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**The Articulation between Natural Sciences and
Systematic Theology: A Philosophical Mediation
Based on the Contributions of Jean Ladrière and
Xavier Zubiri**

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Dedication

To my sister Liza
with whom I share an enthusiasm
for science, human existence and faith
and with whom
I started to learn about creativity and joy.

To my parents, Benedicto and Carmen,
who gave me life, from whom I learned the value
of all human effort,
the beauty of nature and the gift of faith.

To Joaquín Izquierdo, a friend,
who introduced me to Teilhard de Chardin and
to the dialogue
between science and theology.
(Q.E.P.D.)

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Abstract

The object of this work is the interdisciplinary dialogue between natural sciences and Christian theology. The objective is to study the theological, epistemological and semantic conditions that make possible an articulation between scientific worldviews and theological discourses. In this study “to articulate” means that scientific theories and theological discourses do not share the same semantic horizon. At the same time, the verb “to articulate” implies that there is a possible mediation between scientific worldviews and systematic theology. The main thesis of this study is that *an articulation between scientific worldviews and systematic theology is possible through the mediation of philosophy*.

Natural sciences and philosophy refer to the order of manifestation where real things appear as phenomena. Christian theology refers to the order of revelation where God communicates Himself to the human person. The relationship between these two orders can be expressed with the maxim: *neither confusion nor separation*. Furthermore, there is a positive formulation of that relation: *revelation assumes and transfigures what is manifested*. This model of relation is the fundamental theological condition that makes possible an articulation between natural sciences and theology. In addition, there is an epistemological condition: the homologous rational structure of each rational field (sciences, philosophy and theology).

Based on these theological and epistemological conditions, this research work proposes a theological method that articulates scientific worldviews into systematic theology through the mediation of philosophy. The method seeks two objectives: (a) that theology remains in its epistemological boundaries and (b) to respect symmetrically the autonomy of natural sciences’ procedures. Finally, the proposed method is applied to three examples: the elaboration of theological discourses, in dialogue with natural sciences, about (i) creation, (ii) human action and (iii) a spiritual contemplation of God’s presence in the world.

This research follows the contributions of two major scholars of the Twentieth Century: Jean Ladrière and Xavier Zubiri. Our considerations are based on the scholars’ analyses of the plurality of epistemologies and their analyses of the intellectual act.

Keywords: science and theology, science and religion, Jean Ladrière, Xavier Zubiri, fundamental theology, method in theology.

Résumé

L'objet de ce travail est le dialogue entre les sciences de la nature et la théologie chrétienne. L'objectif est d'étudier les conditions théologiques, épistémologiques et sémantiques qui rendent possible une articulation entre les visions scientifiques du monde et les discours théologiques. L'usage du terme « articulation » signifie que les théories scientifiques et les discours théologiques ne partagent pas le même horizon sémantique. En même temps, le verbe « articuler » implique qu'il existe une médiation possible entre visions scientifiques du monde et théologie systématique. La thèse principale est formulée de la manière suivante : *l'articulation entre les visions scientifiques du monde et la théologie systématique est possible par la médiation de la philosophie.*

Les sciences naturelles et la philosophie font référence à l'ordre de la manifestation où les choses réelles apparaissent comme des phénomènes. La théologie chrétienne fait référence à l'ordre de la révélation où Dieu se communique à la personne humaine. La relation entre ces deux ordres peut être exprimée à l'aide de la maxime: *ni confusion ni séparation*. On peut aussi avancer une formulation positive de cette relation: *la révélation assume et transfigure ce qui est manifesté*. Ce modèle de relation est la condition théologique fondamentale qui rend possible une articulation entre les sciences naturelles et la théologie. En outre, il existe une condition épistémologique: la structure homologue partagée par chaque champ rationnel (sciences, philosophie et théologie).

Sur la base de ces conditions théologiques et épistémologiques, cette étude propose une méthode théologique qui articule les visions scientifiques du monde dans la théologie systématique par la médiation de la philosophie. Cette méthode vise deux objectifs: (a) que la théologie reste dans ses limites disciplinaires et (b) la préservation symétrique de l'autonomie disciplinaire des sciences de la nature. À la fin, la méthode proposée est appliquée à trois exemples: l'élaboration des discours théologiques, en dialogue avec les sciences naturelles, à propos (i) de la création, (ii) de l'action humaine et (iii) de la contemplation spirituelle de la présence de Dieu au cœur du monde.

Cette recherche suit les contributions de deux grands savants du XX^e siècle: Jean Ladrière et Xavier Zubiri. Nos réflexions sont basées sur leurs analyses de la pluralité des épistémologies et leurs analyses de l'acte intellectuel.

Mots-clés: science et théologie, science et religion, Jean Ladrière, Xavier Zubiri, théologie fondamentale, méthode en théologie.

Resumen

El presente trabajo tiene como objeto de estudio el diálogo entre las ciencias naturales y la teología cristiana. Su finalidad es estudiar las condiciones teológicas, epistemológicas y semánticas que hacen posible una articulación entre las cosmovisiones científicas y los discursos teológicos. En este estudio el uso del verbo "articular" implica que las teorías científicas y los discursos teológicos no comparten el mismo horizonte semántico. Al mismo tiempo, la acción de "articular" significa que hay una posible mediación entre los puntos de vista científicos y los teológicos. La tesis principal de este trabajo es que *una articulación entre las visiones científicas del mundo y la teología sistemática es posible gracias a la mediación de la filosofía*.

Las ciencias naturales y la filosofía se refieren al orden de la manifestación en el que las cosas reales aparecen como fenómenos. La teología cristiana se refiere al orden de la revelación en el que Dios se comunica a la persona humana. La relación entre estos dos órdenes se puede expresar con la máxima: *ni confusión ni separación*. También existe una formulación positiva de esa relación: *la revelación asume y transfigura aquello que se manifiesta*. Este modelo de relación es la condición fundamental teológica que hace posible una articulación entre las ciencias naturales y la teología. Existe además una condición epistemológica: la estructura homóloga de cada racionalidad (científica, filosófica y teológica).

Fundamentado en estas condiciones teológicas y epistemológicas, esta investigación propone un método teológico que articula las visiones científicas del mundo con la teología sistemática a través de la mediación de la filosofía. Este método persigue dos objetivos: (a) que la teología se mantenga en sus límites epistemológicos y (b) que se respete simétricamente la autonomía disciplinaria de las ciencias naturales. Por último, el método propuesto se aplica a la elaboración de tres discursos teológicos, en diálogo con las ciencias naturales, sobre (i) la creación, (ii) la acción humana y (iii) la contemplación de la presencia de Dios en el mundo.

Este trabajo de investigación sigue las contribuciones de dos grandes intelectuales del siglo XX: Jean Ladrière y Xavier Zubiri. Nuestras reflexiones se fundamentan en sus análisis de la pluralidad de las epistemologías y sus análisis del acto intelectual.

Palabras clave: ciencia y teología, ciencia y religión, Jean Ladrière, Xavier Zubiri, teología fundamental, método teológico.

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I. The scope, intention and context of this work

I.1 The perspective of this work

The scope of this work is the interdisciplinary dialogue between natural and applied sciences and Christian theology. This research work is not about the relationship between science and religion¹ from the perspective of philosophy of religion or religious science, although it is related to it. Our effort is developed from the explicit horizon of Christian revelation.

Our intention is to study the epistemological foundations and the conditions that could make possible the articulation between scientific worldviews and theological discourses. What do we mean by the term “articulation”? This term comes from Latin *articulatus*, "to separate into joints." The adjective “articulate” means "composed of segments united by joints". In this work the use of the verb “to articulate” means that scientific theories and theological discourses refer to different realities and do not share the same semantic horizon. We consider, for reasons that will be clear below, that a scientific concept cannot be assimilated immediately into a theological discourse. At the same time, the verb “to articulate” implies that the scientific worldviews and the Christian concept of “creation” are not independent. There is a joint, a point of connection and mediation between them.

It is our goal to bring to light and justify this mediation between natural sciences and Christian theology. Considering the classic taxonomy of the relation between science and religion, our work does not follow into the categories of conflict, independence or integration². We affirm that there is a possible joint (against conflict and independence). At the same time we affirm that such “articulation” should not lead us to an integrated discourse or global system that assimilates both, scientific concepts and theological concepts, without respecting or considering the epistemological differences between both rationalities (against integration). For these reasons, our work is closer to the model of dialogue in the sense that it seeks ways of translating and

¹ Many good works have been written in the field of “science and religion”. Just to mention a few: I.G. BARBOUR, *When Science Meets Religion*, San Francisco, Harper San Francisco, 2000. M. STENMARK, *How to Relate Science and Religion. A Multidimensional Model*, Michigan, William B. Eerdmanns Publishing Company, 2004. J. HAUGHT, *Science & Religion: From Conflict to Conversation*, Paulist Press, 1995. G.B. FERNGREN, *Science and Religion: A Historical Introduction*, Johns Hopkins University Press, 2002.

² BARBOUR, *When Science Meets Religion*, p. 7-37. P. LUSCOMBE, *Groundwork of science and Religion*, p. 169-183.

articulating the discoveries and language of one rationality into that of the other³. This requires an interdisciplinary effort that recognizes the methodological and linguistic differences.

In addition, our purpose is to propose a theological method that articulates such scientific worldviews into Christian systematic theology and respects the different epistemologies (scientific, philosophical and theological). Our proposed method does not have the pretention to be universal or absolute, but provisional and operational. It is provisional because, as we will explain below, each method must be adequate to the object and as we deepen the object and its relations to other realities we must adapt continuously the method. It is operational because we are not satisfied with the elaboration of some general abstract principles of a theological method but with the exposition of more concrete methodological steps that could be adapted in the future as well. Nevertheless, we must clarify that this method will not be elaborated from a “common sense” based approach disconnected from a theoretical framework⁴. We want it to be grounded in our study of the epistemological foundations of theology and natural sciences.

Finally, we will test this method by applying it to three examples where we elaborate theological discourses about creation, human action and spiritual contemplation in dialogue with natural and applied sciences.

I.2 The context of this work

I.2.1 Personal context of the author

The author has been actively involved in scientific research since 1991, the year he started his doctoral studies in the School of Electrical and Computer Engineering at Purdue University in Indiana, U.S.A. During his years as engineering student, he was influenced by the reading of theological works from Teilhard de Chardin and Karl Rahner. For that reason he started a master of arts degree in theology at Notre Dame University when he was, at the same time, doing his doctoral studies in engineering. The present work is ultimately originated on the author’s aspiration to humbly contribute to make Christian faith intelligible to our culture and society highly influenced by natural sciences and applied technology.

I.2.2 Context of Catholic theology after Second Vatican Council

The second context of this work is the context of Catholic theology after the Second Vatican Council. This context is marked by the desire to dialogue with a multiplicity of partners that include different fields of human knowledge, the diversity of religions and our contemporary

³ P. LUSCOMBE, *Groundwork of science and Religion*, p. 176.

⁴ We use “common sense” in the same way Bernard Lonergan does it, as something non-universally valid and non-systematically elaborated that seeks to discover an immediate solution to a concrete and particular problem. B. LONERGAN, *Insight*, p. 200-201.

legitimate aspirations⁵. Another general aspect that influences current efforts in theology is what has been called the *crisis of trust in reason* and the criticism to the limits and ambiguity of rationality⁶. As a result of this aspect, there have been some efforts to clarify the epistemological status and method of theology. Moreover, the interpretation of Scriptures and Tradition during this period includes the integration of developments in hermeneutics and linguistic analysis⁷ that presupposes a relationship between Christian religious language and Christian religious experience⁸.

Another characteristic of our post-Vatican II context is its anthropological, social and environmental sensibilities. There has been a “turn to the human subjectivity” with an emphasis on human experience⁹. This turn was followed by a “social turn” with a sensibility to human praxis and social justice issues. Most recently we are experiencing an “ecological turn” that seeks to reflect about human relationship and impact to the earth¹⁰, the limits of growth and the objective of sustainability. This ecological turn influences theologians who develop a “Christian environmental ethics”¹¹ and a “Christian spirituality of creation”¹².

This non-exhaustive list of aspects that characterize the post-Vatican II theology definitely influences this work.

I.2.3 Interdisciplinary context

The third context is the current effort to develop interdisciplinary works. Until recently, most people envisioned research work to be an effort very much delimited in one particular domain of knowledge. However, as researchers discover the complexity of reality they realize more that the perspective of one discipline is not enough to describe a situation, to explain the different relations among objects or to solve problems. This has encouraged interdisciplinary work. Our work is a theological research elaborated in an interdisciplinary perspective, i.e., in dialogue with other disciplines, e.g., formal sciences, natural sciences and philosophy. The intention here is to open new avenues in the theological endeavor by considering perspectives, aspects and contributions from other disciplines.

⁵ J.-Y LACOSTE, *XIXe – XXe siècle*, p. 460, 463-464.

⁶ F. SCHÜSSLER FIORENZA, *Systematic Theology: Tasks and Methods*, p. 68-69. R. WINLING, *La teologia del siglo XX*, p. 170.

⁷ F. SCHÜSSLER FIORENZA, *Systematic Theology: Tasks and Methods*, p. 71-73. R. WINLING, *La teologia del siglo XX*, p. 182-186.

⁸ F. SCHÜSSLER FIORENZA, *Systematic Theology: Tasks and Methods*, p. 75.

⁹ A.-M. CLIFFORD, *Anthropology: Contemporary Issues*, p. 16.

¹⁰ A.-M. CLIFFORD, *Anthropology: Contemporary Issues*, p. 16.

¹¹ A. GANOCZY, *Ecology*, p. 201-202.

¹² R. BAUCKHAM, *Écologie*, p. 440.

I.2.4 Our cultural context influenced by scientific worldviews and the mission of Christian theology

The main objective of Christian theology is to make Christian religious experience intelligible to each culture and society (1 Pe 3, 15). Through history Christian believers have sought to communicate their faith to their contemporaries by taking into consideration contemporary values, worldviews and conceptual frameworks. If Christian message is not transmitted in a contemporary intelligible language it will arrive into deaf ears. Bernard Lonergan affirms this clearly when he states the following:

“The Christian message is to be communicated to all nations. Such communication presupposes that preachers and teachers enlarge their horizons to include an accurate and intimate understanding of the culture and language of the people they address. They must grasp the virtual resources of that culture and that language [...] so that the Christian message becomes [...] not an alien patch superimposed upon it, but a line of development within the culture”¹³.

Since Nineteen Century, there has been a remarkable number of scientific discoveries and a significant development of new scientific disciplines. Moreover, natural and applied sciences have become a dominating force that shapes all cultures, modifies languages and affects the images from which we interpret reality¹⁴. New scientific worldviews, born from scientific representations, question our understanding of faith. In addition, we have also experienced a “revolution” in the fields of philosophy of science and epistemology. The debate about scientific rationality, its certainties and limits impacts our understanding of all rationalities, including Christian theology¹⁵.

These impacts are not superfluous to the theologians’ tasks. As Xavier Zubiri already said in *Naturaleza, historia y Dios*, Christianity had been able to articulate in a radical unity three gigantic products of the human spirit: Greek philosophy, Roman Law and the religion of Israel. Currently Christianity faces a challenge from another immense human spirit product: modern science¹⁶. We believe that Christianity must be involved in a serious effort to articulate Christian theology with natural sciences, current philosophical debates and scholarship in general. However, as John Haught regrets, for the most part, the natural world and its evolution are not

¹³ B. LONERGAN, *Method in Theology*, p. 362.

¹⁴ A. PEACOCKE, *Intimations of reality*, p. 13.

¹⁵ F. SCHÜSSLER FIORENZA, *Systematic Theology: Tasks and Methods*, p. 68-69.

¹⁶ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 5.

part of the majority of theologians' interest¹⁷. Furthermore, in our cultural diversity characterized by a plurality of rational discourses, a theologian should ask again how to relate faith and reason. After contemplating the current status of theology, Lonergan affirms with a sense of urgency the following:

*"[...] theological revisions may have their origin, not primarily in theological, but rather in cultural developments. So at the present time, theological development is fundamentally a long delayed response to the development of modern science, modern scholarship and modern philosophy"*¹⁸.

I.3 Our broad perspective

All of what we have mentioned before explain our large perspective and the ambition of our project. We make the conscious decision to address the issues of the epistemological foundation of theology, the conditions that renders possible a dialogue with natural sciences and philosophy and the development of an explicit operative method in systematic theology that articulates scientific worldviews and conclusions without falling into scientism or positivism. This choice is originated in our conviction of the need and urgency of such tasks. For this chosen broad perspective we need to base our reflections on the thoughts of major figures that analyze the plurality of epistemologies, their particular objects and languages and their common ground found in the human intelligence act. The choice of these major figures will be discussed next.

II. A research work based on the contributions of Jean Ladrière and Xavier Zubiri

II.1. The choice of Ladrière and Zubiri

On this research work we will follow the contributions of two major scholars of the Twentieth Century: Jean Ladrière¹⁹ and Xavier Zubiri²⁰. Our reflections are based on their

¹⁷ J. HAUGHT, *Deeper than Darwin*, p. 164.

¹⁸ B. LONERGAN, *Method in Theology*, p. 353.

¹⁹ **Jean Ladrière** (1921-2007) was a Belgian philosopher born in Nivelles. He completed his doctoral dissertation in philosophy in 1949 after which he submitted a *Thèse d'agrégation* in 1957 on the limits of formal systems, e.g., Gödel's first theorem of incompleteness and the Löwenheim-Skolem theorem, among others. His fundamental research project was to articulate the relationship between the different forms of rationality with Christian faith. His works constitute major contributions to the fields of epistemology, philosophy of science, philosophy of language, ethics, political philosophy and fundamental theology. See <http://www.uclouvain.be/99970.html>.

²⁰ **Xavier Zubiri y Apalategui** (1898-1983) was born in San Sebastián, on December 4, 1898. He attended the University of Madrid where he had as his mentor José Ortega y Gasset. He also included periods of residence at the University of Louvain, then under Cardinal Mercier. At the Gregorian, in 1920, he received the doctorate in theology. In 1921 he received a similar degree in philosophy from the University of Madrid. Between 1928 and 1931 he included trips throughout Europe to study under the masters of various disciplines: classical philology with Werner Jaeger; philosophy with Husserl and Heidegger; theoretical physics with De Broglie and Schrödinger; biology with von Geluchten, Spemann, and Goldschmidt; mathematics with Rey-Pastor, La Vallée-Poussin, and Zermelo. Solidly grounded in the history of philosophy, theology, linguistics, modern science, and the foundations of mathematics, Zubiri developed his own philosophical thought, which integrates many elements. Some of these elements that we consider pertinent to our work are: (i) the insight sciences give us about the structure of the natural world and

analysis of the plurality of epistemologies (formal sciences, natural sciences, philosophy and Christian theology) and their analyses and reflections about the intellectual act and reason. However, we must clarify that this thesis does not have the objective of confronting systematically all aspects of Ladrière's and Zubiri's thought.

Despite the fact that other thinkers could have been chosen, we decided to follow Ladrière's and Zubiri's reflection for some reasons. First, they are philosophers and also Christian theologians that distinguish clearly Christian theology from philosophy of religion. Each one has produced a fundamental theology that includes a reflection about the epistemological status of theology that considers the human intellectual act and an understanding of revelation. Second, they are thinkers who assimilate in their philosophy the contributions of natural sciences and the foundational crisis in formal systems. They develop a systematic reflection about the world as a whole articulating it with the scientific developments of the Twentieth Century.

Third, the broadness of their work is without doubt impressive: epistemology and philosophy of science, philosophy of technology, philosophy of language, metaphysics, ethics, philosophy of religion and Christian theology. This will enable us to develop an interdisciplinary dialogue that is suitable to develop a theological method that considers contemporary culture. Finally, their thoughts have many points in common that enable us a systematic reading of both authors. They share the same historical point of departure: the crisis of foundation in formal systems and the crisis of modern reason. The fundamental question found in most of their works is how can we ground our rational efforts. They were also influenced by the founder of the school of phenomenology, Edmund Husserl and by his former student Martin Heidegger, although Ladrière and Zubiri criticize some positions of the German philosophers. We must add that both of them have enlarged the notion of "reason". They do not reduce reason to natural sciences but they have included other rationalities as well, e.g., theology, philosophy, social sciences, humanities and arts among others. Another shared element is their effort to clarify the polysemic concept of "truth". Thanks to their analysis we avoid a possible confusion between a meaning of the concept of "truth" related to ordinary life and a meaning related to theoretical development. Our broad perspective in this research work correlates with the vast horizons of Ladrière's and Zubiri's work.

our ability to know that world; (ii) the relation of God to the physical world; (iii) the Christian theological tradition, with equal emphasis on Eastern and Western Fathers and theologians. See <http://www.zubiri.org/>.

Although there are many points in common, there are some differences in their thoughts that are not insignificant. Zubiri's philosophy is a philosophy about "reality" as a foundation of everything. He seeks the grounds of all our knowledge of "reality". In addition, based on his efforts to ground all theoretical reason in an apprehension of reality, he develops a metaphysics. Ladrière, highly influenced by the "linguistic turn," concentrates his effort in the analysis of different languages and their relation to a field of "reality", to human reason and to rational institutions. We take this difference into account by distinguishing the position of both authors. When they differ, we present the position of both thinkers, and then we express our position and the consequence for our current work.

Although we present synchronically Ladrière's and Zubiri's thoughts, there is a more or less diachronic evolution in both thinkers. We will present here their evolution and then we will justify our systematic reading of both of them.

II.2 The diachronic evolution of Ladrière and Zubiri

II.2.1. Ladrière's evolution

Currently, we encounter some difficulties in our study of the evolution of Jean Ladrière. First of all, the majority of Ladrière's works has not been published yet. For that reason we will consider only the published material, specially those where the Belgian philosopher discusses his own evolution by means of "forewords" or "introductions." The second difficulty is the fact that Ladrière did not write a work that could be considered as his final mature synthesis. Third, Ladrière himself mentions that some of the papers that composed his books were written due to specific requests coming from different conferences or journals²¹. This renders difficult a systematic reading. As a consequence, our presentation of Ladrière's diachronic evolution is provisional.

Nonetheless, there is a remarkable consistency in his works and some dominant axes in his reflections: the plurality of languages related to the plurality of rationalities, the relationship between practical reason and human action, the impact of science and technology in human culture, the historical aspect of human reason and language, the limits of reason and the problem of evil, among others. We consider that there are four periods in Ladrière thought that are characterized by the focus of his analysis.

1. First period: before 1950

²¹ J. LADRIÈRE, *Vie sociale et destinée*, p. 7.

In this period we encounter the initial reflections about the relationships between scientific and philosophical concepts. Some of these works were written before Ladrière's thesis in philosophy and his *thèse d'agrégation*. One reference where we find some of his initial ideas is his *Concept scientifique et idées philosophiques* (1948).

2. Second period: between 1950-1970

During this second period, which coincides with the years after the Second World War, Ladrière is focused on the problem of the foundation of sciences and his studies of the "linguistic turn". This period is characterized by three main works: his works about the crisis of reason, the analysis of the limits of formal systems and the analysis of scientific and ordinary languages, which includes the language of faith. Let's consider briefly the three of them.

A. The crisis of reason

Ladrière analyzes the problem of the crisis of reason in dialogue with some neo-Hegelians, followers of phenomenology and Structuralists. He seeks to study the problem of the foundation of sciences (formal, natural and social) and to enlarge the notion of "rationality". This period includes the topics of the *Lebenswelt*, *human experience*, the *manifestation* as givenness and the *hermeneutics circle*. In addition, there is already an analysis of the relation between reason and action from a Kantian and from an existential perspective. The major interlocutors are Hegel, Husserl, Heidegger, Merleau Ponty and the Structuralisms. Some of the texts that represent this period are the articles published as chapters in *Vie sociale et destinée* (1973).

B. Analysis of formal (mathematical) languages

One of Ladrière's major objectives here is to study the foundation and limits of formal systems after Gödel's incompleteness theorems. He seeks to understand the capacity of mathematical and formal languages to "manifest" something invisible and opaque such as mathematical objects. The main interlocutors are Frege, Russell, Hilbert, Brouwer and Gödel. Among the main texts that represent this period are *Les limitations internes des formalismes*, *Études sur la signification du théorème de Gödel et des theorems apparentés dans la théorie des fondements des mathématiques* (1957), and some articles found in *L'articulation du sens I* (1970).

C. Initial reflections about scientific language and ordinary language

In this axis Ladrière assumes the perspective of analytic philosophy of language. He studies the pragmatic and illocutionary dimensions of language²² and their relation to human action in

²² J. LADRIÈRE, *L'articulation du sens I*, p. vi.

many linguistic forms such as scientific, philosophical and ethical. His main interlocutors are Wittgenstein, Austin and Evans²³.

As part of this axis, he studies the language of faith, its specificity and conditions that render it possible²⁴. He is interested in how the language of faith induces meaning through its performativity and its capacity for self-implication²⁵. He compares the language of faith with other forms of language: science, philosophy and the language of action. The major reference here is *L'articulation du sens I* (1970).

3. Deepening the analysis of the languages of faith and its relations with other languages: 1970-1982

During this period, Ladrière continues and deepens his reflection on the performativity of languages of faith. He affirms that there is in reality a “plurality of languages of faith”²⁶. Moreover, he analyzes the relationship between the languages of faith and the Christian living spiritual experience²⁷. Here, Ladrière starts to understand theology as a second order language of faith. For him, the language of theology, which is clearly different from the language of philosophy of religion, seeks to understand, interpret and systematize other different forms of faith languages²⁸. Ladrière seeks to make explicit the specific rationality of theology and its relation to other speculative languages such as philosophy and sciences²⁹.

Once he reflects about the speculative character of theology, he seeks a possible articulation between the languages of faith (including theology), the problem of human existence and the problem of nature (understood in a cosmological sense). With respect to the problem of nature, Ladrière seeks to articulate the concept of creation to scientific and philosophical cosmologies through the notions of event and creativity³⁰, which were concepts originally developed by Whitehead.

Heidegger and Whitehead are some of the interlocutors of this period, among others. The major reference here is *L'articulation du sens II* (1984).

4. Final efforts: 1984-2007

During this final period, the Belgian philosopher continues the problems and the reflections initiated in the second and third period but from a different perspective. As before, he seeks an

²³ J. LADRIÈRE, *L'articulation du sens I*, p. iii-v.

²⁴ J. LADRIÈRE, *L'articulation du sens I*, p. i.

²⁵ J. LADRIÈRE, *L'articulation du sens I*, p. vii-viii.

²⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 8.

²⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 8-9.

²⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 9.

²⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 12-13.

³⁰ J. LADRIÈRE, *L'articulation du sens I*, p. xix. J. LADRIÈRE, *L'articulation du sens II*, p. 296-299, 301 and 306.

epistemological foundation of theology taking into consideration the “linguistic turn”³¹. However, he adds the aspect of “reference” to the semantic aspects of “meaning” and “signification” found in linguistic expressions. Expressions make sense in reference to a particular domain of reality³². During this period, Ladrière distinguishes between an invisible order of revelation and salvation, to which the languages of faith refer, and a visible order of manifestation to which the scientific and philosophical languages refer³³. On this issue, Ladrière is influenced by Blaise Pascal’s concept of order, by Husserl’s and Heidegger’s concept of “manifestation” and by the post-Second Vatican Council’s development of the theological concept of revelation.

Moreover, Ladrière adds the perspective of “truth” to the problem of “meaning”³⁴. During this period he assumes again the subject of history from the second period in his discussion of Hegel³⁵. For him, reason is an active principle that operates in history, inspires institutions³⁶ and is in a process of self-constitution. Christian theology participates in that historical process³⁷ and cannot be detached from a cultural context³⁸. In addition, he returns to the Kantian aspects of practical reason³⁹ where he receives the influence of Blondel philosophy of action and Levinas’ and Ricoeur’s ethics⁴⁰.

Finally, Ladrière deepens the subject of the relation and possible articulation between theology and science⁴¹ and between theology and philosophy⁴². These relations are based on the relation between the order of manifestation and the order of revelation⁴³. On this subject he proposes that philosophy could play the role of mediation between science and theology⁴⁴.

The major references of this period are *Approches philosophiques de la création* (1985), *L’articulation du sens III* (2004), *La foi chrétienne et le destin de la raison* (2004), and the article *Science et théologie* published in *Revue théologique de Louvain* (2003).

II.2.2. Zubiri’s evolution

³¹ J. LADRIÈRE, *L’articulation du sens III*, p. 7.

³² J. LADRIÈRE, *L’articulation du sens III*, p. 11.

³³ J. LADRIÈRE, *L’articulation du sens III*, p. 11.

³⁴ J. LADRIÈRE, *L’articulation du sens III*, p. 13-14.

³⁵ J. LADRIÈRE, *L’articulation du sens III*, p. 16.

³⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 13.

³⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 12 and 21.

³⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 8-10.

³⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 14.

⁴⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 14 and 31-33.

⁴¹ J. LADRIÈRE, *L’articulation du sens III*, p. 16.

⁴² J. LADRIÈRE, *L’articulation du sens III*, p. 17-18.

⁴³ J. LADRIÈRE, *L’articulation du sens III*, p. 18.

⁴⁴ J. LADRIÈRE, *L’articulation du sens III*, p. 18.

In an introduction written in 1980 to the English edition of *Naturaleza, historia y Dios*, Xavier Zubiri states that there is a historical evolution in his thought that consists of three periods: a phenomenological, an ontological and a metaphysical period⁴⁵. Let's consider briefly each one.

1. The phenomenological period: between 1921-1928

During this period Zubiri is highly influenced by Husserl and his *Logical Investigations*⁴⁶. Through it Zubiri learns the phenomenological analysis that seeks to describe the facts of the act of intelligence⁴⁷ and to overcome the positions of naïve realism and subjectivism⁴⁸. According to Zubiri, these two positions are theories that do not correspond to facts. From this period are Zubiri's licentiate thesis in philosophy written under the direction of Léon Noël and defended in Louvain's *Institut Supérieur de Philosophie* (ISP) in 1921: *Le problème de l'objectivité d'après Ed. Husserl, I: La Logique pure*. The same year he defended in Madrid's *Facultad de Filosofía y Letras* his doctoral dissertation in philosophy entitled: *Ensayo de una teoría fenomenológica del juicio*.

2. Ontological period: 1932-1945

During this period Zubiri criticizes Husserl's turn to idealism and the pure subject. If his point of departure was Husserl's phenomenology, now he seeks to go beyond it⁴⁹. Here he is influenced by Heidegger's *Being and Time*. However, Zubiri's ontology is not identified with Heidegger's. For Zubiri, philosophy is not about the understanding of being but about our apprehension of the reality of the world⁵⁰. Although Zubiri was already exposed to Einstein's Relativity Theories in 1923⁵¹, it is at the beginning of this period that Zubiri deepens the results of contemporary sciences, specially the developments of the relativity theory and quantum theory in Munich and Berlin⁵². The main reference of this period is his book *Naturaleza, historia y Dios* (1946).

⁴⁵ This is the division elaborated by Diego Gracia. Pintor Ramos has the same division but with different names. See D. GRACIA, *Actualidad de Zubiri. La filosofía como profesión de verdad*, p. 74-76. A. PINTOR-RAMOS, *Genesis y formación de la filosofía de Zubiri*.

⁴⁶ D. GRACIA, *Actualidad de Zubiri. La filosofía como profesión de verdad*, p. 79. V.-M. TIRADO SAN JUAN, *Zubiri y Husserl*, p. 153-155.

⁴⁷ D. GRACIA, *Actualidad de Zubiri. La filosofía como profesión de verdad*, p. 82.

⁴⁸ V.-M. TIRADO SAN JUAN, *Zubiri y Husserl*, p. 152.

⁴⁹ D. GRACIA, *Voluntad de Verdad*, p. 45 and 85.

⁵⁰ D. GRACIA, *Voluntad de Verdad*, p. 98.

⁵¹ Zubiri went to Einstein's presentation of his theories in Madrid in the year 1923. There he discovered that he lacked the necessary background in mathematics. For that reason he started to take courses in mathematics and physics that year. J. COROMINAS and J.A. VICENS, *Xavier Zubiri. La soledad sonora*, p. 158-160.

⁵² Between 1930-1931, Zubiri visited Munich and Berlin where he encounters Sommerfeld, Einstein, Planck, Heisenberg and Schrödinger. In addition, he studied biology with Spemann and Mangold, prominent embryologists of that period. J. COROMINAS and J.A. VICENS, *Xavier Zubiri. La soledad sonora*, p. 217-238.

3. Metaphysical period: 1945-1983

In this period Zubiri develops a metaphysics that seeks to go beyond Husserl's phenomenology of the pure conscience and Heidegger's understanding of being⁵³. Zubiri considers metaphysics as the philosophy of the real. The book *Sobre la esencia* (1962) expresses Zubiri's metaphysics that takes into account seriously the development of natural sciences. The highest expression of Zubiri's mature philosophy is found in the three volumes of *Inteligencia Sentiente* (1980-1983). It is neither a metaphysical explanation of intelligence nor a theory of knowledge. It is an analysis of the intellectual act and its facts.

Zubiri's initial theological works are found in *Naturaleza, historia y Dios*. However, Zubiri's mature philosophy of religion and theology are found in this third period in the trilogy of *El Hombre y Dios*, *El Problema Filosófico de la Historia de las Religiones* and *El Problema Teologal del Hombre: Cristianismo*.

II.3 Our systematic reading of Ladrière and Zubiri

Our readings of Ladrière and Zubiri are from the perspective of their mature works. In the case of Ladrière, as we already discussed, he does not have a major change in his evolution, but in his final years he integrates themes and problems that are considered in our present work. Our systematic reading is justified due to his permanent major axes, already mentioned, from the perspective of the "linguistic turn" and from the perspective of phenomenology with its themes of "manifestation" and "experience."

With respect to Zubiri, many of his followers state clearly that his last work, *Inteligencia Sentiente*, is the reference from which we should read the other works⁵⁴. Part of our effort in this research work is to read and analyze Zubiri's contribution to our problem, perspective and goal from the three volumes of *Inteligencia Sentiente*⁵⁵.

III. The state of the matter: a comparative study of contemporary articulations between Christian systematic theology and natural sciences

In this section we summarize some contemporary writings in theology (in fields such as theology of creation, God's relation to the world and theological anthropology) that have been

⁵³ D. GRACIA, *Voluntad de Verdad*, p. 101.

⁵⁴ As Diego Gracia argues, all the works of Zubiri should be read from the perspective of Zubiri's most mature work: *Inteligencia Sentiente*. See D. GRACIA, *Voluntad de Verdad*, p. III and VI. J. Conill, *El sentido de la noología*, p. 278. V.-M. TIRADO SAN JUAN, *Zubiri y Husserl*, p. 163.

⁵⁵ J.-L. CABRIA-ORTEGA, *Relación teología-filosofía en el pensamiento de Xavier Zubiri*, p. 412-413.

developed in dialogue with natural sciences' conclusions, representations and worldviews. Our intention is to retrieve different theological methods of articulations, their *a priori* postulates or presumptions, their advantages, difficulties or insufficiencies. We will classify these theological methods in different models by means of the heuristic method of typology. Although different typologies have been proposed around the general topic of science and religion⁵⁶, we propose a particular typology that is theology specific. Typologies have become classic in the literature. Although they have the risks of oversimplifying the historical reality by imposing a too strict division⁵⁷, they have many advantages. They can summarize different attitudes. They can show the contributions and weakness of different positions, i.e., things that need to be clarified, possible lack of foundations, implicit *a priori* postulates, etc.

Our typology consists of three major positions or methods to articulate systematic theology and natural sciences: (i) direct integration of natural scientific representations and worldviews into systematic theology; (ii) theology and sciences as separated and self-contained rational discourses; (iii) systematic theologies articulated with scientific worldviews through the mediation of philosophy. Let's consider these three types of articulations between theology and natural sciences from the perspective of their methods, strengths, weaknesses, contributions and shortcomings.

III.1 Continuity between science and theology: a direct integration of natural sciences' representations and worldviews into systematic theology

This model represents different versions that are united by one assumption: natural science and theology study different aspects of the same world. One version proposes the development of a synthesis between natural sciences and Christian theology. This interpretation of the contents of faith assumes that science and theology are at the same epistemological, linguistic and semantic level. The second type considers that theology and natural sciences are truth-seeking projects that refer to the same real natural world with distinct but homologous methods. For this version, the objective is not the development one synthesis, but to elaborate analogies between both rational methods.

⁵⁶ Consider, for example, Barbour's typology of relations between science and religion. This typology consists of four modes of relationships: conflict, independence, dialogue and integration. This typology has become classic in the literature about the relationship between science and religion. It has the advantage of summarizing different attitudes with respect to the relationship between the scientific endeavor and the religious experience. See I. BARBOUR, *When Science meets religion*.

⁵⁷ G. CANTOR and C. KENNY, *Barbour's Fourfold Way: Problems with his Taxonomy of Science-Religion Relationships*, p. 765-781.

III.1.1 Christian naturalistic theology⁵⁸ or a naturalistic understanding of Christian faith⁵⁹

Under this model, there are theologians who seek a synthesis between natural science and theology that represents the whole of reality. One example is **Teilhard de Chardin**. Although Teilhard has the merit of starting the contemporary dialogue between natural sciences (above all evolutionary biology and paleontology) and catholic theology, occasionally we cannot distinguish in his writings theological and philosophical concepts from scientific representations. Consider for example the notion of the Omega Point, which Teilhard categorizes as a scientific concept. For Teilhard the Omega is the point of convergence where the evolutionary movement culminates. It has the following attributes: autonomy, actuality, irreversibility and transcendence⁶⁰. However, is this point of convergence really a scientific conclusion or Teilhard's philosophical vision of a teleological cosmic evolution? In addition, Teilhard argues that this Omega coincides with the revealed Christ⁶¹ or at least is synthesized by Him⁶².

“Evolutionism and Christianity need each other in order to sustain and to achieve each other. [...] The Universal Christ would not be conceivable if the Universe [...] does not have (in virtue of some evolutionary structure) a natural center of convergence where the Verb could, by incarnating Himself, illuminate and influence the totality of the Universe. [...] Evolutionism and Christianity seek to mutually fertilize each other and to produce a synthesis”⁶³.

Arthur Peacocke is another scientist-theologian who exemplifies this position. He affirms that the scientific perspective of the natural world must influence our theological understanding of God as Creator. In addition, theology should be consistent with scientific worldviews. Peacocke's theology is naturalistic in the sense that it does not affirm the existence and actions of supernatural entities or supernatural miracles that break the laws of nature. Natural laws are actions of God who sustains them. There is no dualism natural/supernatural in the cosmos. Peacocke argues that theologians should take this naturalism seriously in order to avoid the

⁵⁸ The term “Christian naturalistic theology” comes from Arthur Peacocke in A. PEACOCKE, *All That Is: A Naturalistic Faith for the Twenty-First Century*, p. 5-6, 8.

⁵⁹ The term “naturalistic understanding of Christian faith” comes from Ann Pederson in A. PEACOCKE, *All That Is: A Naturalistic Faith for the Twenty-First Century*, p. 119.

⁶⁰ P. TEILHARD DE CHARDIN, *Le Phénomène humain*, p. 272.

⁶¹ P. TEILHARD DE CHARDIN, *Le Christ Évoluteur*, in *Comment je crois*, p. 169.

⁶² P. TEILHARD DE CHARDIN, *Le Dieu de l'Évolution*, in *Comment je crois*, p., 291.

⁶³ “Évolutionisme et Christianisme ont besoin l'un de l'autre pour se soutenir et s'achever mutuellement. [...] le Christ Universel chrétien ne serait pas concevable si l'Univers [...] ne possédait pas (en vertu de quelque structure évolutive) un centre naturel de convergence où le Verbe pût, en s'y incarnant, rayonner et influencer sur la totalité de l'Univers. [...] Evolutionisme et Christianisme ne demandent pas qu'à se féconder l'un l'autre et à se synthétiser”.

P. TEILHARD DE CHARDIN, “Introduction au Christianisme” dans *Comment je crois*, p. 183-184.

development of a theology based on a “*tired eschatological symbol*” or on “*mythological forms that scarcely any educated person believes today*”⁶⁴.

Peacocke’s method is based on the epistemology of critical realism. He assumes that the world unveiled by science and by theology is real. From his critical realism, he arrives at his philosophical concept of emergentism. Peacocke argues that the natural world consists of a hierarchy of systems with various levels of organization and complexity⁶⁵, e.g., subatomic particles, atomic particles, complex compounds, living organisms, human beings and social reality. In this series of levels each successive member of the series is a whole constituted of parts belonging to previous (or lower) levels. He affirms that each level has its own consistency, which implies an impossible ontological or epistemological reduction. In conclusion, there is one reality that consists of a multilevel system.

What about God? Where is He in this multilevel reality? Peacocke sustains that religion is a human experience that belongs to this hierarchical multilevel reality⁶⁶. Actually, it is the highest level of integrated relationships. Moreover, Peacocke assumes a pan-en-theism view of God’s presence in the natural world⁶⁷: “*transcendence-in-immanence*”. Peacocke envisions God’s relationship with the world as a Venn diagram in set theory: the world is a subset of the universal set, God. God is fully immanent and present in the natural world, but he is not identified with it. God transcends the world and this divine transcendence implies the ultimate otherness of the Divine Being. Peacocke’s panentheism allows him to affirm that God’s actions are all over the hierarchy of levels in the natural world. God is not an other-world presence, action or experience.

For Peacocke, theology is an intellectual analysis of the religious experience, which is at the highest level that integrates all lower ones⁶⁸. The theological method must take into consideration a series of principles: (i) the continuity in the multilevel reality of the natural world, which includes human religious experience; (ii) the principle of emergentism that affirms that higher levels of reality are constituted from parts belonging to inferior levels; (iii) God’s immanent presence in the whole reality. Therefore, theology must search religious and theological meaning within the whole natural world of which we are part⁶⁹. If theology deals with the dynamic and intrinsic interaction nature-humankind-God, then it “*must take continuous account of models developed to expound the new knowledge of the sciences of the less complex*

⁶⁴ A. PEACOCKE, *All That Is: A Naturalistic Faith for the Twenty-First Century*, p. 9.

⁶⁵ A. PEACOCKE, *Intimations of reality*, p. 34.

⁶⁶ A. PEACOCKE, *Intimations of reality*, p. 36-37.

⁶⁷ A. PEACOCKE, *All That Is: A Naturalistic Faith for the Twenty-First Century*, p. 21-22.

⁶⁸ A. PEACOCKE, *Intimations of reality*, p. 37.

⁶⁹ A. PEACOCKE, *Intimations of reality*, p. 78.

levels below”⁷⁰. As a consequence, theology should be based not only on Scriptures and Tradition but also “on an evolutionary perspective of the cosmological and biological science”⁷¹. Does that imply an identification of scientific truths with theological truths? For Peacocke, the meaning of truth is reference. The fundamental criterion of truth is first of all correspondence. If there is no correspondence, then we should consider coherence. Finally, if we lack all of these, we can use the criterion of utility⁷². Without hesitation, Peacocke affirms that “theology ought to reach its conclusion in such a manner as to (attempt to) match the warrant that science itself can command”⁷³.

Peacocke’s method results within an integrated system with a strong sense of God’s immanent presence and action within the natural world. Consider the following statement:

“God is the Immanent Creator creating in and through the processes of the natural order. I would argue that all this has to be taken in a very strong sense. [...] The processes themselves, as unveiled by the biological sciences, are God-acting-as Creator, God qua Creator”⁷⁴.

III.1.2 Theology and sciences are truth-seeking projects that refer to one reality, the natural world, with distinct but homologous methods

John Polkinghorne is a scientist who became minister and theologian, like Peacocke. For him theology and natural sciences are truth-seeking projects with specific methods and epistemologies⁷⁵. He agrees with Peacocke’s critical realist epistemology⁷⁶. Theology’s and natural sciences’ discourses are critical because their methods subtly intertwine experience and interpretation. They are realist because they are marked by discovery processes rather than by human constructions.

Polkinghorne’s ideas have a basic supposition: theology and science explore aspects of one reality, the world⁷⁷. There is no division between natural/supernatural, profane/sacred, reason/revelation but one reality⁷⁸. However, they have different objects of study⁷⁹. Natural sciences study physical systems, while theology’s object is a personal God who cannot be put to

⁷⁰ A. PEACOCKE, *Intimations of reality*, p. 51.

⁷¹ A. PEACOCKE, *All That Is: A Naturalistic Faith for the Twenty-First Century*, p. 9.

⁷² Russell’s reading of Peacocke in A. PEACOCKE, A. PEACOCKE, *All That Is: A Naturalistic Faith for the Twenty-First Century*, p. 142.

⁷³ Peacocke’s response to Russell in A. PEACOCKE, *All That Is: A Naturalistic Faith for the Twenty-First Century*, p. 187

⁷⁴ A. PEACOCKE, *Biological Evolution; a positive theological appraisal*, p. 359.

⁷⁵ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. ix.

⁷⁶ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. x.

⁷⁷ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. xv, 43.

⁷⁸ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. 93.

⁷⁹ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. 43.

test⁸⁰. Although theology and sciences have different methods, they have many epistemological analogies. Both rationalities have similar concerns: (i) understanding and ordering experiences; (ii) formulating in precise terms the truths disclosed or discovered⁸¹; (iii) searching for increasing verisimilitude; (iv) correcting their theories by relating them to experience; and (v) both are concerned with entities whose realities are more subtle than that of naïve objectivity⁸². Following his Anglican Tradition, Polkinghorne affirms that theology has three sources of inquiry: Scriptures, tradition and reason⁸³. The last one enables the articulation between theology and other forms of rationality, e.g., natural sciences⁸⁴.

What are the possible points of interaction between natural sciences and theology? Polkinghorne proposes a series of analogies taken from science⁸⁵. He proposes that God's action in the world be understood like an input of information. Although the communication of information between two points requires energy, Polkinghorne suggests imagining this divine communication of information as a limit case of zero energy.

III.1.3 Examination of this model

In this section we will evaluate positive elements in this model. We will also formulate our interpretation of what is the basic postulate followed by theologians in this model. Finally, we will discuss its weaknesses and shortcomings. In terms of positive elements, this model values the world created by God. The world is the milieu where God communicates with us. Its objective is to make faith intelligible for today in light of the worldviews produced by natural sciences. In most cases this model seeks the mediation of philosophy (critical realism, emergentism or panentheism) between science and theology.

All these scholars presuppose one implicit *a priori* postulate: ***theology and natural sciences elaborate discourses referring to the same reality***. Polkinghorne is more explicit when he affirms that theology and sciences explore aspects of one reality, one world⁸⁶. Peacocke (not Polkinghorne) also assume that scientific and theological languages are at the same level and

⁸⁰ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. 51.

⁸¹ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. 35.

⁸² J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. 77.

⁸³ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. 37-39.

⁸⁴ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. 40.

⁸⁵ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. 98-101.

⁸⁶ J.-C. POLKINGHORNE, *One world. The interactions of science and theology*, p. xv, 43.

have the same system of reference. Therefore, science and theology have a correspondence of objects, methods, and verification processes with an equivalent notion of truth⁸⁷.

In their valuable effort to avoid all dualism, the discussed theologies discard the division between natural/supernatural, profane/sacred and reason/revelation. Nevertheless, this position raises the following question. Does that imply that the natural world's reality (studied by science) and the divine reality (studied by theology) are the same or at least one the subset of the other? This seems to be affirmed by Peacocke's understanding of panentheism. If there is only a methodological distinction, at least in Polkinghorne's case, but not a metaphysical or ontological difference, what is the ground to affirm the consistency and autonomy of the natural world? Does not the natural, the profane and human reason risk the absorption by the supernatural, the sacred and revelation?

At the same time, there is a risk of falling into a naturalism that explains God's actions (revelation, incarnation, salvation, etc.) from the point of view of natural causes, processes, and systems. For example, for Peacocke, the incarnation (theological concept) is not a descent into the world by a God conceived from above, but a manifestation (the philosophical concept of phenomenon) of the one who is already in the world as an order of energy-matter-space-time (scientific concepts). Another difficulty found in this model is that a "Christian naturalistic theology" could empty Christianity of its eschatological dimension, which cannot be reduced to the natural world or explained by means of natural processes. Polkinghorne is right when he states that God's otherness with respect to the world seems not assured⁸⁸.

⁸⁷ There are other theologians who share implicitly this presupposition and who think that some scientific concepts, representations and conclusions enter in direct conflict with theology and revelation. Consider for example Christoph Schönborn who wrote in the New York Times the following: "Ever since 1996, when Pope John Paul II said that evolution (a term he did not define) was 'more than just a hypothesis,' defenders of neo-Darwinian dogma have often invoked the supposed acceptance - or at least acquiescence - of the Roman Catholic Church when they defend their theory as somehow compatible with Christian faith. But this is not true. The Catholic Church, while leaving to science many details about the history of life on earth, proclaims that by the light of reason the human intellect can readily and clearly discern purpose and design in the natural world, including the world of living things. Evolution in the sense of common ancestry might be true, but evolution in the neo-Darwinian sense - an unguided, unplanned process of random variation and natural selection - is not. Any system of thought that denies or seeks to explain away the overwhelming evidence for design in biology is ideology, not science. [...] Now at the beginning of the 21st century, faced with scientific claims like neo-Darwinism and the multiverse hypothesis in cosmology invented to avoid the overwhelming evidence for purpose and design found in modern science, the Catholic Church will again defend human reason by proclaiming that the immanent design evident in nature is real. Scientific theories that try to explain away the appearance of design as the result of 'chance and necessity' are not scientific at all, but, as John Paul put it, an abdication of human intelligence." C. SCHÖNBORN, *Finding Design in Nature*, in New York Times, July 7, 2005. Although he has modified his original position, he still fuses biological and theological concepts in one discourse: "If the Resurrection of Christ is, so to speak 'the greatest mutation', [...] then we may also say: here is the destination of evolution. Seen from its conclusion and accomplishment, its meaning also becomes manifest. Although in its individual steps it may seem aimless and without direction, the long way did have a meaning when viewed from the perspective of Easter". C. SCHÖNBORN in P. SCHUSTER, *Creation and Evolution, a conference with Pope Benedict XVI in Castel Gandolfo*, p.106-107.

⁸⁸ J.-C. POLKINGHORNE, *Faith, Science and Understanding*, p. 107-109. J.-C. POLKINGHORNE, *Science and Providence*, p. 33.

In addition, there is no clear demarcation between natural sciences and theology⁸⁹. This integration does not recognize the plurality of epistemologies or methods⁹⁰. It does not recognize either the differences between a scientific representation and result, a philosophical affirmation and a theological proclamation and elaboration. Another difficulty, according to Ladrière, is that integration moves too fast to a synthesis or unified vision. This leads to a simple transposition or substitution of concepts from one field to the other⁹¹. It does not take into consideration the historical dimension of knowledge where concepts have semantic antecedents⁹².

III.2 Theology and natural sciences as separated and self-contained rational discourses: from independence to dialogue to avoid conflicts or errors

This model affirms a clear demarcation between natural sciences and theology. For some theologians, sciences and theology work in different realms of reality. For some others, these two rationalities have at least very different but complementary methodologies that in principle should not contradict each other. Let's start with the most radical position, Barth's notion of independence. Then we will revise more moderate attitudes like Ratzinger's and Moingt's.

III.2.1 Independence of reference and method: Karl Barth

When **Karl Barth** interprets the biblical narrative of the origin, he sees creation as the exterior foundation of the Covenant⁹³. Creation is necessary for the gift of grace and is the opening of salvation history. At the same time, the Covenant is the creation's interior foundation. The Covenant gives sense and finality to creation. Therefore, creation is only known through revelation and in relation to the Covenant⁹⁴. Barth argues that God as Creator is a revelation's concept and a statement of faith⁹⁵. Furthermore, in the *Church Dogmatics I.1*, Barth clearly disagrees in equating God the creator with a philosophical (or scientific) concept.

"It must not be taken to mean that Jesus had in mind what all serious philosophy has called the first cause or supreme good, the esse a se or ens perfectissimum, the universum, the ground and abyss of meaning, the unconditioned, the limit, the critical negation or origin,

⁸⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 181

⁹⁰ J. LADRIÈRE, *L'articulation du sens I*, p. 161-162.

⁹¹ J. LADRIÈRE, *L'articulation du sens II*, p. 162.

⁹² J. LADRIÈRE, *L'articulation du sens III*, p. 131.

⁹³ L. LADARIA, *El Dios vivo y verdadero: el misterio de la Trinidad*, Salamanca, Secretariado Trinitario, p. 87.

⁹⁴ I. FERNANDEZ, *Création : théologie historique et systématique*, p. 347.

⁹⁵ "It needs only be added that the assertion of creation is a statement of faith, i.e., a statement which can never be more than a hypothesis apart from its foundation in God's self-witness, not only on the side which maintains that God is the Creator of the world, and which therefore asserts the reality of God, but also on that which asserts that God is the creator of the world and which therefore asserts the distinctive reality of the world." K. BARTH, *Church Dogmatics III.1*, p. 6.

*and that he consecrated it and gave it a Christian interpretation and baptized it by means of the name father, which was not entirely unknown in the history of religion. In this regard we can only say that this entity, the supposed philosophical equivalent of the Creator God, has nothing whatever to do with Jesus' message about God the Father whether or not the term father be attached to it"*⁹⁶.

In the *Church Dogmatics III.1*, Barth distinguishes the Christian doctrine of creation from other world-views that have emerged or may emerge in the spheres of mythology, philosophy and science. In Barth's own words:

*"It [the Christian doctrine of creation] differs from all of these [mythology, philosophy and science] by the fact that it is based on God's revelation. But this is not merely a formal difference. It is also material. The Christian doctrine of creation does not merely takes its rise from another source. It also arises very differently from all such world-views. It not only has a different origin, but has a different object and pursues a different course. The divine activity which is its object can never become the theme of a world-view."*⁹⁷

However, in the same volume of the *Church Dogmatics III.1* Barth accepts the possibility that a myth, philosophy or science might be able to express, think or investigate the question of the world's becoming and the source of the universe in a legitimate way and whose motivation would be genuine⁹⁸. In addition, this "*new doctrine of pure becoming advance as an equivalent for the theological concept of divine creation*" can be admitted only if it shows that this pure becoming is pure divine benefits "*preceding all knowledge and being and underlying all knowledge and being.*"⁹⁹ In spite of that possibility, there remains the fact that theology is concerned only with divine revelation while the non-theological thinking seeks to apprehend the cosmos. The objects and the sources of theology and the non-theological thinking (science and philosophy) are different. For that reason "*the Christian doctrine of creation must pursue its own path according to its special ground and object and independently of any and every established or future philosophical system.*"¹⁰⁰

Barth has the merit of integrating creation into salvation history. There are some theologians that accept the nucleus of Barth's position, but with some nuances. Let's discuss Ratzinger's and Moingt's conceptions of the relationship between these two rational discourses.

III.2.2. Methodological distinction but in a complementary dialogue to correct ideological errors or to avoid conflicts: Ratzinger and Moingt

⁹⁶ K. BARTH, *Church Dogmatics*, I/1, in GREEN, Clifford, *Karl Barth. theologian of freedom*, p. 187.

⁹⁷ K. BARTH, *Church Dogmatics III.1*, p. 340.

⁹⁸ K. BARTH, *Church Dogmatics III.1*, p. 341.

⁹⁹ K. BARTH, *Church Dogmatics III.1*, p. 342.

¹⁰⁰ The underlined emphasis is ours. K. BARTH, *Church Dogmatics III.1*, p. 343.

Ratzinger affirms a distinction between natural sciences and theology that makes them complementary and not mutually exclusive. He clearly states that we do not have to choose between creation and evolution “*inasmuch as these two things respond to two different realities*”¹⁰¹. They are complementary due to the inner unity between faith and reason. Revelation and theology of creation explain the origin of the human person. Belief in creation tells us that the world is meaningful¹⁰². At the same time, the notion of creation does not explain *how* persons come to be but *what they are*. The theory of evolution seeks to understand and describe biological development and processes. It cannot answer the question of meaning.

Based on the distinction between the question of meaning and the understanding of biological processes, Ratzinger rejects the notion that the human being is the product of haphazard mistakes and chance. For him, this is not a scientific conclusion, but a statement whose origin is found in a materialistic philosophy. Ratzinger affirms that the human person is not the product of chance and error, but the results of God’s love¹⁰³. In his commentary of the book of Genesis, Ratzinger affirms that the *Logos* is the ultimate origin of things¹⁰⁴ and consequently, the world carries rationality within itself¹⁰⁵. God’s *Logos* is the Eternal Reason that creates the world, which rests forever in the divine hands. The narrative of creation invites human reason to be grounded in God’s creating Reason¹⁰⁶.

Ratzinger does not adopt scientific concepts, conclusions or worldviews in his theology. On the contrary, consistent with catholic tradition he argues that neither scientific nor philosophical rationality could enable us to discover the Christological foundation of the world¹⁰⁷. Nevertheless, he considers that scientific rationality, which a theologian should know, is complementary to theology, although they refer to different realities. For Ratzinger, the

¹⁰¹ J. RATZINGER, *In the Beginning; A Catholic Understanding of the Story of Creation and the Fall*, p. 50.

¹⁰² POPE BENEDICT XVI in P. SCHUSTER, *Creation and Evolution, a conference with Pope Benedict XVI in Castel Gandolfo*, p. 12-13.

¹⁰³ J. RATZINGER, *In the Beginning; A Catholic Understanding of the Story of Creation and the Fall*, p. 56-57.

¹⁰⁴ POPE BENEDICT XVI in P. SCHUSTER, *Creation and Evolution, a conference with Pope Benedict XVI in Castel Gandolfo*, p. 20.

¹⁰⁵ POPE BENEDICT XVI in P. SCHUSTER, *Creation and Evolution, a conference with Pope Benedict XVI in Castel Gandolfo*, p. 22.

¹⁰⁶ J. RATZINGER, *In the Beginning; A Catholic Understanding of the Story of Creation and the Fall*, p. 1-15 and 56-57.

¹⁰⁷ “Of course there is rationality in nature, but it does not allow us to gain a comprehensive insight into God’s plan. What remain, then, are contingency and the riddle of the terrible element in nature [...]. Despite the rationality that exists, we can observe a component of terror [in nature], which cannot be further analyze philosophically. Here philosophy calls for something more, and faith show us the Logos, who is the creative reason and who incredibly at the same time was able to become flesh, to die and rise again. With that, a completely different face of the Logos is manifested from what we can manage to glimpse on the basis of a grouping reconstruction of the fundamental reasons for nature”¹⁰⁷. POPE BENEDICT XVI in P. SCHUSTER, *Creation and Evolution, a conference with Pope Benedict XVI in Castel Gandolfo*, p. 174. “The moment of anthropogenesis cannot possibly be determined by paleontology: anthropogenesis is the rise of the spirit, which cannot be excavated with a shovel. The theory of evolution does not invalidated the faith, nor does corroborate it”¹⁰⁷. POPE BENEDICT XVI in P. SCHUSTER, *Creation and Evolution, a conference with Pope Benedict XVI in Castel Gandolfo*, p. 16.

theologian has the objective and mission to engage in dialogue with science in order to correct possible ideological and pseudo-scientific errors within the scientific worldview.

Moingt develops a theology of creation whose point of departure is God's revealed plan of salvation. For him, as for Barth, there is no opposition between God's plan of creation and God's plan of salvation. Theology does not have the task to explain how the universe was constituted, but to provide the meaning of the creative act from the point of view of God's revelation about the human being and his salvation¹⁰⁸. Theology does not have anything to say outside the meaning given to it by the divine project¹⁰⁹. The relationship between God and the world is neither the relationship of a demiurge to things nor a law that organizes a universe. The relationship between God and the world should be understood in Christological terms: *the world is the gift that God gives to his Son who enters into its realms as a creature*¹¹⁰. Moingt analyses and interprets the biblical narratives about creation in order to see what they clarify about God's plan for humanity¹¹¹.

The French Jesuit recognizes the internal consistency of the world and everything that happens in it. God's words are uttered to organize the world, which mediates between humanity and God¹¹². The internal consistency of the world comes from the Christian belief that it is created good and to become the milieu through which God communicates to human beings¹¹³. Due to this internal consistency of the world, Moingt proposes a dialogue with natural sciences and philosophy in order to avoid any false conflict between theology and these two rationalities¹¹⁴. This dialogue must respect the autonomy of sciences¹¹⁵. For Moingt, this dialogue is grounded in the fact that theology, philosophy (phenomenology) and science (quantum physics) refer to the same world although with different languages, perspectives and methods¹¹⁶. Moingt places the contribution of theology at the level of human life's meaning from the perspective of God's plan of salvation.

III.2.3 Examination of this model

¹⁰⁸ J. MOINGT, *Dieu qui vient à l'homme*, II-1, p. 43, 255.

¹⁰⁹ J. MOINGT, *Dieu qui vient à l'homme*, II-1, p. 263.

¹¹⁰ J. MOINGT, *Dieu qui vient à l'homme*, II-1, p. 287.

¹¹¹ J. MOINGT, *Dieu qui vient à l'homme*, II-1, p. 265.

¹¹² J. MOINGT, *Dieu qui vient à l'homme*, II-1, p. 259.

¹¹³ J. MOINGT, *Dieu qui vient à l'homme*, II-1, p. 289.

¹¹⁴ J. MOINGT, *Dieu qui vient à l'homme*, II-1, p. 256, 285

¹¹⁵ J. MOINGT, *Dieu qui vient à l'homme*, II-1, p. 289.

¹¹⁶ J. MOINGT, *Dieu qui vient à l'homme*, II-1, p. 272, 275 and 279.

Theologians that follow this model have the merit of recognizing the epistemological differences between natural sciences and theology and the internal consistency of the world. Most of the theologians that follow this model base their reflections on an implicit *a priori* postulate that could be formulated as follows: ***theology and natural sciences refer to distinct realities and have different epistemologies and semantics***. Barth and Ratzinger agree that theology and natural sciences refer to two different realities. Avoiding the risk of epistemological or methodological confusion, Moingt and Ratzinger suggest that theology's contribution is not at the level of explaining natural structures or processes but at the level of meaning for human existence. Here there is no risk of reducing theology to a naturalism whose consequence is losing its specificity and contribution. Nonetheless, there are other risks that need to be addressed. Although we agree that natural sciences and theology should be distinguished, what is the foundation to distinguish both rationalities? Is there a limit on that distinction? Or does that distinction make them totally independent? If that is the case then a dialogue between science and theology is very difficult, pointless or impossible.

This position also has the risks of reducing creation to soteriology and eschatology. We should not forget that God is the creator of the universe and not only of the religious sphere¹¹⁷. Moreover, Ratzinger, although he recognizes the value of scientific rationality, sometimes seems to reduce the contribution of a dialogue between science and theology to a correction of ideological aspects that could emerge in a scientific worldview. The image is more of a theologian's fraternal correction of a scientist's possible materialistic and ideological bias. We do not see in his system an articulation between faith and scientific worldviews. Are we satisfied with that position? Does science have nothing to contribute to the notion of creation? Is the dialogue only unidirectional, more a monologue from theology to science?

In terms of Moingt, he seems to reduce the dialogue to avoiding a conflict between theology and natural sciences. His method of developing a theology of creation is based on hermeneutics of biblical narratives. Nonetheless, a theology of creation should not only be developed on the hermeneutics of biblical, patristic and dogmatic texts. It should also have a speculative dimension that could articulate theology with scientific worldviews. Although Moingt develops a speculative theology in other fields of theology, e.g., the notion of pro-existence in his Christology, he does not do it in his theology of creation.

¹¹⁷ F. EUVÉ, *Penser la création comme jeu*, p. 57-59.

III.3 Theologies articulated with scientific worldviews through the mediation of philosophy

Theologians who follow this model aim to develop a constructive relationship between science and theology that respects their epistemological and semantic distinctions. There are three types of articulation that we consider under this model: the first is through existential questions, the second by means of philosophical and metaphysical concepts, and the third follows the mediation of human praxis.

III.3.1 Theological development that answers ultimate existential questions arisen from scientific representations: the case of limit-questions

Paul Tillich argues that there is no result from natural sciences (such as physics) or human sciences (such as history, sociology and psychology) that could be either directly productive or disastrous for theology¹¹⁸. Theologies have no direct relation with natural or human sciences. Theologians deal with scientists when there are philosophical-existential questions involved¹¹⁹. Tillich argues that the point of contact between sciences and theology lies in the philosophical elements found in both¹²⁰: the notion of being and the human situation out of which existential questions emerge. These existential questions are concerns about the limits, risks and conditions of our existences. As Tillich affirms, “*man is unconditionally concerned about that which determines his ultimate destiny beyond all preliminary necessities and accidents*”¹²¹. Tillich develops a method of correlation for systematic theology that articulates existential questions and theological answers. This method first analyzes the human situation and the existential questions arisen from it. Then it demonstrates that the Christian message’s symbols provide the answer to these questions¹²².

Some theologians who are committed to develop their theology in dialogue with natural sciences have been influenced by Tillich’s method. Following Tillich’s ideas, **Langdon Gilkey** develops the notion of limit-question. These limit-questions are the ultimate existential questions that emerge from our interpretations of scientific representations. They are philosophical questions about the existence of the cosmos and the mystery of human life. These existential questions are at the innermost core of our search for meaning because their answers are

¹¹⁸ P. TILlich, *Systematic Theology*, p. 21

¹¹⁹ P. TILlich, *Systematic Theology*, p. 27.

¹²⁰ P. TILlich, *Systematic Theology*, p. 21

¹²¹ P. TILlich, *Systematic Theology*, p. 17.

¹²² P. TILlich, *Systematic Theology*, p. 70-71.

fundamental for what we are and do¹²³. Limit-questions are beyond the boundaries of ordinary methods of scientific inquiry and verifiable knowledge. However, they can be answered by religious experiences expressed by religious symbols. Taking into consideration these limit-questions from the perspective of philosophy, theologians search for concepts in revelation and tradition in order to develop a ‘fresh’ theology that response to today’s concerns.

We will mention here two theologians who develop theological answers to some limit-questions: John Haught and Christoph Theobald.

Haught reflects on the following limit-question born from evolutionary biology: do we need God when the mechanisms of natural selection are sufficient to understand the evolution process? The issue of natural selection and other natural mechanisms seem to render unnecessary the presence of God¹²⁴. To answer this question, Haught develops his theology based on the biblical concept of “kenosis”, found in the Christological setting of Philippians 2:5-11. Haught argues that God does not “*cling to his divine status, but instead emptied himself*” in his relation to the world, even in the creative action. For Haught, creation is autonomous because the ‘humble’ God, who emptied Himself in his infinite love, avoids any coercive action that could absorb the world¹²⁵. God is presented in the mystery of his kenosis and not as a being that is “*omnipotent without love, an intelligence without compassion, an absoluteness without relationality, an eternity purified of temporality, or an immutability sterilized of inner drama*”¹²⁶.

Theobald searches for contributions that a Christian theology of creation can offer to some limit-questions that emerge in our pluralist western societies. Here are some brief examples of theological responses elaborated by Theobald in dialogue with some scientists:

(i) What we see as “chance” is a possibility for creation’s autonomous innovation¹²⁷. The limit-question addressed is the following: *what is the role of “chance” in evolution? How can we interpret it?*

(ii) For those who experience life as creation, the cosmos is not the absurd product of pure chance. God wills the universe, life and humanity¹²⁸. Those who discover their life as a free gift, as creation, experience a joy that could go as far as giving their life for others¹²⁹. This response addresses the following question: *is everything in the cosmos the pure product of “chance”?*

¹²³ L. GILKEY, *Society and the Sacred*, p. 111.

¹²⁴ Although Haught does not analyze in details this question from the perspective of philosophy, the question is directly related to the ultimate foundation of the universe and the ultimate meaning of life.

¹²⁵ J. HAUGHT, *God after Darwin*, p. 111-112, 114.

¹²⁶ J. HAUGHT, *Christianity and science. Toward a theology of nature*, p. 43.

¹²⁷ C. THEOBALD, *L’univers n’est pas sourd*, p. 364.

¹²⁸ C. THEOBALD, *L’univers n’est pas sourd*, p. 366.

¹²⁹ C. THEOBALD, *L’univers n’est pas sourd*, p. 365.

(iii) Believers consider that Christ's crucifixion and resurrection open an existential answer to questions about suffering and death. Christian eschatological hope, grounded in Christ's resurrection, provides the final meaning of this cosmic adventure¹³⁰. The question addressed here is the following: *seeing the suffering in the world and the problem of death, what is the meaning of life?*

(iv) The silence of God in his creation, as expressed by Psalm 18:1-5, means that the Creator is discrete and does not impose Himself in the created world, which is autonomous. God hides Himself in his created gift in order to enable the receptor's free answer¹³¹. A true gift is characterized by the fact that the Giver discretely withdraws himself in order to avoid an imposed answer. This is a response to the following question: *if there is a Creator, why cannot we find evidence of his presence in the cosmos?*

III.3.2 Transformation of scientific concepts into theological concepts by means of philosophical categories

As John Haught argues, "we cannot speak seriously about God's relationship to the scientifically understood universe without using philosophical or metaphysical language"¹³². In this section we will discuss some examples of theologians that have developed their theology using some concepts that were transformed from their original scientific use to a philosophical meaning pertinent to theology. Our objective is not to be exhaustive, only to provide some examples and then to reflect upon them.

Karl Rahner is a theologian who makes an effort to incorporate the evolutionary worldview in Christian theology. At the same time, Rahner avoids using specific scientific terms, representations or theories such as "natural selection", "Big Bang", etc. The evolutionary worldview is assumed through the philosophical concept of "self-transcendence", which is understood as becoming more and more complex. Rahner considers that God can be thought as the Absolute Being, the condition that renders possible the finite being's self-transcendence in order to become more. God is considered as a never ending Creator and creation is conceived as *creatio continua*. Self-transcendence is not a reality among other physical realities, as God is not a being among other beings. Therefore, self-transcendence is not in the realm of natural science but in the realm of mystery. The totality of reality is in constant self-transcendence grounded in

¹³⁰ C. THEOBALD, *L'univers n'est pas sourd*, p. 367.

¹³¹ C. THEOBALD, *Transmettre un Evangile de liberté*, p. 155-156.

¹³² J. HAUGHT, *God after Darwin*, p. 110.

God's relation to the world. This is not pantheism because God is not identified with the cosmos, is not a thing among other things but the ground of the evolutionary process¹³³.

Rahner develops not only a philosophical reflection and discourse. He writes in a clear theological horizon and language. Rahner affirms that God not only creates something different from Himself, but He also gives Himself to this created and finite being in order to divinize it. The world receives God, the infinite and ineffable mystery, in such a way that He Himself becomes its innermost life. This process of God's self-communication and its acceptance reaches its climax in history in the person of Jesus Christ. Rahner understands salvation as God's self-communication and human acceptance. The Savior is God's self-communication acting in the world and at the same time he is a human being who accepts God in grace within history. The Savior unifies in himself the creature's self-transcendence and God's self-communication. From this perspective, incarnation is necessary to achieve the process of self-transcendence and the process of divinization of the world as a whole. Therefore, creation and incarnation are not two disparate and juxtaposed acts of God "outwards". We can understand creation and incarnation as two moments or two phases of the one process of God's self-giving and self-expression. Incarnation has not only the objective of liberating us from sin, but of fulfilling and achieving creation.

Rahner articulates his theology of creation and salvation with a scientific worldview without confusing scientific knowledge about the cosmos with Christian revelation. His effort respects epistemological differences between natural sciences and theology¹³⁴. He transforms the evolutionary worldview by means of philosophical concepts such as self-transcendence. Then he enters into theological reflection by means of concepts such as God's self-communication. Clearly Rahner is not satisfied with a simple commentary on scriptural or dogmatic texts about creation and salvation. He develops his systematic theology in new ways that can communicate the revealed words to our contemporaries.

The Belgian theologian **Adolphe Gesché** develops his theology of the cosmos by revising the concept of "causality". Gesché criticizes the use of the metaphor of object fabrication to understand God's act of creation¹³⁵. We cannot apply to God the same type of causality that one uses to describe human actions in the process of construction of objects. Christians believe in a God who is outside a mechanical relation of cause and effect. Gesché postulates another sense of

¹³³ K. RAHNER, *Foundation of Christian Faith*, p. 180-189.

¹³⁴ K. RAHNER, *Foundation of Christian Faith*, p. 178-179.

¹³⁵ A. GESCHE, *Le Cosmos*, p. 71.

causality that could be applied to God. First of all, God is not a cause among other causes. God is a cause in the sense of creating things with a capacity to create themselves¹³⁶. This divine transcendental causality respects and wills an immanent causality that is internal to the creation process, which is self-regulated. God's causality poses the created being in a process of becoming. Consequently, Gesché proposes to replace the formula "*by whom everything is made*" with a new one: "*by whom everything becomes*"¹³⁷. God is Creator of a creative autonomous and self-regulated becoming. Creation is nothing else than this creative becoming from which different things will emerge by means of internal causalities.

It is important to note that Gesché articulates the scientific notion of evolution with theology through the philosophical concepts of "transcendental causality", "immanent causality", "autonomy" and "becoming". These philosophical concepts enable Gesché to re-elaborate the theological concept of creation.

François Euvé proposes to reinterpret God's relation to creatures, including the act of creation, by using the concept of "game"¹³⁸. The concept of "game" is taken from the branch of applied mathematics called "game theory"¹³⁹. This concept enables him to bring together at the same time the roles of "chance" and "rule" found in science. There is no game without both aspects¹⁴⁰. The aspect of chance allows us to avoid the notion of a predetermined plan or intention. Nevertheless, the game is not pure chance. The presence of chance and the lack of predetermined plan do not imply the absence of rules or the absence of intentions in a game. The game must have some rules that enable a strategic action. Chance is the necessary but not sufficient condition to develop an unedited and unpredictable path¹⁴¹. Euvé uses it in order to highlight and interpret the aspects of novelty and unpredictability that scientists see in the cosmic and biological evolution.

After he examines the scientific meaning of "game", Euvé analyzes it from the perspective of philosophy. Euvé finds that the notion of "game" has the following characteristics: freedom, separation, unpredictability, lack of productivity, rule and fiction. Then Euvé analyzes the term "game" from a theological perspective in order to retrieve its pertinence to theological discourse. He has found that biblical and historical theologies have used some notions related to the concept

¹³⁶ A. GESCHE, *Le Cosmos*, p. 71-72.

¹³⁷ A. GESCHE, *Le Cosmos*, p. 72.

¹³⁸ Gesché has previously developed this topic of creation as a "game". See A. GESCHE, *Le Cosmos*, p. 144-149.

¹³⁹ The term "game" was already a metaphor taken from ordinary life.

¹⁴⁰ F. EUVÉ, *Penser la création comme jeu*, p. 333.

¹⁴¹ F. EUVÉ, *Penser la création comme jeu*, p. 336.

of “game” such as laugh and dance¹⁴². In applying these considerations to creation and using “game” as a metaphor, theology can avoid the rigid notion of divine destiny that controls and determines all creation aspects as a divine predetermined plan. At the same time, the presence of chance in the cosmos does not imply the negation of a Creator with an intention. The use of the concept of “game” authorizes the affirmation of the world’s autonomy, where God allows the cosmos and humanity to act according to chance and human freedom and according to some rules¹⁴³. The metaphor of “game” enables the theologian to highlight the aspects of wonder and joy in the contemplation of the cosmos. God, as somebody who enters in a game, enters with freedom and also takes a risk. This risk is manifested in the sin and death that appear in creation. Nevertheless, the risks of the creative game should not make us forget the joyful aspect of it. This joy is a sign that prefigures the eschatological joy of the final cosmic accomplishment in Christ, which is not over yet¹⁴⁴.

As we see, Euvé takes a scientific concept with its initial meanings. Then he retrieves and adds useful and relevant philosophical aspects and meanings. Finally, in a third moment he applies this concept to theology in order to interpret God’s role in the world and “creation” in a new original way.

III.3.3 Articulation of scientific worldviews and systematic theology by means of the philosophical categories of praxis and ethics

Some theologians articulate some scientific worldviews into their theologies by means of an ethical reflection or through the philosophical category of “praxis”¹⁴⁵. There is a large variety of topics that includes, among others, our responsibility with respect to the environment, social justice in the distribution of natural resources and the relations between applied science (and technology) to the subject of evangelical praxis. Let’s consider two examples: Christoph Theobald and Jürgen Moltmann.

Christoph Theobald affirms that there is a relationship between our worldview and how we envisage our actions and ourselves. Through a philosophical reflection Theobald argues that the human capacity to think, to anticipate the future and to act in a deliberative manner (ethics) is

¹⁴² F. EUVÉ, *Penser la création comme jeu*, p. 331.

¹⁴³ F. EUVÉ, *Science, foi, sagesse. Faut-il parler de convergence ?*, p. 119-138.

¹⁴⁴ F. EUVÉ, *Penser la création comme jeu*, p. 386.

¹⁴⁵ Some of these works have been influenced by Teilhard de Chardin’s thoughts about the divinization of human actions and suffering. See P. TEILHARD DE CHARDIN, *Le milieu Divin*.

specific to humanity¹⁴⁶. Humanity has an eminent role to play in the interrelations and interdependence of all forms of life. What attitude should the human person have vis-à-vis scientific discoveries and technological power? The fragility of our world asks for a change of attitude and discernment with respect to the environmental consequences of our actions. This is a call for human freedom, responsibility and ethics¹⁴⁷.

Theobald proposes an articulation between Jesus' praxis and our current need to develop an ethical, responsible and free attitude to our universe and our fellow human beings. Christ's praxis, his healings and his words, manifests that life is a gift even in the middle of extreme difficulties. This gift of life invites us to give our lives even to our enemies. Christ is the Messiah, the Saint of God that manifests the cosmos' hidden capacities to regenerate. Through Jesus' messianic actions, words and holiness, God reveals that the cosmic and human mysterious destiny is Christ himself¹⁴⁸. Confessing that in Christ everything is created (Col 1:16) means that we hear, thanks to him, in the cosmic silence the infinitely discreet voice of the Father, who is the Absolute Giver of all things. These are the theological foundations of an attitude of benevolence toward the environment.

Moltmann starts his theology of creation confronting the ecological crisis we are currently living. For Moltmann, this crisis is not transitory or temporary. What we are experiencing is a struggle for the life or death of creation in our planet¹⁴⁹. Moltmann addresses this problem and he critiques current attitudes to the natural world that promote the actual ecological crisis¹⁵⁰. Exploitative domination has been the prominent attitude that created this problem. This attitude is grounded in the modern scientific way of knowing nature: mastering nature by objectifying and analyzing it. For Moltmann, a theology of creation should propose a knowledge whose objective is not to dominate but to restore the community of the human being with nature.

A theology of creation will contribute to see nature, not as an object to conquer, but as God's creature¹⁵¹. In terms of God's presence in the world, the Spirit's inhabitation makes creation the house of the Lord¹⁵². In terms of an anthropological perspective, the natural world is called to be a community of creation¹⁵³. All these elements invite us to change our current actions

¹⁴⁶ C. THEOBALD, *L'univers n'est pas sourd*, p. 370.

¹⁴⁷ C. THEOBALD, *L'univers n'est pas sourd*, p. 371.

¹⁴⁸ C. THEOBALD, *Transmettre un Evangile de liberté*, p. 164.

¹⁴⁹ J. MOLTSMANN, *Dieu dans la création*, p. 7.

¹⁵⁰ R. BAUCKHAM, *The theology of Jürgen Moltmann*, p. 184.

¹⁵¹ J. MOLTSMANN, *Dieu dans la création*, p. 14.

¹⁵² J. MOLTSMANN, *Dieu dans la création*, p. 9, 17

¹⁵³ J. MOLTSMANN, *Dieu dans la création*, p. 17.

based on the attitude of domination to a praxis that corresponds to a creational-ecological-communitarian vision¹⁵⁴.

III.3.4 Examination of this model

Theologians that follow this model assume neither continuity nor rupture between natural sciences and theology. They are able to go beyond these two possibilities by virtue of a philosophical mediation that provides a meaningful articulation. Some follow a mediation provided by an existential horizon of meaning (limit-questions), others by the mediation of metaphysical concepts (causality, transcendence, etc.) and others use metaphors whose meanings traverse scientific, philosophical and theological perspectives (e.g., Euvé's uses of the notion of "game"). Finally, others follow the mediation of the anthropological horizon of human praxis. This model follows this basic postulate: ***theology and natural sciences have their own rationality, however they can be articulated through the mediation of philosophy, which shares elements with both rationalities.***

Nevertheless, there are some questions concerning this position. Theologians who follow this model of articulation have not grounded their effort. There is a lacuna, a hiatus that needs to be developed in order to ground this effort. Moreover, what could be the explicit theological method, or methods, that enables the development of systematic theology articulated with natural sciences through some mediation? What are the proper mediations? In other words, how do we articulate systematic theology with natural sciences doing justice to the nucleus of truth discerned in the first and second models already discussed?

IV. Objectives and hypotheses of this work

IV.1 Summary of questions, issues and lacunas raised in our previous analysis

Our previous analysis of the three models of relations between Christian systematic theology and natural sciences shows us that each model has issues that need to be clarified, possible lacks of foundations and a series of lacunas that need to be addressed. All of these can be summarized by the following four sets of questions related to four subjects.

Q1: Orders of reality. Do the reality of the natural world (studied by natural sciences) and the reality of God's actions and revelation (studied by Christian theology) coincide or are they different? If they are identical, then in principle we could develop one fully integrated system of

¹⁵⁴ J. MOLTSMANN, *Dieu dans la création*, p. 292-293 and 405.

knowledge that would correspond to the total reality. If they are different, does that imply that they are totally independent? If that is the case, then all efforts to articulate natural sciences and theology are wishful thinking.

This set of questions is related to the traditional theological debate on the relationship between nature and grace¹⁵⁵. Theologians learn from that debate in the history of theology that there are three extremes to be avoided: an absorption of the natural into the supernatural realm, a reduction of God's grace into a form of naturalism and an extrinsicism of God's grace with respect to human nature (contested by H. de Lubac) understood as a relationship of juxtaposition or superposition of both realities¹⁵⁶. In terms of the two orders of reality, the natural world and God's actions and revelation, their relationship can be conceived as a continuity (where the extreme of absorption of one by the other or reduction of one into the other must be avoided), as a discontinuity (where the extreme of mere juxtaposition or superposition must be avoided as well) or as neither one nor the other. The proposed method of articulation of scientific worldview into systematic theology depends on our idea of the relationship between both orders of reality.

Q2: Specific rationalities and methods. Do sciences, philosophy and theology study reality (or different realities) through different specific rationalities in terms of their objects, methods and notions of truth? If they have distinctive rationalities then it will be difficult, if not impossible, to argue in favor of one overall synthesis as willed by Peacocke. Moreover, if they are different, can they dialogue? What is the foundation of this possible dialogue? Should we be satisfied with a dialogue whose simple objective is to avoid or correct any mistaken interpretation or ideology?

These questions about the specific rationalities of sciences, philosophy and theology are relevant to our work. In order to propose a theological method that articulates scientific worldviews into systematic theology we must clarify the objects and methods of natural sciences and Christian theology. Furthermore, we must also clarify what we mean when we talk about scientific truth and theological truth.

Q3: Notion of "reality" and our access to it. In the two sets of questions previously discussed we refer to terms such as "reality" or "realities". When we talk about the reality of the natural world, the human being's reality and the reality of God, what does the term "reality" mean? Additionally, do we discover the objects, structures and foundation of reality (or realities), or do we merely construct models?

¹⁵⁵ See G. KRAUS, *Nature and Grace*, p. 504-506.

¹⁵⁶ E.-M. FABER, *Grâce*, p. 603-604.

Moreover, we must clarify the status of scientific objects and theories. Are they meager scientific or theological constructions? Or do we access a “reality” through scientific, philosophical and theological theories? These are unavoidable epistemological issues that are pertinent to the dialogue between sciences and theology. They are related to the modern debate of realism versus idealism and the position of Twentieth Century phenomenology that influences Ladrière and Zubiri.

Q4: Articulation between rationalities. Presuming that natural sciences, theology and philosophy have distinctive rationalities, how do we ground a possible articulation that goes beyond meager corrections of mistaken interpretation? Do we need some mediations between sciences and theology? If that is the case, what are the most appropriate mediations? Finally, we must clarify if the dialogue is between sciences and faith or between scientific and theological rationalities.

IV.2 Objectives of this research work

As mentioned before, the main objectives of this present work are:

- (i) *to study the conditions and foundations for a possible articulation between natural sciences and systematic theology;*
- (ii) *to propose a theological method, grounded in these foundations and conditions, that explicitly articulates scientific worldviews into systematic theology.*

These main objectives will be achieved by four specific objectives that are directly related to the previous four general sets of questions and issues raised during the analysis of the state of the matter. These four specific objectives are the following:

First objective: An analysis of the relationship between the reality of the natural world and the reality of God’s revelation and actions. There are three viewpoints: (a) there is continuity between the reality studied by natural sciences and the reality by Christian theology; (b) there is a discontinuity and clear demarcation between them; (c) there is neither continuity nor discontinuity. These three viewpoints are related to the three models of relationship between sciences and theology, as discussed previously. Through this work we must address this issue that is very relevant to the foundation and conditions for a dialogue between these two fields of knowledge.

Second objective: An analysis that renders explicit the specific rationalities, methods and languages of natural sciences, philosophy and Christian theology. The three modes of relating

Christian theology and natural sciences previously discussed presuppose some implicit views of what is a rational discourse. However, our study of the state of the matter has not clarified us what are the specific rationalities of natural sciences, philosophy and systematic theology. A deeper analysis of these three rationalities is essential to understand their access to the orders of realities of the natural world and the reality of God's revelation. In addition, that analysis will clarify the status of objects and theories and their relation to the reality studies. Finally, that analysis will clarify the appropriate "place" of a possible articulation between natural sciences and theology that does not fall into scientism or positivism.

Third objective: A study of the concept "reality". Any model of articulations between natural sciences and theology presupposes a concept of "reality" (cosmic reality, anthropological reality and the reality of God's revelation). We need to clarify what does this notion of "reality" mean. Moreover, we need to address how we access a reality through scientific, philosophical or theological rationality. Is there any common structure between scientific, philosophical and theological languages?

Fourth objective: The development and justification of possible philosophical mediations between natural sciences and systematic theology. We need to ground a possible relationship between natural sciences and theology. Do we integrate immediately scientific worldviews into theological discourses? Do we only clarify some misunderstandings? Or, do we need philosophical mediations in the dialogue between these fields of knowledge? In the third case, what do we mean by philosophical mediation? What are these possible philosophical mediations and what are their relations to natural sciences and theology?

As we will see, once we address these four specific objectives, related to the four sets of questions, we will be able to provide the foundation and the conditions that render possible a method that articulates systematic theology with scientific worldviews. These four specific objectives are unavoidable global epistemological issues that are explicitly addressed by Jean Ladrière and Xavier Zubiri through their efforts. They have contributed to our knowledge about human understanding by their penetrating analysis of our apprehension of reality, language and rational methods.

IV.3 Hypotheses of this research work

In this section, we present the basic hypotheses of this research work that correspond to the four questions and the four specific objectives already discussed. There is one fundamental hypothesis, which is the following:

Fundamental hypothesis: *An articulation of scientific worldviews into systematic theology is possible through the mediation of philosophy. In this articulation, philosophy enables us to transform the semantics of scientific worldviews to be used in theology.*

This hypothesis is the basic postulate of the third model of relationship between natural sciences and theology. Our intention is to ground explicitly this hypothesis as a condition that renders possible the articulation of scientific worldviews into systematic theology. Moreover, the theological method we will propose will have this philosophical mediation as one of its concrete steps. Our position is that scientific concepts, representations and theories should not be immediately integrated into theological discourses. Furthermore, we affirm that we can and we should go beyond simple clarifications of ideological positions that could cause conflicts with Christian beliefs. We propose that theologians develop theological systems considering seriously scientific worldviews without pretending to create an integrated global system that is neither science nor theology.

Moreover, there are three more theses. Each one builds on previous ones, i.e., we will not be able to demonstrate the fundamental hypothesis, without these others. They are the following:

Hypothesis 1: the orders of reality. *There are two orders of reality, the order of manifestation and the order of revelation. The relationship between these two orders should be understood through the maxim: neither confusion nor separation. They can be neither identified nor separated.*

This hypothesis grounds our fundamental hypothesis. Natural sciences and theology cannot be integrated into one global system because they do not refer to one identical order of reality. They refer to two orders of reality that are not identical. On the other hand, natural sciences and theology could be articulated because the two orders of reality are not separated or independent. There is a relation analogous to the relation of the human and divine natures in Christ expressed by the Council of Chalcedon.

Hypothesis 2: Specific rationalities that share a homologous structure. *Sciences, philosophy and theology have their own distinctive rationalities. Nonetheless, they share a homologous rational structure in the sense that specific objects, methods (i.e., a system of reference, a sketch and an experience as testing), verification processes and notions of truth are attested in each of*

them. The distinctiveness lies in the fact that each component is specific and particular to each science, philosophy and theology.

This is the second foundation that renders possible a relation between natural sciences and theology through the mediation of philosophy: the three rationalities share a homologous structure.

Hypothesis 3: three moments to access reality. *Each rational method (scientific, philosophical and theological) is grounded in three inseparable moments: (i) a fundamental immediate experience in the sense of an apprehension of reality, (ii) a milieu where we apprehend things in relation to previous knowledge (language and a field of reference) and (iii) an elaboration of theories or sketches. Through experiences one apprehends each real thing as individual. Through the field of references and language one intellectually know what the real thing is in function of other realities previously apprehended. Elaborated theories or sketches are the methodological explanation of what things are and why they are. Finally, the notion of “reality” is intimately related to these three inseparable moments of the rational method.*

This hypothesis will clarify the moments of each rationality and their access to each order of reality. We will clarify as well the relation of a fundamental experience (such as a Christian spiritual experience), a milieu or system of reference where we apprehend the fundamental experience (e.g., Scriptures and Tradition) and a search to understand these two moments (Christian theology). Once we clarify these moments, shared by all rationalities, we will be able to understand the grounds of the theological method and its connection to revelation and reason. This will enable us to develop a theological method that articulates scientific worldviews.

IV.4 Connections between the four hypotheses of this work

According to the four hypotheses (mediation of philosophy, the orders of reality, the specific rationalities and the three moments to access “reality”) natural sciences, philosophy and theology do not share the same object, method, verification processes or notions of truth. This is the nucleus of truth of Barth’s position and contribution. Nevertheless, they can be articulated due to the following reasons: (i) they share homologous rational structures; (ii) they are united in the rational subject (scientist, philosopher or theologian) who searches the truth and meaning of life; and (iii) God is the ultimate foundation of all realities (be the order of manifestation or the order of revelation). However, all possible articulations are always problematic, conditioned and precarious because (i) all rationalities must revise continuously their objects, methods and

verification processes and (ii) all knowledge is always open to be surpassed. Consequently, there is a permanent need to revise all our articulations.

IV.5 Organization of this research work

This research work is organized around the set of questions, the objectives and the hypotheses already discussed. Table 1.1 shows the organization of chapters. As the reader can see, each chapter addresses one or two questions, specific objectives and hypotheses.

Table 1.1 Relationship between questions, objectives, hypotheses and chapters in the present document

Chapters in the document	Questions	Specific Objectives	Hypotheses
Chapter 2. Two orders of reality: the order of manifestation and the order of revelation.	Q1	First objective	Hypothesis 1. The orders of reality
Chapter 3. The order of manifestation and the project of rationality: natural and human sciences.	Q2	Second objective	Hypothesis 2. Specific rationalities.
Chapter 4. The order of manifestation and the project of rationality: philosophy.	Q2	Second objective	Hypothesis 2. Specific rationalities.
	Q3	Third objective	Hypothesis 3. Three moments to access reality.
Chapter 5. The order of revelation and the project of rationality: theology.	Q2	Second objective	Hypothesis 2. Specific rationalities.
	Q3	Third objective	Hypothesis 3. Three moments to access reality.
Chapter 6. The articulation of systematic theology and scientific worldviews: philosophical mediations.	Q4	Fourth objective	Fundamental hypothesis. The necessary mediation of philosophy.
Chapter 7. Conclusion: the need for a permanent revision of our articulations.			

Chapter 2. Two orders of reality: the order of manifestation and the order of revelation

I. Introduction

I.1 Specific objective and hypothesis of this chapter

The present chapter seeks to analyze the relationship between the reality of the natural world and the reality of God's revelation and actions. As we have discussed in the previous chapter, there are three viewpoints: there is continuity between the reality addressed by natural sciences and the reality studied by Christian theology; there is a discontinuity and clear demarcation between them; there is neither continuity nor discontinuity.

This chapter will elucidate the first hypothesis of this research work:

Hypothesis 1: the orders of reality. *There are two orders of reality, the order of manifestation and the order of revelation. The relationship between these two orders should be understood through the maxim: neither confusion nor separation. They can be neither identified nor separated.*

According to this hypothesis natural sciences, philosophy and theology do not refer to the same order of reality. Before justifying this hypothesis let's consider the notion of reference as has been developed in philosophy of language and linguistics

I.2 Reference in science, philosophy and theology

There is in philosophy of language a distinction between meaning and reference. Frege distinguishes these two linguistic aspects. For Frege, the aspect of reference (*Bedeutung*) is the object that the expression designates¹⁵⁷. With respect to our object of reference we can distinguish the mode in which it is represented (meaning). The same object can be represented in different modes, e.g., "Barack Obama" and "the president of United States in 2009". For the moment let's just say that meaning (*Sinn*) is the sense of an expression, what we understand once we hear an oral expression or read a sentence. In this section we will deal with the issue of reference in science, philosophy and theology. We will deal with the issue of meaning later.

Ladrière goes beyond the notion of reference as an object that a sentence designates. He develops the notion of fields or order of references. An order of reference is a source of knowledge. Do sciences, philosophy and theology refer to the same field of references? Do they

¹⁵⁷ M. BEUCHOT, *Historia de la filosofía del lenguaje*, p. 212.

share the same source of knowledge? As we will see, Ladrière understands that sciences and philosophy refer to the order of manifestation. Meanwhile, he states that theology refers to the order of revelation. The following will clarify what means the term “order”. This will help us clarify what are the orders of manifestation and revelation and how they relate.

II. Distinction of order of reality

For Ladrière, natural sciences, human sciences and philosophy refer to the same order. Nevertheless, theology refers to another order of reality¹⁵⁸. What does he mean by order of reality? Ladrière mentions that he uses the term “order” in the same sense as Pascal did. Let’s consider Pascal’s concept of “order”.

II.1 Pascal’s concept of “order”

Pascal develops a philosophy of gradation and distinction of orders. In his works “order” is a polysemic term, e.g., “order of a discourse,” “social order,” “religious order,” “personal order,” etc. Order here is a term related with reality’s gradations¹⁵⁹. Pascal develops his notion of orders in the fragment L. 308 B. 793 in *Pensées*¹⁶⁰. This fragment distinguishes between two natural orders: flesh and spirit. It affirms also the existence of a third order, the supernatural order or charity, which is infinitely superior to the other two. Therefore, Pascal thinks that there are three hierarchical orders: (1) the order of flesh (*chair*), (2) the order of spirit and (3) the order of charity. There is a radical disproportion that separates each order. The superior order includes the inferior, but the inferior is incapable to construct the superior. Pascal also affirms that these

¹⁵⁸ J. LADRIERE, *Science et théologie*, p. 16.

¹⁵⁹ P. MAGNARD Pierre, *Le vocabulaire de Pascal*, p. 43

¹⁶⁰ “La distance infinie des corps aux esprits figure la distance infiniment plus infinie des esprits à la charité ; car elle est surnaturelle. Tout l’éclat des grandeurs n’a point de lustre pour les gens qui sont dans les recherches de l’esprit. La grandeur des gens d’esprit est invisible aux rois, aux riches, aux capitaines, à tous ces grands de chair. La grandeur de la sagesse, qui n’est nulle sinon de Dieu, est invisible aux charnels et aux gens d’esprit. Ce sont trois ordres différents de genre. [...] Les saints ont leur empire, leur éclat, leur victoire, leur lustre, et n’ont nul besoin des grandeurs charnelles ou spirituelles, où elles n’ont nul rapport, car elles n’y ajoutent ni ôtent. Ils sont vus de Dieu et des anges, et non des corps ni des esprits curieux : Dieu leur suffit. [...] Jésus-Christ, sans biens et sans aucune production au dehors de science, est dans son ordre de sainteté. Il n’a point donné d’invention, il n’a point régné ; mais il a été humble, patient, saint, saint, saint à Dieu, terrible aux démons, sans aucun péché. [...] Mais il y en a qui ne peuvent admirer que les grandeurs charnelles, comme s’il n’y en avait pas d’infiniment plus hautes dans la sagesse. Tous les corps, le firmament, les étoiles, la terre, et ses royaumes, ne valent pas le moindre des esprits ; car il connaît tout cela, et soi ; et les corps, rien. Tous les corps ensemble, et tous les esprits ensemble, et toutes leurs productions, ne valent pas le moindre mouvement de charité. Cela est d’un ordre infiniment plus élevé. De tous les corps ensemble, on ne saurait en faire réussir une petite pensée : cela est impossible, et d’un autre ordre. De tous les corps et esprits, on n’en saurait tirer un mouvement de vraie charité : cela est impossible, et d’un autre ordre, surnaturel.” B. PASCAL, *Pensée*, L. 308 B. 793, in version of M. LÉON BRUNSCHVIG, *Pensée et opuscule*, p. 695-697. The underlined emphasis is ours.

disproportions are not equivalent. There is an infinite distance between flesh and spirit. But between these two orders and the order of charity, there is an absolutely infinite distance¹⁶¹.

These orders do not refer only to different fields of ontological realities. The three orders of beings are also orders of knowledge¹⁶². Each order is a field of reference that has its level of truth. The first level, the order of flesh, relates to the body, and to political, financial or military actions¹⁶³. The order of the spirit refers to the knowledge possessed by intellectuals, scholars and philosophers. The order of charity refers to wisdom as knowledge that comes from God. Pascal states clearly that a human being does not have access by his natural forces to the third order, which is the supernatural order of God's reality. In terms of knowledge and reference, we can access each order of reality by different types of efforts and methods. With respect to the reality of God we can access only by means of charity and God's grace.

These three orders are heterogeneous. However, regardless of their distance and heterogeneity, each order is figurative of the other two. The sense of the term "figure" in Pascal is equivalent to the concept of "metaphor". A reality that belongs to the order of the flesh can become a metaphor of a spiritual reality. Consequently, the vocabulary of the first order could be applied metaphorically to the other two¹⁶⁴.

II.2 Ladrière's distinction between two orders

We interpret Ladrière's notion of "order" as an autonomous field reference and source of knowledge. Although Pascal mentioned three orders, Ladrière consistently refers to two orders: the order of manifestation and the order of revelation. The first order, the order of manifestation, is the field of reference that is accessible by means of ordinary experience, perception, human action, science, myth and philosophy¹⁶⁵. The second order, the order of revelation, is the field of reference that is accessible by God's own initiative. As Pascal's order of charity, we do not have access to this order by the sole means of our human intellectual and linguistic capacities and efforts. It is God's action that reveals us his truth.

¹⁶¹ J.-L. BISCHOFF, *Dialectique de la Misère et de la grandeur chez Pascal*, p. 107.

¹⁶² P. MAGNARD, *Les « trois ordres » selon Pascal*, p. 13.

¹⁶³ J.-L. BISCHOFF, *Dialectique de la Misère et de la grandeur chez Pascal*, p. 106.

¹⁶⁴ J.-L. BISCHOFF, *Dialectique de la Misère et de la grandeur chez Pascal*, p. 105.

¹⁶⁵ In *L'articulation du sens I*, Ladrière already mentions the term "order". However, he still fuses the concepts of revelation and manifestation (p. 186-188) or he distinguishes them as modes of "givenness" (p. 216). In *L'articulation du sens II*, Ladrière mentions a "horizon of meaning" with a reference to a "field of reality" (p. 101). In his third period, in *L'articulation du sens II*, Ladrière mentions the concept of "order" (p. 30, 37, 43, and 44) and the concept of field of reality (p. 22, 37 and 42). Moreover, during this third period he clearly distinguishes the order of revelation and the order of manifestation. See also J. LADRIÈRE, *Approches philosophiques de la création*, p. 19.

Moreover, we interpret the concept of order not only as fields of reference and sources of knowledge but also as domains of realities¹⁶⁶. Both domains of realities exist as God's gift. The order of manifestation is God's creation. It is God Himself who grounds the existence of everything that is in the universe. The order of revelation is God's gift in Christ that calls and leads us to the reality of the Kingdom of God. Therefore, these two orders are not independent. The reality of the world as creation is a preamble of the reality of salvation, which is understood as fulfillment in God. The reality of the world needs itself to be fulfilled. The superior order of revelation accomplishes the world¹⁶⁷.

Nevertheless, although they are not independent, we can and must distinguish them. God creates the world with a fundamental characteristic; the world is autonomous¹⁶⁸. It has in itself the principles of its own constitution and becoming. Therefore we must refer to the world's own principles when we intend to describe or explain what is manifested. We will see that the God of the Christian faith is not a watchmaker who controls every aspect of the world. As we will see below, Christians believe that God creates the finite reality with the gift of autonomy and freedom.

III. The order of manifestation and self-constitution

III.1 Meaning of the word "manifestation"

This order is a source of knowledge grounded in the process of manifestation. The word manifestation comes from the Latin *manifestatio*, which comes from the verb *manifestare* that means "to make public". The sense of the word manifestation is to disclose something that is not obvious. It is related to the word discover, which comes from the Latin *dis* (the opposite of) – *cooperire* (cover). Discover means to obtain knowledge by uncovering what is hidden.

We believe Ladrière is influenced here by Husserl's and Heidegger's phenomenology. Let's consider briefly only Heidegger's analysis of the process of manifestation and its relationship to language in his work *Being and Time*.

III.2 Manifestation in Heidegger's *Being and Time*

In order to analyze the concept of phenomenology, Heidegger starts to study the concept of "phenomenon" and then he does the same with the concept of "*logos*". The term phenomenon (*to*

¹⁶⁶ J. LADRIERE, *Science et théologie*, p. 16-17.

¹⁶⁷ J. LADRIERE, *Science et théologie*, p. 17.

¹⁶⁸ J. LADRIÈRE, *Approches philosophiques de la création*, p. 22-24.

phainomenon) comes from the Greek verb *phainestai*, which means “to show itself”¹⁶⁹. Phenomenon is “*that which shows itself in itself, the manifest*”. “Phenomena” are “*the totality of what can be brought to the light*”, the entities (*ta onta*). An entity can show itself in different ways, depending on the kind of access we have. An entity can even manifest itself as something that does not correspond to it. This is a second meaning of the term “phenomenon”; something that could “look like”, “seem like”, but in reality “it is not”.

Heidegger also distinguishes between “showing itself”¹⁷⁰ and “appearance”. Appearance can have different meanings¹⁷¹. First, “appearance” can mean announcing itself as not showing itself. Second, it can mean that the thing that “appears” announces itself but it remains hidden, veiled, in that appearance. It announces itself through another thing that shows itself.

For Heidegger, the *logos* is a discourse that lets something be seen¹⁷². The structure of the *logos* is the “*mode of making manifest in the sense of letting something be seeing by pointing it out*”. This *logos* can be true or false. The truth (*aletheia*) of the *logos* means that the entities, of which one is talking, must be taken out of their hiddenness. The entities must be “unveiled”, which also means “discovered”¹⁷³. Being false means to be deceived because something remains covered, hidden as something which is not¹⁷⁴.

Following this analysis, Heidegger develops the different senses of the term “*logos*”¹⁷⁵. *Logos*, in letting entities be perceived (sensed), is related to the Greek term *legein*, which mean ‘to exhibit’. Also *logos*, when related to that which is exhibit and shown (*legomenon*), means the ‘ground’ or ‘foundation’. Finally, *logos* as *legomenon* can also signify that which becomes visible in its relation to something.

Once Heidegger has analyzed the concepts of *phenomenon* and *logos*, he continues to interpret the notion of phenomenology. For him, phenomenology means “*to let that which shows itself be seen from itself in the very way in which it shows itself from itself*”¹⁷⁶. This is Heidegger’s reformulation of Husserl’s maxim “*to the things themselves*”. Heidegger continues with a fundamental question: what does phenomenology lets us see? Phenomenology lets us see

¹⁶⁹ M. HEIDEGGER, *Being and Time*, p. 51, §28.

¹⁷⁰ In German, “showing” is “*zeigen*” and “appearing” is “*melden*”.

¹⁷¹ In Heidegger there are different modes of hiddenness. There is the hiddenness of what shows itself and then hides itself again. Then there is the hiddenness of what appears and then hides itself into a false appearance. V.-M. TIRADO-SAN JUAN, *Fenomenología del logos. Zubiri y Heidegger*, p. 253.

¹⁷² “*The Λόγος lets something be seen, namely what the discourse is about; and it does so either for the one who is doing the talking (the medium) or for the persons who are talking with one another, as the case maybe. Discourse ‘lets something be seen’ ...: that is, it lets us see something from the very thing which the discourse is about.*” M. HEIDEGGER, *Being and Time*, p. 56, §32

¹⁷³ M. HEIDEGGER, *Being and Time*, p. 56, §33.

¹⁷⁴ M. HEIDEGGER, *Being and Time*, p. 57, §33.

¹⁷⁵ M. HEIDEGGER, *Being and Time*, p. 58, §34.

¹⁷⁶ M. HEIDEGGER, *Being and Time*, p. 58, §34.

something that for the most part does not show itself at all. He will argue that it is the Being of entities¹⁷⁷.

III.3 Manifestation in Ladrière

According to Ladrière, manifestation “is the process by which things becomes visible”¹⁷⁸. As we will see with more details, Ladrière, makes a distinction between manifestation and revelation¹⁷⁹. To manifest itself is to become visible, to become a phenomenon. This manifestation in its unity is composed of different layers that condition each other. For example, when we study a plant, what is manifested is composed of a layer studied by botany, another layer studied by cell biology, another layer of reality studied by biochemistry, another layer studied by physics, etc.

In the process of manifestation, something appears to us, and by coming into view it becomes near. Nevertheless, during this action of becoming near, a distance remains between the phenomenon and us. This distance is made up of aspects that rest covered¹⁸⁰. Things are never totally exposed¹⁸¹. The process of manifestation is the process by which things appear progressively and partially in a limited space with a limited time length. This manifestation is not only about a singular thing; it is also about its interactions with other things. These interactions are results of interdependency between different things that influence each other¹⁸². As a consequence, a phenomenon could be a mixture of different things and layers that are difficult to separate. This is one of the reasons why the process of scientific discovery and philosophical reflection is hard to perform and is always at risk to lead us to confusion. It could happen that what we thought was a single object, is in reality something that is composed of different systems or maybe is something that is part of a more complex system.

III.4 The constitution of the manifested reality

Ladrière affirms that a process of “constitution” characterizes this order¹⁸³. Analyzing the process of manifestation we can “see” that all inorganic, living and personal realities are in a

¹⁷⁷ M. HEIDEGGER, *Being and Time*, p. 59, §35.

¹⁷⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 32.

¹⁷⁹ J. LADRIÈRE, *L'articulation du sens I*, p. 216-217.

¹⁸⁰ J. LADRIÈRE, *L'articulation du sens I*, p. 218.

¹⁸¹ J. LADRIÈRE, *L'articulation du sens III*, p. 32.

¹⁸² J. LADRIÈRE, *L'articulation du sens III*, p. 34.

¹⁸³ J. LADRIÈRE, *Science et théologie*, p. 17.

process of self-constitution. Each thing or person emerges and becomes a reality¹⁸⁴. This self-constitution is the foundation of the manifestation. This process is neither chaotic nor destructive. There is some order in this becoming process that enables relationships of things or persons to a whole characterized by being a unity. The Greeks used the word “cosmos” to describe this ordered world that keeps all things related avoiding chaos¹⁸⁵. The world is not only the unity of phenomenal things or persons, it is also the set of conditions and causes that enable the existence and constitution of things and their manifestation¹⁸⁶. The world is not the product of the interactions of all things, but, on the contrary, it is the condition of the possibility for all interactions¹⁸⁷. Let’s consider this process of self-constitution in the inorganic, living and human reality. Our objective in this section is only to describe these processes in general terms, not to enter into the complicated details or to explain relations, conditions or principles. These details will be elaborated in other parts of this work.

III.4.1 The self-constitution process in the inorganic and living reality

The cosmic process of self-constitution has three major characteristics: (a) this process is unfolded in time, (b) it is open to new developments or events and (c) it is intelligible.

(a) Becoming and time. The process of self-constitution is deployed in time. A series of phases could be traced back as a history of the cosmos. Every constituted reality is located in a particular context and phase in the cosmic process of becoming. Time in this cosmic history is irreversible¹⁸⁸.

(b) The cosmos is always in self-constitution. A phase of this cosmic history, regardless of its consistence, could not be considered as the last one. There is always place for novelty in this process of becoming. In this process of self-constitution, something new and unexpected could happen that leads to the emergence of new realities. This already has happened in the case of the complexity of inert matter, the phenomena of life, the phenomena of consciousness, and the phenomena of human society and culture.

(c) The cosmos has in itself the principles of its function, process and self-constitution. We do not need to search for principles outside the cosmic reality in order to understand the cosmos.

¹⁸⁴ J. LADRIERE, *L’articulation du sens III*, p. 37.

¹⁸⁵ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 116.

¹⁸⁶ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 120-121.

¹⁸⁷ J. LADRIERE, *L’articulation du sens III*, p. 34-35.

¹⁸⁸ J. LADRIERE, *Approches philosophiques de la création*, p. 33.

These principles are intelligible¹⁸⁹. The question is how do we have access to this intelligibility in what is being constituted and manifested. This will be discussed in the subsection related to research in science and philosophy. This cosmic process of self-constitution can be studied by means of scientific theories, which seek in some way to remake the cosmic path where visible things appears since the beginning. These cosmic theories reproduce the cosmic history by reproducing its mechanisms, processes and structures that make it concrete. As we will see, this is done by the use of formal representations such as mathematical operators, scientific concepts and historical narratives.

III.4.2 The self-constitution process in the human reality

We have discussed the self-constitution process in the inorganic and organic reality. Do we have a process of self-constitution in the human reality? If that is the case, what is constituted here? Ladrière does not discuss explicitly the self-constitution process in the human person. For that reason we depend here on Zubiri's contribution. In some aspects the cosmic process of self-constitution constitutes the human reality. However, our reality is neither completely constituted nor fully determined. A human being is a personal reality who is engaged in an open effort of self-constitution¹⁹⁰. The human person makes his own personal reality through actions¹⁹¹. An action cannot be reduced to a reaction to a stimulus coming from the environment. An action responds to a personal project. Zubiri calls "project" the adoption of a determined form of human reality¹⁹². The human person chooses one possibility among others to construct his own reality¹⁹³. Through a project a human person creates his own possibilities¹⁹⁴ and seeks his own realization¹⁹⁵.

A human project requires particular actions to implement them. As Paul Ricœur explains, a project is something that is not yet real; it becomes real by means of actions¹⁹⁶. I may have the project to be a scientist. In order to make this project real, I need to do a series of actions: going every morning to school, reading, traveling, working in a laboratory, discussing with others, asking questions, etc. I may have the project to ride a bicycle, which implies wearing special

¹⁸⁹ J. LADRIERE, *Science et théologie*, p. 17.

¹⁹⁰ X. ZUBIRI, *Acerca del mundo*, p. 178.

¹⁹¹ X. ZUBIRI, *El hombre y Dios*, p. 75.

¹⁹² X. ZUBIRI, *El hombre y Dios*, p. 82. X. ZUBIRI, *Acerca del mundo*, p. 178.

¹⁹³ X. ZUBIRI, *Sobre el hombre*, p. 600 and 607.

¹⁹⁴ X. ZUBIRI, *Sobre el hombre*, p. 604.

¹⁹⁵ X. ZUBIRI, *El hombre y Dios*, p. 83.

¹⁹⁶ P. RICŒUR, *Philosophie de la Volonté. Le volontaire et l'involontaire*, t. 1, p. 10-11.

shoes, searching for my bike, doing corporeal actions such as moving the pedals and keeping the balance, etc.

In addition, there is a human project that has the character of being global; a life project that we believe will achieve our personal life. What we are describing here is not one particular project, but a *fundamental project*, which can be implicit in the formulation of particular projects or actions. A person could affirm that he lives without a fundamental project. He could say explicitly that he follows the maxim “*carpe diem*”. Nevertheless, this maxim itself constitutes the person’s fundamental project. This fundamental project is articulated with a fundamental value, even when it is not thematized in a deliberation process. This fundamental project is in the order of the possible. It might happen. Here our imagination plays a fundamental role because it helps us envision our possibilities without being yet fully engaged. As expressed by Ricœur, by means of the imagination we rehearse new ideas and new forms to be in the world¹⁹⁷. Actions and particular projects may achieve some possibilities and some elements of this global project. However, there are actions and particular projects that might risk or move us away from our fundamental project¹⁹⁸.

Human life does not start from zero. It is determined by a situation¹⁹⁹. The situation is another aspect of human reality and its self-constitution. The human person has the possibility to construct his life from what he is already, from things in his environment, his historical and social context, and his relationships. This is what Zubiri calls the “situation”²⁰⁰. Inside a situation the human person realize his own life by means of a project²⁰¹. Actually, there is a series of situations: personal, environmental and geographical, social and historical. These situations do not determine completely a person, but are the conditions of the possibilities of his project and its possible achievement. Let’s consider in some details these situations.

¹⁹⁷ P. RICŒUR, *Du texte à l’action*, p. 245.

¹⁹⁸ Some people could object that this fundamental project should be explicit, well thought, and deliberated, which is problematic with respect to our involuntary actions. Are these involuntary actions obstacles to the self-constitution of any human project? Although this is not the place to fully explain involuntary actions, at least we can say a couple of things. First, even involuntary actions manifest something about the reality of the human person. Second, there is no action that is fully conscious, transparent and willed as there is no action that is fully unconscious, opaque and involuntary. If the unconscious was fully opaque and hidden we could not postulate the existence of one principle, the unconscious, of our involuntary acts. How do we would know that there is only one principle and not many? According to Ricœur we can understand involuntary actions because they are in a close correlation with voluntary ones. In fact we cannot separate them, although they can be distinguished. These imply that the imagination, voluntary and involuntary acts play a role in the elaboration process of the fundamental project. See F. DOSSE, *Paul Ricœur. Les sens d’une vie*, p. 214.

¹⁹⁹ In *El hombre y Dios* Zubiri uses the term “contexto vital”. However in *Naturaleza, historia y Dios* and in *Sobre el hombre* he uses the term “situación”. We believe they are equivalent. X. ZUBIRI, *Naturaleza, historia y Dios*, p. 375. X. ZUBIRI, *Sobre el hombre*, p. 593-657. X. ZUBIRI, *El hombre y Dios*, p. 77.

²⁰⁰ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 375.

²⁰¹ X. ZUBIRI, *Sobre el hombre*, p. 644.

(i) The personal situation is what the person has achieved or has not achieved until the present. If my project is to become a basketball player and for some reasons I stop practicing for a long time, that will influence the possibilities of achieving my intention. If my project is to become a surgeon and I am a 45 years old man that has never done studies in biology, my possibilities are very low.

(ii) The environmental and geographical situation refers to the place I was born and grew up. My situation would be different if I grew up in a small fishing village in a third world country rather than in the middle of the financial quarters in Manhattan, New York.

(iii) The social situation refers to the family I was born into and my social position (poor, middle class, and rich). It also refers to my working environment and my social relations. In addition, it refers to the social reality at a particular time period (political order, social chaos, time of economic expansion, etc.)

(iv) The temporal situation refers to the time period. My personal project would be different if I was born in the time period of feudalism rather than in the middle of the French Revolution.

These situations has some implications with respect to the project:

(a) The human project is historical. The process of self-constitution of the human fundamental project is realized through time²⁰². Our previous actions have consequences that affect the possible achievement and deployment of my project. As it happens within the cosmic reality, human time is irreversible. However, human beings have the capacity to modify their present course of actions. In front of an obstacle we may revise our project and decide to change the course of our actions, or we may decide to continue them.

We not only encounter fundamental projects at the personal and biographical level, there are group and institutional fundamental projects that guide actions and particular projects. We talk about the absence of a social or a national project. Currently, we even discuss the relevance and consequences of the globalization process as a worldwide project. Our personal projects lead to these group, institutional, social, national, and worldly projects due to the person's social dimension. These interpersonal projects are autonomous with respect to the initial personal and fundamental projects, although not independent. There is a strong influence from one to the other. All these projects create history at the biographical level and also at the level of groups, societies and civilizations.

²⁰² X. ZUBIRI, *Sobre el hombre*, p. 633.

(b) The human project is always in self-constitution. A particular moment in the person's biography could not be considered as the last one. The person's present reality is constituted by his situations, his previous actions and his potentials. At the same time, a person's reality is always open to the future. We project our lives into the future. The word "project" comes from Latin *projectum* that is the past participle of *proicere*, which means to "throw forth". The project is something that is not achieved yet, but whose reality is present as a possibility²⁰³. Consequently, the fundamental project is not only open, but also provisional. It is provisional for many reasons.

- I can and sometimes must revise and even modify my fundamental project in the face of present situations and possibilities.

- I even can change completely my fundamental project and value without any internal or external coercion.

- A situation or even an action can hurt so deeply my possibilities that I might remain temporally without a fundamental project, e.g., the death of a wife with whom I started to construct a fundamental project.

- I can annul a possible human project by a series of actions or by a habit that goes against it. Nevertheless, I cannot close absolutely all possible projects. As long as I am alive and conscious, I can develop one.

These remarks mean that a human fundamental project is by definition not yet accomplished. They mean also that a project is provisional, in constant revision and even fragile, which means that our reality is dynamic and always in self-constitution.

(c) The human reality has in itself the principle of its operations, actions and self-constitution. This principle, as we will see, is nothing else than our limited, fragile and situated human freedom, which is the foundation of our intentions, actions and human projects. Through our freedom we sketch our project as a system of possibilities²⁰⁴. That principle that constitutes our personal and social reality is immanent.

Still there is the question of how do we have access to the intelligibility of what is being constituted and manifested. This will be discussed in the subsection related to research in science and philosophy.

III.5 Scientific and philosophical research as means to access the order of manifestation

²⁰³ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 379.

²⁰⁴ X. ZUBIRI, *Sobre el hombre*, p. 604.

Amazed by the things that surround us and by ourselves, we are engaged in a quest about the truth of real things²⁰⁵. To do research is to dedicate our efforts to uncover the truth about the reality that surrounds us and that we are. To research what something is in reality a never-ending effort due to two aspects. The first aspect is that reality is open in the sense of being inexhaustible. Each time we discover new aspects of the whole reality. The second is that reality is manifold (mathematical, physical, biological, psychological, social, historical, etc.).

The order of manifestation is studied by many modalities of knowledge. We will discuss here only two: sciences (natural and human) and philosophy. Both of them inquire about real things in the world, but in different ways²⁰⁶. Let's consider both of them.

III.5.1 Natural and human sciences

According to Ladrière, sciences operate in the horizon of manifestation in order to uncover the structure of the reality that manifests itself. Scientific research seeks to answer questions about the internal structure of things, and how they function in relation to other things. For now, let's leave aside the issue of how a real thing, a person, a social institution or a historical event can become an observable scientific object.

In addition, sciences aim to develop a coherent image of the world from its scientific experiments and theories. The scientific method approaches this manifested reality by submitting the phenomenon to controlled empirical observations. Nevertheless, these observations are local. Through the elaboration of hypotheses and their testing, sciences try to fill the gaps in our knowledge of the phenomenal world. Sciences try to elaborate a coherent image of the ensemble of phenomena²⁰⁷.

There are a series of *a priori* principles that guide scientific research in order to have access to the phenomenon. These principles are the following: formal expressions, empirical reduction, connectivity, self-sufficiency and emergence²⁰⁸. The principle of *formal linguistic expressions* takes different forms that are particular to each science. Ladrière only mentions the mathematical formulation, which appears in physics, chemistry and functional biology²⁰⁹. This mathematical formulation enables the scientist to represent in the laws of nature the correlation between

²⁰⁵ X. ZUBIRI, *¿Qué es investigar?*

²⁰⁶ J. LADRIÈRE, *Approches philosophiques de la création*, p. 14.

²⁰⁷ J. LADRIÈRE, *Approches philosophiques de la création*, p. 15.

²⁰⁸ J. LADRIÈRE, *Approches philosophiques de la création*, p. 15-16

²⁰⁹ This is the only one discussed by Ladrière due to his emphasis in physics. We decided to generalize his concept of "mathematization" to "formal linguistic expressions" in order to include other sciences, e.g., evolutionary biology and human sciences.

different things. However, the mathematical formulation is only one type of formal expressions. Evolutionary biology and some hermeneutical sciences use concepts and historical narratives as formal linguistic expressions that explain the causality and relation between events.

The principle of *empirical reduction* implies that the objects of science are reduced to observable interactions among them. These interactions can be expressed by means of physical laws, concepts or historical narratives. The principle of *connectivity* implies that many scientific objects are connected directly or indirectly. There is no phenomenon that is isolated from the rest of reality. *Self-sufficiency*²¹⁰ is a principle that implies that all phenomena should be explained and understood from other phenomena in the cosmos. Science must not go outside the cosmic or the human reality, for example to a supernatural realm, in order to explain the structure of a phenomenon.

Finally, the principle of *emergence* complements the principle of *self-sufficiency*. The principle of emergence affirms that there are different modes of reality that cannot be reduced to only one mode. These different irreducible modes are the mode of the inorganic systems, the biological organism, and the personal reality. These three modes correspond to three domains of sciences: physics-chemistry, life sciences and human sciences²¹¹. Each mode of reality has in itself the principles of intelligibility that enable our understanding of its internal structures. Life is not reduced to inorganic systems, and conscience is not reduced to biochemical processes. That does not mean that life sciences do not require knowledge in physics or in chemistry. It means that knowledge about physics and chemistry, although necessary, is not sufficient to study living organism. Consequently, psychology cannot be reduced to biology as biology should not be reduced to chemistry or physics.

All these principles already mentioned are necessary but not sufficient for the development of scientific research. Things are not manifested in a clear and transparent fashion. We cannot have a clear access to all details of their internal structure. On the contrary, there are some aspects that remain hidden and opaque. The process of discovering the internal structure of the object of interest is a hard work that requires the fulfillment of some conditions. Following Xavier Zubiri we can describe three general conditions that enable the scientist to have access to the manifested reality.

The first condition is that a scientist must approach the real thing in a particular way in order to have access to its manifestation. This is what the Greeks called *méthodos*. A method is

²¹⁰ In French is the principle of “*fermeture*”.

²¹¹ J. LADRIERE, *Approches philosophiques de la création*, p. 16-17.

more than a mechanism to produce a result. It is a path that enables us to access the thing that is studied²¹². The second condition is scientific anticipation. The scientist must anticipate through a series of scientific questions the phenomenon. Science, more than a vision is a **foresight** that anticipates the manifestation. The third condition is the historical and cultural context. Sciences are historically and culturally conditioned. In a particular cultural and historical situation the scientist develops a series of questions and develops a path to approach things in order to study reality. This is illustrated by the history of science that shows the development of different sciences in different historical moments.

All these three conditions, combined with the principles already discussed, entail three temptations that scientists have not been able to avoid always. According to the principle of empirical reduction, the scientist must reduce the phenomenon to observable interactions. Scientific methods are efficient procedures capable of reducing the amalgam of facts to fundamental empirical facts. This methodological reductionism is a requisite for the scientific method. However, this entails the risks of only considering as real empirical scientific “facts”. This leads to positivism that only considers as truth what we learn from scientific facts. This could lead us also to an ontological or metaphysical reductionism: the only things that exist are those that become scientific objects. As a consequence, science is reduced to an efficient technique that produces empirical facts.

The second temptation is related to the human quest to know. Scientists develop their knowledge by means of questions that anticipate the phenomenon. These questions are born from human necessity to know. If that necessity is reduced to the utility of things, the scientist falls into the temptation of pragmatism²¹³. We learn in order to obtain useful things from what surrounds us. The problem here is not with technology *per se*, but with reducing the quest of truth to the sole value of utility. Here science is reduced to an efficient technique and reason is reduced to an instrument that helps us dominate the world.

The third temptation is to consider science and truth as nothing else than the product of a cultural and historical situation. This leads to historicism and cultural relativism²¹⁴. Accordingly, the scientist is not doing research to discover the internal structures of real things. What he is doing is the meager production of social or cultural artifacts that are relative to his cultural environment.

²¹² X. ZUBIRI, *Naturaleza, historia y Dios*, p. 39.

²¹³ X. ZUBIRI, *Naturaleza, Historia, Dios*, p. 42.

²¹⁴ X. ZUBIRI, *Naturaleza, Historia, Dios*, p. 43.

These three risks are neither scientific theories nor facts. They are ideologies not grounded in the scientific method. Positivism, pragmatism and cultural relativism may remain within the scientific culture as attitudes with respect to the quest of truth. In order to overcome these attitudes or risks, we must remember that science is not an addition, a merely summing up of a series of disconnected truths. Sciences, and intellectual life in general, are the deployment of reason that searches for truth in a permanent effort to understand reality. Reality is so diverse that it requires different sciences and rationalities to approach its different aspects and dimensions. That is why we must consider other rationalities with other methods to uncover the truth of the manifested reality. One of them is philosophy.

III.5.2 Philosophy and its own rationality

Sciences and philosophy are two modes of knowledge of the same order of manifestation and constitution. Nonetheless, they have different objectives and questions. Sciences examine and interrogate phenomena in order to discover their internal structure and their properties. Philosophy searches something that is not visible: the principles and conditions of the manifestation and the self-constitution processes. Philosophy does not seek to understand the structural properties of real things. It seeks to understand what is the real as real²¹⁵. Philosopher's questions are different from the questions posed by a scientist. The following are some examples of questions raised by philosophers during the history of philosophy. *What is the foundation of all reality? What we mean when we say that something is real? Is there any meaning to our existence? What characterizes a "good action"? What is truth and what are the criteria to know something is true?* Leaving aside some criticism we could make about the structures of these questions, we see on them a fundamental attitude. We are perplexed with the existence of things that surround us and with our own existence, our potentials and fragilities. Let's consider the different types of principles and conditions that philosophy seeks.

(i) Principles and conditions that enable the manifestation and our apprehension of it. The manifestation process enables that some aspects of things or persons appear to us. Consequently, we can encounter at least some aspects of these existing realities²¹⁶. Ladrière characterizes this process as an act of "givenness". The thing that manifests itself becomes "visible". Nevertheless the principles and conditions for the possibility of this manifestation remain invisible. The foundation of the manifestation process is not manifested. It is not a phenomenon among other

²¹⁵ X. ZUBIRI, *¿Qué es investigar?*

²¹⁶ J. LADRIERE, *L'articulation du sens III*, p. 30.

phenomena. These principles and conditions are hidden in what is given. The project of philosophy is to discover, describe and analyze these invisible principles and conditions from what becomes visible²¹⁷. It does not seek the structure of properties of what is manifested, which is the objective of science, but to understand the manifestation process itself²¹⁸.

The philosopher seeks in himself the principles and conditions that enable him to access the visible realm of phenomena and his knowledge of it. This effort is guided by the following questions. What is the foundation that grounds the intelligibility of different existing realities (thing, personal, social, etc)? What grounds the fact that the cosmic reality can be studied by means of mathematical expressions? What is the relationship between our linguistic expressions and the manifested reality? All of this is the objective of epistemology and philosophy of science.

Language is an essential aspect of the human intellectual effort to understand the order of manifestation. Philosophy has access to the invisible realm of principles and conditions through experience²¹⁹ and language²²⁰. According to Ladrière, language is capable of making present what is absent or hidden. Philosophy of language studies, among other things, the role of reference, meaning and metaphors. Scientific discourse is a particular language that represents the structures of properties hidden in the phenomena. Philosophical discourse formulates and expresses the hidden sets of principles and conditions of the manifestation, self-constitution and the human knowing process. Through language the philosopher tries to go beyond the phenomenon to the a priori conditions of the intelligibility of the world.

(ii) Principles and conditions of self-constitution. Philosophy seeks to know what makes possible the self-constitution of different existing realities²²¹. Philosophy seeks, describes and analyses the principles and the conditions for the possibility of the self-constitution of the cosmic reality. This is the objective of metaphysics and what traditionally has been called philosophy of nature. It also seeks the principles and conditions for the possibility of the human's self-constitution, which includes human actions, projects and existence at the personal, social, national and global levels. This is the objective of ethics, philosophical anthropology, social and political philosophy.

(iii) The ultimate foundation of reality. Philosophy seeks the ground of manifestation, self-constitution, and knowledge. During the history of philosophy, some philosophers have sought to

²¹⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 30-31.

²¹⁸ J. LADRIÈRE, *Approches philosophiques de la création*, p. 19-20.

²¹⁹ J. LADRIÈRE, *Approches philosophiques de la création*, p. 19-20.

²²⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 35-37 and 58-59.

²²¹ LADRIÈRE, *Approches philosophiques de la création*, p. 37.

unveil the ultimate absolute foundation that grounds all reality. This absolute foundation is not grounded in anything different from itself. Different philosophers have postulated different possibilities: matter, the cosmos itself, etc. Others have postulated an absolute transcendental reality that acts immanently in our world, God. This effort belongs to metaphysics and philosophy of religion.

Our objective here was not to justify different fields of philosophy, but to point at the fact that philosophy studies the order of manifestation and self-constitution.

IV. The order of revelation and salvation

IV.1 An order of events

The order of revelation and salvation is about a reality that does not appear as a phenomenon. It is not the manifestation of an autonomous world that is self-constituting itself or a free human person who is self-constituting himself, but a revelation from God²²². If the manifested reality keeps a distance from us because it remains opaque, in revelation what is revealed comes from an absolute distance to become close to us (Jn 1)²²³. What is revealed is not a reality of this world in the sense that it is not grounded on any worldly phenomenon. God reveals his own divine reality, which is grounded only in Himself. The invisibility of this reality is not the same invisibility of the set of immanent principles and conditions for the world's manifestation, self-constitution and human knowledge. If they were the same then the reality of God would be identified with the reality of this world. Although God is the invisible ultimate foundation of all phenomena, He does not "appear" as a manifested thing that a human person could reach by his own effort. God makes Himself accessible through the events in the history of salvation. Moreover, He reveals Himself in the visibility of one event that is the highest point of revelation, the event of Christ. In Christ there is a deeper meaning than the simple perceptible phenomenon²²⁴. There is a relation between the perceptible event of Christ and God's invisible mystery. It is impossible to see God, but in Christ God has made Himself accessible by means of revelation. The text of 1 Jn 1,1-3 refers to senses in order to talk about Christ as God's revelation:

"Something which has existed since the beginning, which we have heard, which we have seen with our own eyes, which we have watched and touched with our own

²²² The order of manifestation and the order of revelation share one thing: they are modes of "givenness". One comes from real things and the other is a givenness from God.

²²³ J. LADRIERE, *L'articulation du sens I*, p. 218.

²²⁴ J. LADRIERE, *L'articulation du sens III*, p. 22.

hands, the Word of life, this is our theme. That life was made visible; we saw it and are giving our testimony, declaring to you the eternal life, which was present to the Father and has been revealed to us. We are declaring to you what we have seen and heard, so that you too may share our life. Our life is shared with the Father and with his Son Jesus Christ. We are writing this to you so that our joy may be complete.”

The order of revelation is about a reality that is unexpected, unforeseen because it does not flow as a result of necessity. It is an order characterized by the unexpected occurrences of “events”, God’s words transmitted by the prophets and God’s acts of salvation²²⁵. An event, when it occurs, brings modifications to the history of the world. It is present in the constituted reality but as something that adds a novelty that comes with it²²⁶. This novelty is bearer of an otherness that is irreducible to the constitution of things. It is the reality of God that is present as a pure gift. God’s events in the heart of human history constitute what we call salvation history.

IV.2 What is revelation?

The term revelation comes from Greek *apokalupsis*, which comes from the verb *apokaluptein*. The word is a composition of *apo*, which means “away from” and the word *kaluptein*, which means “to cover”. Its literal meaning is the action of getting away or taking away the veil, which can be translated by the verb “to unveil” or “to disclose”. This was translated to Latin *revelare*. This word is a composition of *re* and the word *velare*. The first term, *re*, means “opposite of” and *velare* means “to cover”. The second term, *velare*, comes from *velum*, which is veil. As such, reveal is “to uncover” or “to unveil”.

This is the sense used by Paul when he writes about how in Christ the veil is removed in 2 Cor 3,12-16²²⁷.

“Since, then, we have such a hope, we act with great boldness, not like Moses, who put a veil over his face to keep the people of Israel from gazing at the end of the glory that was being set aside. But their minds were hardened. Indeed, to this very day, when they hear the reading of the old covenant, that same veil is still there, since only in Christ is it set aside. Indeed, to this very day whenever Moses is read, a veil lies over their minds; but when one turns to the Lord, the veil is removed.”

Paul understands revelation as God’s action to remove our veil. Only in Christ our veil is removed. Revelation does not refer to something that is discovered by a human effort. The letter

²²⁵ P. BÜHLER, *Parole de Dieu*, p. 1027.

²²⁶ J. LADRIERE, *Science et théologie*, p. 17.

²²⁷ See also 2 Cor 12,7

to the Colossians refers to “*the mystery that has been hidden throughout the ages and generations but has now been revealed to his saints*” (Col 1,26). It is God Himself that revealed the mystery of Christ.

How do we understand today this act of revelation? Borrowing Thomas Kuhn’s notion of paradigm, we do not hesitate to affirm that the Second Vatican Council represents a change of paradigm in our understanding of revelation. Let’s see briefly this change.

IV.2.1 Before the Second Vatican Council: revelation as a set of supernatural propositions

Although the concept of revelation belongs to Christian faith since the beginning, a formal and explicit theology of revelation does not appear fully developed in Catholic theology until recently. The First Vatican Council develops an understanding of revelation in a context of apologetics. This council understands revelation as a *depositum fidei*, a body of doctrinal propositions or supernatural truths proposed definitively. This set of dogmatic propositions is under the protection of the Catholic Church, in specific under the papal authority²²⁸. This Vatican council uses some expressions such as “eternal decrees of God’s will”, “divine things”, “divine goods” to describe the content of revelation. According to this understanding, there is a close relationship between revelation and dogma²²⁹.

*“Wherefore, by divine and Catholic faith all those things are to be believed which are contained in the word of God as found in Scripture and tradition, and which are proposed by the Church as matters to be believed as divinely revealed, whether by her solemn judgment or in her ordinary and universal magisterium.”*²³⁰

The council highlights the dogmatic aspects of revelation. We will see that the Second Vatican Council will highlight the scriptural aspects.

In terms of scholastic theology, Garrigou-Lagrange develops a theology of revelation that conceives God’s revelatory act as a *modum locutionis*, by way of speech²³¹. This notion of revelation as *locutio Dei* or God’s speech suits well a model of propositional divine truth under the protection and vigilance of the Church.

IV.2.2 The Second Vatican Council: the *Dei Verbum*’s paradigm

²²⁸ J.-F. HAUGHT, *Mystery and Promise. A Theology of Revelation*, p. 32.

²²⁹ C. THEOBALD, *La constitution dogmatique Dei Filius du concile de Vatican I*, p. 282.

²³⁰ The underlined emphasis is ours. FIRST VATICAN COUNCIL, *Dogmatic constitution on the Catholic faith*, Chapter 3, No. 8.

²³¹ J.-F. HAUGHT, *Mystery and Promise. A Theology of Revelation*, p. 34.

As some theologians affirm, this document was a dramatic breakthrough²³² that takes into consideration biblical scholarship validated by Pius XII. Instead of highlighting Tradition and the Church's magisterium, *Dei Verbum* underlines the theme of God's Word. As stated by Gerard O'Collins, the document *Dei Verbum* is "profoundly biblical in its language and mentality"²³³. The biblical notion of God's word implies a strong relationship between revelation and events in salvation history. It also implies a dialogical encounter and personal relationship. Consider the following paragraph that marks the tone of the whole document.

"In His goodness and wisdom God chose to reveal Himself and to make known to us the hidden purpose of His will (see Eph 1,9) by which through Christ, the Word made flesh, man might in the Holy Spirit have access to the Father and come to share in the divine nature (see Eph 2,18; 2 Pt 1,4). Through this revelation, therefore, the invisible God (see Col 1,15; 1 Tm 1,17) out of the abundance of His love speaks to men as friends (see Ex 33,11; Jn 15,14-15) and lives among them (see Bar 3,38), so that He may invite and take them into fellowship with Himself. This plan of revelation is realized by deeds and words having an inner unity: the deeds wrought by God in the history of salvation manifest and confirm the teaching and realities signified by the words, while the words proclaim the deeds and clarify the mystery contained in them. By this revelation then, the deepest truth about God and the salvation of man shines out for our sake in Christ, who is both the mediator and the fullness of all revelation"²³⁴.

Revelation is not conceived primarily as a set of supernatural propositions. Instead of starting with the concept of *depositum fidei*, the document refers primarily to God's self-revelation in Christ in order to establish an interpersonal relationship, a dialogical encounter. This encounter seeks to share God's life with humankind in salvation history. The text highlights the scriptural and Christological character of revelation and its relationship to salvation history. Being Christological in its foundation, revelation has two fundamental dimensions: a divine or theological dimension and a human or anthropological dimension.

IV.3 Theological dimension: revelation as God's self-communication

This theological dimension is related to God's initiative. As the order of manifestation and self-constitution was a "givenness" of something in visibility, revelation is primarily a "givenness", a communication. However, we should clarify what God communicates in his revelation.

²³² J.-F. HAUGHT, *Mystery and Promise. A Theology of Revelation*, p. 35.

²³³ G. O'COLLINS, *Retrieving Fundamental Theology*, p. 51.

²³⁴ The underlined emphasis is ours. SECOND VATICAN COUNCIL, *Dei Verbum*, No. 2.

In the order of manifestation God is the ultimate foundation of all manifested and self-constituted reality. In the order of revelation God communicates Himself personally. As the *Dei Verbum* says, “*through divine revelation, God chose to show forth and communicate Himself*”²³⁵. God takes the initiative to communicate Himself to humankind. God communicates Himself to us through events. The *Dei Verbum* mentions two kinds of events: words and deeds. Words imply a linguistic aspect. Consequently, God communicates Himself by speaking through people such as Moses, the prophets and wise men. This embraces the Law, prophetic words and the sapiential discourses. God also communicates Himself through his deeds: creation, the Covenant, the liberation of Israel, etc. God’s words and deeds are events in salvation history.

Christian faith proclaims that there is one event that communicates absolutely God to us. This event is neither a word nor an action exterior to God or to humankind. It is the Word of God, the *Logos* that is since the beginning with God²³⁶. The Word of God becomes Himself flesh (Jn 1). Consequently, He is accessible in the form of a human presence in history. God is not accessible as a perception, nor as a speculative theoretical vision (in the sense of *theôria*) but as a Word. Christ is the event of God among us. In him, God becomes “visible” without ceasing to be invisible because he remains a mystery that we cannot apprehend by our own effort. Christ is also the sign *par excellence*: he brings us from the visible to the invisible reality of God. “*Whoever has seen me has seen the Father*” (Jn 14,9).

IV.4 Anthropological dimension: God’s Word addressed to all human persons and to the whole human person

Revelation is neither a dictate nor a simple set of intellectual propositions and moral norms communicated by God. That would not be God’s self-communication. In order to communicate Himself to us, God’s addresses our human reality and invites us to dialogue. Revelation is a word addressed to a concrete person or community. Consequently, God’s word is necessarily situated in a place, a time and a cultural context²³⁷. The Word of God is an event in the sense of being unexpected, unpredictable, surprising and with the capacity of turning upside down the human heart. Revelation addresses the whole human being. Let’s consider four human aspects of revelation: linguistic, intellectual, historical, and transmission.

²³⁵ SECOND VATICAN COUNCIL, *Dei Verbum* No. 6.

²³⁶ J. LADRIERE, *L’articulation du sens III*, p. 42-44.

²³⁷ J. LADRIERE, *L’articulation du sens III*, p. 42-43.

IV.4.1 Linguistic aspect

The Word of God enters into our reality and is capable of transforming, with our collaboration, the human *logos*. Through this transformation God makes Himself present to humankind. The Word of God is present into our human reality through human words, discourses, norms, rites, literary genres, and cultural categories. This is what *Dei Verbum* means with the following statement:

*“For the words of God, expressed in human language, have been made like human discourse, just as the word of the eternal Father, when He took to Himself the flesh of human weakness, was in every way made like men.”*²³⁸

God’s word is not a descriptive or explicative but performative in the sense that it establishes a relation where both, God and the human person, are self-involved²³⁹.

IV.4.2 Intellectual aspect

As Zubiri says, revelation includes knowledge. However this knowledge is not initially conceptual, theoretical or speculative. Above all, revelation is an intimate knowledge of God expressed in the Hebrew word *yada*²⁴⁰. This knowledge is an experience and recognition of God that leads the human person to conform himself with God’s will. The New Testament, in specific the Gospel of John, mentions this personal knowledge of God. This is expressed by the Gospel of John: “*And this is eternal life, that they may know you, the only true God, and Jesus Christ whom you have sent*” (Jn 17,3)²⁴¹.

IV.4.3 Historical aspect

When God communicates Himself to humankind He enters into our historical reality. Revelation is intrinsically historical. Revelation is historical because it happens through a series of events in salvation history that starts with creation, continues with the Covenant in the history of Israel and arrives at its summit in the event of Christ. This is the sense of the beginning of the letter to the Hebrews:

²³⁸ SECOND VATICAN COUNCIL, *Dei Verbum*, No. 13.

²³⁹ J. LADRIERE, *L’articulation du sens III*, p. 42.

²⁴⁰ Is 43,10 and Ex 33,13. X. ZUBIRI, *Cristianismo*, p. 455.

²⁴¹ See also Jn 1,10.

“Long ago God spoke to our ancestors in many and various ways by the prophets, but in these last days he has spoken to us by a Son, whom he appointed heir of all things, through whom he also created the world” (Heb 1,1-2).

Revelation is also historical in the sense of our apprehension and comprehension. Revelation is a process of deepening God’s events and self-communication. This deepening is historical in three senses. We increase our understanding of God’s word. There is an intellectual transformation. We deepen in a moral sense by an apprehension of God’s will that transforms our actions and projects. We deepen in our personal relationship with God that transforms the totality of our life. This is a spiritual transformation.

IV.4.4 The aspect of transmission

This aspect is related to the previous three. God’s word is not addressed only to one person. It is addressed to humankind. Consequently, God’s self-communication invites the hearer to share his personal experience to other. Transmission means to share God’s revelation with another person, another community, another generation and another culture²⁴². This transmission is not done in an abstract neutral language. It includes transmitter’s and receptor’s cultural and intellectual categories. Transmission requires a process of interpretation to go from one set of categories to another set. Consequently, interpretation is fundamental in the transmission process. Each person, group, community, generation and culture must interpret and re-appropriate God’s words. This transmission, its interpretation and re-appropriation have a history, which is part of the composition of Scriptures and Tradition.

IV.5 The constitution of what is revealed: salvation history.

In the previous order, we discussed the relationship between manifestation and the autonomous process of self-constitution. The order of revelation is not self-constituted in the same way as the order of manifestation. It is constituted by God’s initiative and action. It is God who takes the initiative to invite us to a communion with Him. God creates the world through his Word (Gn 1 and Jn 1). He invites the people of Israel to a Covenant. Christ invites us to the Kingdom of God. God takes the initiative that starts the constitution, but it requires the human response to enter into this I-Thou relationship. However, we should ask ourselves what does God

²⁴² See 1 Jn 1,3: *We are declaring to you what we have seen and heard, so that you too may share our life. Our life is shared with the Father and with his Son Jesus Christ. We are writing this to you so that our joy may be complete.*

constitute here? What is constituted here is God's presence among us and our human transformation. All these aspects are related and can be summarized in one word: salvation.

IV.5.1 God's presence, God among us

In the Synoptic Gospels, Jesus appears as the messenger of God's presence among us. Jesus announces God's arrival using the image and theme of God's Kingdom²⁴³. Christian communities affirm subsequently that God is present above all in the person of Christ who is God's image²⁴⁴. Origen and Tertullian continue this reflection and proclaim that Christ is himself the Kingdom (*auto basileia*)²⁴⁵. In Christ, God's eschatological presence arrives and transforms us.

IV.5.2 Human transformation

The Word of God introduces a discontinuity in our human existence by provoking a response. Faith is an affirmative response that makes us enter into God's Kingdom. Faith transforms our reality by being at the same time God's gift and a human response. There are events in our lives that become a threshold to fundamental change, a caesura between a "before" and an "after"²⁴⁶. According to the Scriptures, an encounter with Christ, through his words and actions, implies a meaningful moment of caesura. It is here that revelation in Christ and human transformation are articulated²⁴⁷.

Moreover, the New Testament presents another model of relationship between human transformation and God's self-communication. The Second Letter of Peter mentions that God's promises and gifts have been given to us in order to participate of the divine nature²⁴⁸. God's self-communication divinizes the human persons that accept the gift. Here God encounters us in what is our most profound aspiration, which is our personal achievement²⁴⁹. This personal achievement is nothing else than a process of divinization. What is constituted here is the eschatological goal of creation's achievement, the hidden mystery of God that is Christ in us²⁵⁰.

All these aspects (God's Kingdom and presence; human transformation, achievement and divinization) might be summarized in the notion of salvation. What is constituted in this order of

²⁴³ "And in the days of those kings the God of heaven will set up a kingdom that shall never be destroyed, nor shall this kingdom be left to another people. It shall crush all these kingdoms and bring them to an end, and it shall stand forever." (Dan 2,44)

²⁴⁴ See Jn 14,6; Col 1,15; 2 Cor 4,4

²⁴⁵ P. HÜNERMANN, *Royaume de Dieu*, p. 1238.

²⁴⁶ C. THEOBALD, *Dans les traces de la constitution Dei Verbum*, p. 24.

²⁴⁷ C. THEOBALD, *Dans les traces de la constitution Dei Verbum*, p. 25.

²⁴⁸ See 2 Pt 1,4

²⁴⁹ J. LADRIERE, *L'articulation du sens I*, p. 219.

²⁵⁰ See Col 1,25-28.

revelation is salvation history in itself, the presence among us of the Trinitarian God that transforms those who accept the invitation. This salvation history is constituted through events: creation, Israel, Christ and his ceaseless presence through the action of the Holy Spirit. Consequently, revelation and salvation are two moments of one single reality: God's self-communication.

IV.6 Theology as a rationality that studies the order of revelation and salvation

Christian theology has been defined as faith seeking understanding. For Ladrière, theology is knowledge of the reality that is accessible by revelation²⁵¹: God's self-communication in salvation history that reaches its climax in the event of Christ. Ladrière provides the following definition of theology: *theology is "the articulation between speculative reasoning and the formulation of faith"*²⁵². Theology is an effort of reason to study the economy of salvation as revealed by the Word of God²⁵³. The objective of theology is to make intelligible and systematic the revealed content of faith and to contribute to its communication²⁵⁴.

Ladrière gathers together in theology a multiplicity of disciplines: dogmatic theology, systematic theology, exegesis, history of dogma, moral theology and spiritual theology²⁵⁵.

V. The relationship between the order of manifestation and the order of revelation

In this section we will discuss the relationship between the order of manifestation and the order of revelation. Our objective here is not to discuss the whole complexity of this relationship but to elaborate some preliminary aspects on this subject. In the rest of this research work we will deepen our reflection about this relationship. Here we present a typology of interactions between the order of manifestation and the order of revelation²⁵⁶: the mode of formal identification (*concordism*), the mode of independence or separation (*discordism*) and the mode of transcendence in the immanence. Let's consider the three of them.

V.1 Formal identification

²⁵¹ J. LADRIERE, *L'articulation du sens III*, p. 64-65.

²⁵² J. LADRIERE, *L'articulation du sens III*, p. 116.

²⁵³ J. LADRIERE, *L'articulation du sens III*, p.108, 123 and 155.

²⁵⁴ J. LADRIERE, *L'articulation du sens III*, p.105, 123-124 and 187.

²⁵⁵ J. LADRIERE, *L'articulation du sens III*, p. 63.

²⁵⁶ We follow Dominique Lambert's typology. Although he refers to the relationships between science and theology, we are using it to analyze and describe the different mode of relationships between the order of manifestation and the order of revelation. See D. LAMBERT, *Sciences et théologie. Les figures d'un dialogue*, p. 74-106

The mode of formal identification places both orders in the same plane²⁵⁷. That means that God's revelation and actions are accessible through the order of manifestation. For some God becomes a sort of hypothesis that could be validated or falsified by means of the scientific method. A "supposed" scientific analysis of God's actions and reality produces three possible theses. First, for some, God and the cosmos are but one reality. This is the thesis of pantheism. Second, the thesis of atheism affirms that science has not confirmed the hypothesis of God. Some atheists argue that what science has found is that every religious experience is nothing else than a subjective experience²⁵⁸. Third, God exists but He is reduced to a hypothesis that explains what science cannot explain, e.g., like the origin of the Big Bang. This is the "God of the gaps": God fills the gaps of our scientific knowledge. As Lambert affirms, the basic problem with this model is that it does not recognize God's transcendence. If there were a full correspondence and identification between both orders, God would be one phenomenon among others. This conception empties God's mystery and proclaims, at least indirectly, the human capacity to reach God.

Another difficulty is that an identification of these two orders does not respect the fact that the order of manifestation is autonomous. The autonomy of the order of manifestation means that the process of self-constitution and becoming has its own principles of deployment. If we deny this we will affirm that God controls all details of the self-constitution process. Consequently, all real things or persons would be simple automates. There would be no autonomy in the cosmic reality and consequently God would be fully responsible of natural disasters and human evil actions, e.g., assassinations, the shoah, wars, etc.

From the point of view of epistemology, this model denies autonomy to sciences, philosophy, and theology. One mode of knowledge could be reduced to another. From the point of view of an atheist, the religious experience is just a result of the evolution process and natural selection, or an epiphenomenon of the brain. Some fundamentalists and creationists reject scientific conclusions that they believe are contrary to revelation.

These consequences lead us to affirm that the orders of manifestation and revelation are not identical. We cannot reduce one to the other.

V.2 The mode of independence or separation

²⁵⁷ See D. LAMBERT, *Sciences et théologie. Les figures d'un dialogue*, p. 74-89.

²⁵⁸ That is one of the main thesis of Richard Dawkins' book *The God Delusion*, which has been in the list of New York Times Bestseller.

The mode of independence affirms that the orders of manifestation and revelation are independent²⁵⁹. This model of relationship corresponds to the model of independence between science and religion²⁶⁰. This had been an initial theological position of Karl Barth when he wrote in *The Epistle to the Romans* the following²⁶¹:

*“In the Resurrection the new world of the Holy Spirit touches the old world of the flesh, but touches it as a tangent touches a circle, that is without touching it. And, precisely because it does not touch it, it touches it as its frontier. [...] There is here no merging of fusion of God and man, no exaltation of humanity to divinity, no overflowing of God into human nature. [...] Through His presence [the presence of Christ] we have been dissolved as men and established in God.”*²⁶²

For the Barth of *The Epistle to the Romans*, the order of revelation and salvation is separated from the order of manifestation and self-constitution. As a result, he has difficulties in expressing that God enters our world to save us. Barth even goes to the point of affirming that we will be dissolved in our human reality (the order of manifestation and self-constitution) in order to be established in God's reality.

There are also a series of theological difficulties. If both orders are independent how can we understand the aspect of theology that traditional is called *oikonomia*. First, under this model the relationship between God in Himself and God among us, i.e., the Economic Trinity, it is not clear. Second, creation is also an event in salvation history. It is a fundamental Judeo-Christian belief that God creates everything that exists in our order of manifestation. Third, by the act of incarnation God has entered fully into our reality. Fourth, through Christ's Resurrection God has transformed and achieved radically Christ's human reality and has vindicated him from his condemnation and crucifixion. As a consequence, both orders cannot be independent.

V.3 The mode of transcendence in the immanence: without confusion and without separation

We have arrived at the affirmation that both orders can neither be identified nor can they be separated. Salvation history witnesses a non-mutually exclusive relationship between both orders that affirms at the same time God's transcendence and God's immanence in the world's autonomy. First, creation implies that the order of self-constitution is grounded in God, who is

²⁵⁹ D. LAMBERT, *Sciences et théologie. Les figures d'un dialogue*, p. 89-106.

²⁶⁰ I.-G. BARBOUR, *When Science Meets Religions*, p. 17-22.

²⁶¹ However, Karl Barth changed this position. In the *Church Dogmatics* he clearly affirmed that Christ is God among us. He also affirms a clear correspondence between creation and the Covenant. We saw this in chapter 1 and we will see more in chapter 5 that discusses the theological rationality.

²⁶² K. BARTH, *The Epistle to the Romans*, p. 30.

the absolute source of existence. Consequently, God is present among us, not as a phenomenon but as the ultimate condition and foundation of the order of manifestation and self-constitution²⁶³. We are not independent of God and at the same time, we are different from God. God does not absorb our reality. The world conserves its autonomy and its capacity of self-constitution²⁶⁴.

The incarnation is another event in salvation history that witnesses this mode of relationship between both orders. As the Council of Chalcedon affirmed, humanity and divinity exist in Christ without separation and without confusion. Christ is God's absolute self-communication to the cosmos and to human history and He is the irrevocable human response and world achievement. Christ's humanity is not absorbed or dissolved by his divinity. Through incarnation God has made the order of manifestation a place of encounter and communion between the divine and the human. There is no more separation between the sacred and the profane. However, God's presence among us neither dissolves our autonomy or freedom nor exhaust God's mystery which is always beyond our capacities.

Christ's incarnation and paschal mystery have some consequences in terms of our conception of salvation. Salvation is not a negation of our reality. As Thomas Aquinas affirmed, *gratia non tollat naturam, sed perficiat*, (grace does not destroy nature but perfects it)²⁶⁵. When God divinizes our humanity he does not destroy it. On the contrary God accomplishes our reality through His self-communication. It is the merit of Karl Rahner to have shown us that God and the human being are not in contradiction²⁶⁶. On the contrary, the more we are dependent on God's self-communication, the more our reality is deployed and achieved. The less we accept his gift, the less achieved we will be. The order of salvation is not a place or a thing that enters into competition with the order of self-constitution. Salvation is about the achievement of our reality in Christ.

This leads us to the eschatological dimension of salvation history. Both orders are in the middle of a tension marked by the expression "already but not yet". God's plan is already revealed and achieved in Christ's resurrection but is not yet fully manifested in the world. Through the incarnation and resurrection of Christ, the order of manifestation is already a place of encounter with God. The world and historical events can become "signs of the times" of God's will that should be discerned. There is no more separation between the sacred and the profane. This is the foundation of the church's sacramental life. The sacraments are the Holy Spirit's

²⁶³ J. LADRIERE, *Approches philosophiques de la création*, p. 15.

²⁶⁴ We will deepen this aspect later in this work.

²⁶⁵ See THOMAS AQUINAS, *Summa Theologica*, I, q1, a8.

²⁶⁶ K. RAHNER, *Foundations of Christian Faith*, p. 78-79.

actions in the Church that mediate God's presence and Self-communication through visible gestures. The Church's mission to proclaim the Good News of God's final Self-communication in Christ is also grounded in this eschatological aspect of "already".

Nevertheless, the "not yet" implies that the cosmic process of self-constitution and human history are not achieved yet in God. God's presence among us is not evident. Only those who have faith can contemplate and hear God's presence and signs (Mt 13,10-17; Lc 13,18-21). To "see" and to "hear" Him requires faith, interpretation and discernment. Only at the final eschatological recapitulation in Christ, God will be fully manifested²⁶⁷, our world will be fully achieved and our human reality will be fully divinized. All of this will not imply that the world will be absorbed by God but completely fulfilled in its difference with respect to the divinity. That is the reason why this time of "already but not yet" is characterized by hope.

V.4 The articulation of science and theology

God's transcendence in the immanence of our world is the foundation of the autonomy of the self-constitution process. This mode of relationship between both orders, without separation and without confusion, grounds a possible articulation between science and theology. This articulation must respect the autonomous methodology of science, philosophy and theology. Science and theology could not converge in an integration or synthesis that does not respect the demarcation of methodologies. At the same time, science and theology should dialogue because they are not talking about two independent realities. However this dialogue should articulate both in a process that is in constant revision because only in the final eschatological recapitulation in Christ will the orders of manifestation and revelation converge totally. This justifies Ladrière's affirmation that the convergence between the different rational modalities of knowledge (sciences, philosophy and theology) is an object of eschatological hope²⁶⁸. Actual articulations would not be definitive and final. They will always need to be revised as we reflect more deeply on the world's reality and in God's revelation.

VI. Conclusion

In the first chapter, in the state of the matter, we made reference to two realities: the reality of the natural world and the reality of God's revelation and action. In this chapter we analyzed

²⁶⁷ J. LADRIERE, *L'articulation du sens I*, p. 220.

²⁶⁸ J. LADRIERE, *L'articulation du sens I*, p. 189-190. J. LADRIERE, *Science et théologie*, p. 5.

these two realities from the perspective of orders of reference. These orders of reference are modes of givenness, i.e., sources of knowledge. There is the order of manifestation and the order of revelation. Natural sciences, human sciences and philosophy refer to the order of manifestation where real things “appear” as phenomena. Christian theology refers to the order of revelation where God communicates Himself to the human person.

In this chapter we also discussed the relation between these two orders or modes of givenness. There are three models of relation: formal identification, separation or independence and transcendence in the immanence. If these two orders are identical then natural sciences (or human sciences) philosophy and theology could be integrated into one global system. If these two orders are independent then natural science and theology could not dialogue or be articulated. However, we have shown the limits of these two models of relation and the positive aspects of the third model. The model of God’s transcendence in the world’s immanence is well grounded in the Christian tradition. We find many theological reflections or practices that validate this model: Church’s sacramental life, Council’s Christological reflections on the relation between divine and human nature, the relation nature-grace and the reflection on God’s Kingdom in human history. This model recognizes the differences and the interactions between the order of manifestation and the order of revelation. We formulate these aspects in the following expression: *these two orders of manifestation and revelation can be neither identified nor separated.*

This model of relation is the fundamental condition that renders possible a dialogue that seeks to articulate natural science, philosophy and theology. However, in order to articulate scientific, philosophical and theological rationalities we must understand their objects and their specific methodologies. In the following chapter, chapter 3, we will discuss how a real thing, a person, a social institution or a historical event can become an observable scientific object. In chapter 4 we will discuss philosophy, which seeks the ground of the process of manifestation, the cosmic and human process of self-constitution and the ground of human knowledge. Finally, in chapter 5 we will analyze the specific theological epistemology.

In the following three chapters (3, 4 and 5) we will encounter the difficulty of clarifying their objects, methods, limits, verification processes and the meaning of “truth” in sciences, philosophy and theology. We cannot articulate sciences, philosophy and theology without clarifying these epistemological aspects. The following three chapters build the necessary foundations for an interdisciplinary dialogue and articulation of scientific worldviews in

systematic theology that recognize and consider the epistemological differences grounded in the orders' differences.

Chapter 3. The order of manifestation and the project of rationality: natural and human sciences

I. Introduction

I.1 Specific objective and hypotheses of this chapter

The present chapter seeks to render explicit what is scientific rationality, its object, method and verification process. The objective is to “describe” what is science and not to “explain” or to ground this rational endeavor. As we will see, sciences cannot ground or justify themselves. That will be the role of philosophy of science and epistemology. Here we will analyze the notion of scientific rationality and clarify the diversity of objects and methods of different scientific domains. This is essential to understand our access to the orders of reality of the natural world. This analysis will clarify the status of scientific objects and theories and their relation to the reality studies.

In this chapter we will start to elucidate the second hypothesis of this research work:

Hypothesis 2: Specific rationalities that share a homologous structure. *Sciences, philosophy and theology have their own distinctive rationalities. Nonetheless, they share a homologous rational structure in the sense that specific objects, methods (i.e., a system of reference, a sketch and an experience as testing), verification processes and notions of truth are attested in each of them. The distinctiveness lies in the fact that each component is specific and particular to each science, philosophy and theology.*

According to this hypothesis, sciences (natural and social) follow a rational structure: scientific object, a scientific method and the verification procedures. In chapter 4 and chapter 5 we will analyze respectively the specific rationality of philosophy and theology. As we will see, the homologous rational structure shared by natural sciences, philosophy and theology is the second fundamental condition that renders possible an articulation between natural sciences and theology.

Moreover, there is a second hypothesis that will be elucidated in this chapter:

Hypothesis of the plurality of sciences. *The notion of “science” does not have a unique model, e.g., physics. There is a plurality of sciences due to a plurality of objects, methods and verification processes.*

In order to justify this hypothesis we will consider the rational structure not only of natural sciences but also of social sciences. That is the case even when the present work is only about the

articulation of natural sciences' worldviews into systematic theology. We will show the reader that even when there is a plurality of sciences there are some general attributes common to the scientific rationality.

In the following sections we will start with a description of the general attributes and elements of the scientific rationality. This description of a general framework of a scientific rationality will enable us to analyze the plurality of sciences. Chapter 4, which is about the philosophical rationality and the ground of all knowledge, will justify this general framework. In general terms Ladrière and Zubiri agree with this general framework or they complement each other. There are some differences, specially concerning mathematics, that we will make explicit. With respect to physics we will follow Ladrière's work and add some minor aspects from Zubiri due to the basic agreement between them. This will enable us to avoid unnecessary repetitions. In terms of life sciences, Ladrière and Zubiri have not developed explicitly or fully an epistemology of biology. However, their framework of a general scientific structure is useful to describe the epistemologies of biology. We will use other sources to retrieve and describe the attributes and elements in life sciences.

II. Epistemological attributes and elements shared by all sciences

II.1 What characterized scientific knowledge

In this section we will discuss what characterizes a scientific knowledge. According to Jean Ladrière, scientific reasoning is an intellectual process that aims to elaborate knowledge that possesses the following epistemological attributes: critical, systematic, and capable of self-expansion²⁶⁹. A critical knowledge is a kind of comprehension that is aware of its method and is capable of adapting it to the nature of its objects. A scientific method adapts itself always to apprehend the object of study by the development of new tools, new formal operations, or protocols. In other words, a field of scientific knowledge controls the circumstances of its own development.

Scientific knowledge is systematic since there is a conceptual framework that seeks to articulate all components in a whole. Sciences organize a body of knowledge into a unity when the relations between different aspects appear clearly²⁷⁰. The capacity of self-expansion in sciences is what assures their progress. Scientific progress is understood in two ways: (i) the

²⁶⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 151-152.

²⁷⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 152.

discovery of new sectors, levels or aspects still unknown and (ii) a deeper intelligibility of objects already studied. This progress is achieved by means of new instruments, new technology, new protocols, new theories and new information. Scientific progress presupposes a critical knowledge that controls and develops its method and the capacity to systematize its knowledge or meta-knowledge. By meta-knowledge we refer to knowledge of principles, axioms and method. All of these enable sciences to go beyond the knowledge previously obtained²⁷¹.

Ladrière affirms that there are some essential elements that are indispensable to a scientific field²⁷². They are the following: the scientific **object**, the **method** and the **verification** process. A scientific field assures the control of its methodological approaches in order to adapt them to the object of study. As a consequence, a scientific object is not independent of a scientific method. Finally, a scientific field has the ability to construct its own evaluation and verification that organizes and ensures its cumulative knowledge by following some criteria of truth. All of these enable scientific progress. Let's consider each essential element in more detail.

II.2 The scientific object

Ladrière establishes a clear principle: an **object** cannot be understood without referring it to a **method**. An object is delimited and defined in relation to a particular method²⁷³. At the same time a familiarity with the object enables the elaboration of methodological prescriptions²⁷⁴.

II.3 The scientific method

The Spanish philosopher Xavier Zubiri states that a **method** is forging a way in order to deepen reality itself²⁷⁵. According to him, in all rational methods, including sciences, there are three essential elements: (1) a system of reference, (2) a sketch and (3) an experience as testing. These three constituents are not independent or purely sequential. Each one re-covers the other. Let's consider each of these methodological elements.

II.3.1 The system of reference

²⁷¹ J. LADRIÈRE, *L'articulation du sens II*, p. 153

²⁷² J. LADRIÈRE, *L'articulation du sens II*, p. 157

²⁷³ J. LADRIÈRE, *L'articulation du sens II*, p. 151-153.

²⁷⁴ J. LADRIÈRE, *Vie sociale et destinée*, p. 199.

²⁷⁵ In chapter 4, section III, we will clarify what Zubiri means by the term reality.

A researcher knows the object of study not just in and by itself but also with respect to other realities. For Zubiri there is a field²⁷⁶ of reality where we apprehend a thing in relation to other apprehended realities²⁷⁷. Therefore, we intellectually know a real thing from the standpoint of other real things²⁷⁸; we intellectually know it therefore in a system of reference. The system of reference is the field of reality and the field of apprehension is the “world as sensed”²⁷⁹.

In Ladrière there is a similar idea. For Ladrière there is a field of experience (*champ de l'expérience*) through which the cosmic reality becomes accessible to us²⁸⁰. That field of experience is the place of encounter between the cosmic reality and our experiences (it is a field of reality), between its appearance and our receptivity of it²⁸¹. Things that enter into this field of experience, enter into a visibility (field of manifestation) where each thing is apprehended in its singularity and at the same time it is apprehended in a network of relations that bind them all²⁸². In other words, each thing shows itself in interactions with others²⁸³.

In natural or social sciences this system of reference, the “world as sensed”, is the setting where the scientist makes his “observations”. This system of reference is the point of departure from which the researcher develops a series of hypotheses.

II.3.2 The sketch

If the system of reference is the point of departure of the rational method, the sketch is the terminus²⁸⁴. The sketch is a free construction that proposes what a real thing “could be”. This construction is an outline, we might say an interpretation, of what a real thing “could possibly be” taking in consideration the system of reference²⁸⁵. In the case of sciences, the sketch or outline is

²⁷⁶ Let's briefly explain Zubiri's concept of field. Zubiri affirms there are three modes of intellection: primordial apprehension, logos and reason. For him **primordial apprehension** is the primary and radical mode. Here one apprehends each real thing as individual. In the primordial apprehension, I apprehend the real “only” in and by itself. (X. ZUBIRI, *Inteligencia y Logos*, p. 15). In the other mode of intellection, the **logos** (X. Zubiri, *Inteligencia y Realidad*, p. 12), I intellectually know what the real thing is in function of other realities. The **field**, also called field reality, is the *ambit of reality* that encompasses many real things. Thus each real thing should be intellectually known therein not just in and by itself (the primordial apprehension) but also with respect to the other realities in the field (X. Zubiri, *Inteligencia y Logos*, p. 15-16). Therefore, I intellectually know a real thing from the standpoint of other real things; I intellectually know it therefore in the field-sense (X. Zubiri, *Inteligencia y Realidad* p. 275). In the third mode of intellection is **reason**. I intellectually know what the real thing, not only in itself, not only in function of other realities, but also in function to the world. Reason consists in going from field reality toward worldly reality. We will explain in more details Zubiri's philosophy and the concept of field in chapter 4, section III.

²⁷⁷ X. ZUBIRI, *Inteligencia y Logos*, p. 15-16.

²⁷⁸ X. ZUBIRI, *Inteligencia y Realidad*, p. 275.

²⁷⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 228.

²⁸⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 154.

²⁸¹ Ladrière calls it “field of reality” (*champ de la réalité*) (p. 37) or field of experience (*champ de l'expérience*) (p. 150 and 154) and affirms that it is the place where things manifest themselves to us. J. LADRIÈRE, *L'articulation du sens III*, p. 37 and 150.

²⁸² J. LADRIÈRE, *L'articulation du sens III*, p. 32.

²⁸³ J. LADRIÈRE, *L'articulation du sens III*, p. 34.

²⁸⁴ X. ZUBIRI, *Inteligencia y Razón*, p. 217-220.

²⁸⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 219

a model, a hypothesis or a particular theory that follows the framework of analysis chosen by the scientist²⁸⁶. This sketch approximates real objects and their internal structures²⁸⁷. However, this is not complete without testing the sketch.

II.3.3 Experience as testing

The sketch is something abstract that approximates a real thing. It is an outline that “could possibly be”. We have to test it by means of an experience in order to corroborate or refute it. According to Zubiri there are four modes of experiences: (i) an experiment as a physical controlled manipulation that forces a reality to show its nature²⁸⁸, (ii) *compenetration* (which in Spanish means “mutual understanding” or “putting yourself in another’s shoes”) as an internal vision by “installing” myself in the interiority of the object of study (this could be the case with human beings)²⁸⁹, (iii) testing-together (“*com-probación*” in Spanish) for the case of postulated realities (e.g., mathematics) where one tests together the reality of A and the reality of B in the formula A “as being” B²⁹⁰; and finally (iv) conformation where I experience myself as an insertion, into my own reality, of a sketch of possibilities of what I am²⁹¹. This last one could be the case of philosophy and theology.

This experience or testing is the heart of the verification process.

II.4 Verification

II.4.1 Definition of verification

Scientific knowledge does not stop with its object and method. It requires a **verification** procedure. Zubiri affirms that verification is the fulfillment of a sketch²⁹². Verification is essentially a dynamic quality²⁹³; it is always *to go verifying*. This “to go verifying” is what constitutes the process of testing. It is also a progressive adequacy (correspondence) always unfinished where different rival sketches are tested, e.g., waves’ theory vis-à-vis photon theory to explain light²⁹⁴.

²⁸⁶ We will see that the choice in physics is a particular field of mathematics, historical narratives in evolutionary biology, etc.

²⁸⁷ J. LADRIÈRE, *L’articulation du sens II*, p. 152.

²⁸⁸ X. ZUBIRI, *Inteligencia y Razón*, p. 247-248

²⁸⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 249-250

²⁹⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 254.

²⁹¹ X. ZUBIRI, *Inteligencia y Razón*, p. 256.

²⁹² X. ZUBIRI, *Inteligencia y Razón*, p. 263.

²⁹³ X. ZUBIRI, *Inteligencia y Razón*, p. 269.

²⁹⁴ X. ZUBIRI, *Inteligencia y Razón*, p. 273.

Zubiri calls “adequate verification” the verification that in a certain way is *total*. It is a complete fulfillment between the real and what has been sketched out²⁹⁵. However, normally there is no such total verification, but a partial verification. This happens because ordinarily we are not capable of apprehending the whole reality of an object. This implies that the correspondence between judgments or hypotheses and reality is only a remote goal of a never-ending dynamism of the intellect. Consequently, all sketches that are true are structural approximations to what should be a truth completely adequate to reality. Approximation here does not mean inaccuracy, falsehood or deficiency. It means gradual approximation to the whole reality.

Besides, Zubiri expresses that there are some sketches that are not verifiable in a positive sense. They are verifiable in the negative sense of refutation or falsification²⁹⁶. Popper, for whom science proceeds by conjecture and refutation, elaborates this negative notion of verification. For him, “*the criterion of the scientific status of a theory is its falsifiability, or refutability, or testability*”²⁹⁷. Science progresses by means of eliminating false hypotheses and by imagining new hypotheses capable to be in agreement with an increasing number of empirical facts. As expressed by Chalmers: “*a hypothesis is falsifiable if there exists a logically possible observation statement or set of observation statements that are inconsistent with it, that is, which, if established as true, would falsify the hypothesis*”²⁹⁸.

II.4.2 The criteria of truth in the verification process

The criteria of truth are the means by which one can recognize that a proposition or a theory is true²⁹⁹. Ladrière examines three theories about truth that have been part of the western intellectual tradition and their defining criterion. They are, respectively, (a) truth as correspondence, (b) truth as coherence, and (c) the pragmatic theory of truth.

II.4.2.1 The theory of truth as correspondence

²⁹⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 274.

²⁹⁶ Popper makes the distinction between falsifiability and falsification. Falsifiability is a requirement that guarantess the empirical character of a series of statements. Falsification refers to the procedure that effectively refutes a theory. See K. POPPER, *The logic of scientific discovery*, p. 86-87.

²⁹⁷ For Popper this criterion works as a criterion of truth of a scientific hypothesis and also as a criterion of demarcation between scientific theories and a non-scientific theories, e.g., marxism and psycho-analysis. K. POPPER, *Conjectures and refutations*, p. 37.

²⁹⁸ A.-F. CHALMERS, *What is this thing called science?*, p. 62.

²⁹⁹ We are not talking here about the most fundamental level of the notion of truth. For the moment we are only refering to a scientific or rational truth. A fundamental concept of truth related to the appearance or manifestation of real things into our field of experience will be discussed in chapter 4.

According to the scholastic definition, truth is “*adaequatio rei et intellectus*”. This is equivalent to the theory of truth as correspondence, according to which the criterion of truth is as following: the necessary and sufficient condition of truth in a “proposition A” is the correspondence between what is stated in the “proposition A” and the “fact of A”³⁰⁰. What is not clear in this statement is the “fact of A”. One possibility is the notion of correspondence between facts of reality and logic as a picturing relationship as expressed by Wittgenstein’s *Tractatus Logico Philosophicus*³⁰¹. The “proposition A” will be like a picture that represents, in the sense of reproducing, some state of affairs in the world that exists independently of my statement or my interpretation. However, there is a problem with that notion of correspondence. How can we justify propositions that make a prediction about the future? What about hypothetical propositions or conditional propositions? As an example of hypothetical or conditional propositions we have: “if A (and A is not a fact) then B”. “If I was born at Paris (and that is not the case) I would be a Parisian”. I was not born at Paris, nevertheless the proposition is true! The “fact of A” is not an objective event but an interpretation of the world made by the proposition. That is why Ladrière does not agree with Wittgenstein notion of correspondence³⁰². For Ladrière, the correspondence is between an operation that presents “the thing” in a certain perspective and the effective realization of that operation in the “the thing” or event that needs to be verified. In other words, there is no immediate relation between the “proposition A” and the “fact of A”. There is a need of a mediation achieved through a verification procedure and a criterion of truth that confirms the acceptability of the “proposition A”³⁰³.

In sciences, the idea of truth implies a correspondence between an abstract object, constructed by a procedure such as a mathematical operation and an experiment performed in the concrete thing. Correspondence implies here the realization of the abstract object in the concrete thing or event.

II.4.2.2 Theory of truth as coherence

According to this theory, *a statement is true if and only if it stands in an appropriate relation to some system of other statements*³⁰⁴. A proposition cannot have the conditions of truth independently from its relations with other propositions. Using a Hegelian expression: “*the truth*

³⁰⁰ A.R. WHITE, *Truth*, Londres, MacMillan, 1970, p. 150. Quoted by J. LADRIÈRE, *L’articulation du sens III*, p. 52.

³⁰¹ L. WITTGENSTEIN, *Tractatus Logico Philosophicus*, No. 2.1, 2.11, 2.12, 2.13, 2.131. P.K. MOSER, D.H. MULDER, and J.D. TROUT, *The theory of knowledge*, p. 66.

³⁰² J. LADRIÈRE, *L’articulation du sens III*, p. 53-54.

³⁰³ J. LADRIÈRE, *L’articulation du sens III*, p. 58-60.

³⁰⁴ P.K. MOSER, D.H. MULDER and J.D. TROUT, *The theory of knowledge*, p. 69.

is the whole”³⁰⁵. The criterion of truth is the coherence of a proposition with the whole of a discourse where it belongs. Here we have the main difficulty. With which discourse or system should the statement or proposition “cohere”? Is coherence a definition of truth relative to a particular system? What about a person who has a system of beliefs that is mostly false, such as the National Socialist political system? Obviously, a statement that coheres with this inadequate system of beliefs could not be true.

There are two versions of this theory of truth: the idealist version and the empirist version. The idealist version, attached to absolute idealism, affirms an identity between the whole of reality and the truth that manifests itself. The truth is self-manifestation of reality. According to Hegel, “what is real is rational and what is rational is real.” In other words, there is a *correspondence* between the discourse and the real as a whole³⁰⁶. The empirist version considers a “totality” that is not the real as a whole, but a system of scientific propositions as it functions during a specific moment. The truth of a particular proposition is its coherence with that system. It is the *correspondence* with a set of empirical information or facts³⁰⁷.

II.4.2.3. Pragmatic theory of truth

According to this theory, the truth of a proposition is its utility with respect to certain intentions or courses of action³⁰⁸. The criterion of truth is the following: an idea is true if it is useful and effective. Hypotheses are not considered as conjectures about reality but as instruments of prediction and guidelines for research³⁰⁹. Under this theory, truth is turned to the future: prevision and action over things in a time ahead. If in the other two theories truth is related with the idea of contemplating reality, truth for a pragmatist is correlated with an efficacious action that transforms such reality.

Usefulness is a criterion of truth that is very relevant. Nevertheless, a criterion of truth is not the same as a concept of truth. Consequently, the usefulness cannot be considered as a concept of truth³¹⁰. The pragmatic theory of truth confuses the conditions that make a statement true with the conditions of justification by its usefulness³¹¹. Unless there is reference to the world or a correspondence with facts, this theory of truth can be used to justify something that is useful

³⁰⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 54.

³⁰⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 55.

³⁰⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 56.

³⁰⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 56-57.

³⁰⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 56.

³¹⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 56-57.

³¹¹ P.K. MOSER, D.H. MULDER, and J.D. TROUT, *The theory of knowledge*, p. 72.

but false. Thus, we can adapt this criterion as follows: an idea is useful in terms of prediction and research guidelines if it gives a description adequately enough of the reality.

II.4.2.4 The priority of the idea of correspondence

This analysis shows that the ideas of coherence and utility relate to the idea of correspondence, which seems to have priority. What is decisive is the agreement between a proposition and a fact, between a discourse and the real. Ladrière understands the idea of correspondence as an agreement between reality and its place of manifestation that is the human *logos* (thought and language). A proposition is true because the real allows an interpretation that is expressed by the proposition itself³¹². The *logos* of the world, understood as its intelligibility, can be expressed by the human *logos* and it can be manifested with fidelity³¹³.

Here correspondence is a second manifestation of the real that depends on the first manifestation as “appearance”. This is the correspondence between the *logos*-manifestation of the world and the *logos*-discourse of the human person. Truth here is the ratification of the human word of the world’s manifestation³¹⁴.

Although correspondence is the foundation of all other theories of knowledge, in practice we use the three of them as criteria to validate our scientific knowledge, as we will see below.

After discussing these general epistemological attributes and elements of scientific knowledge, now we will use this framework to analyze different modes of scientific knowledge.

III. Three modes of scientific knowledge

In this section we will analyze Ladrière’s topology of three types of scientific knowledge: sciences of formal systems, empirical-formal sciences, and hermeneutical sciences³¹⁵. We will adapt the second type of science, empirical-formal sciences, to include life sciences in general and evolutionary biology in particular. For that reason we prefer to call this mode of scientific knowledge “natural sciences”. They make reference to: postulated and constructed reality, nature as a manifested reality, and the manifested human reality that demands interpretation. We will

³¹² J. LADRIÈRE, *L’articulation du sens III*, p. 57-58.

³¹³ J. LADRIÈRE, *L’articulation du sens III*, p. 58-59.

³¹⁴ We will see in chapter 4 the connection of Ladrière notion of correspondence and Heidegger’s notion of *aletheia* as unveil or manifestation. See J. LADRIÈRE, *L’articulation du sens III*, p. 58-59.

³¹⁵ J. LADRIÈRE, *L’articulation du sens I*, p. 25-50. J. LADRIÈRE, *L’articulation du sens II*, p. 153-162. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 87-96.

now examine each type of science and how they fulfill the general characteristics of rational knowledge.

III.1 Formal sciences

This section focuses on the sciences of formal systems, i.e., logic and mathematics. Due to limit in space and due to the complexity of the subject we will focus our attention on mathematics. We will analyze the status of mathematical objects and truth, the method proper to mathematics and finally the relationship between formal systems and the physical world. The period that comprises the end of the 19th century and the 20th century witnessed the erosion of certainty in the fields of mathematics. In the past, this field was considered the model of rationality that made incontestable progress in objective knowledge. Nevertheless, this has changed due to a series of fundamental debates and revisions in our understanding of formal sciences and their certitude.

III.1.1 The foundational crisis: the Hilbert Programme and Gödel's theorems

Hilbert was a mathematician who worked on the foundations of mathematics. The objective of the *Hilbert programme* was to “*establish once and for all the certitude of mathematical methods*”³¹⁶ and to guarantee the absolute objectivity of the intellectual efforts in mathematics. The conjecture in the background was that all problems could be solved³¹⁷. According to this school, named formalism, mathematics is an activity that operates over signs that do not have semantic content. For Hilbert, mathematical reality is identified with the concrete reality of signs. It is by means of the object-sign that we can go from the abstract to the concrete. Mathematical objects are nothing else than concrete signs³¹⁸. For the formalist, definitions and rules are fundamental to mathematical method, which seeks to proof theorems. Consequently, mathematics becomes a body of demonstrable formulas. Mathematical truths are formal truths that depend on conventions, definitions and rules.

The objective of formalism is the axiomatization and formalization of various mathematical fields in order to ensure their coherence³¹⁹. According to Hilbert, mathematics is formalized by

³¹⁶ Quoted by S. SHAPIRO, *Thinking about mathematics*, p. 158. Hilbert himself wrote: “*Qu'en serait-il de la vérité de notre savoir, de l'existence et du progrès de la science s'il n'y avait au moins en mathématique une vérité solide?*” Quoted in J. LADRIÈRE, Jean, *Les limitations internes des formalismes*, p. 1.

³¹⁷ J. LADRIÈRE, *Les limitations internes des formalismes*, p. 2.

³¹⁸ Hilbert himself affirmed this by the following expression: “*au commencement est le signe*”. Quoted by J. LADRIÈRE, *Les limitations internes des formalismes*, p. 4.

³¹⁹ J. VON NEUMANN, *The formalist foundations of mathematics*, p. 63.

providing (i) certain axioms that serve as building blocks for the formal structure of mathematics; (ii) rules of deductions and construction. What is relevant in the deductive formal method is the set of axioms chosen and the rules. Intuition and observation are not part of the deductive process, although they could assist as heuristic. Axioms are functional definitions of mathematical objects and concepts. For that reason, it is decisive that they be consistent³²⁰. If a group of axioms is consistent then they are true and their defined objects exist. Therefore, mathematical existence is identified with the non-contradiction of the set of axioms. The rules of deduction are not arbitrary. They must enable the derivation of true propositions from consistent axioms³²¹. A mathematical deduction eliminates all rational doubts by demonstrating that all theorems and mathematical truths are conclusions derived from the premises³²². *Hilbert programme*, which sought to establish the certitude of mathematics, was deeply questioned by Gödel's incompleteness theorems.

Let's consider Gödel's first incompleteness theorem³²³. This theorem affirms that in a formalized consistent theory F_s , there is a proposition P_s in the language of F_s where neither P_s nor its negation are theorems of F_s . P_s is not provable in F_s ³²⁴. This is the case even if P_s is clearly true³²⁵. This calls into question that a single formal method can derive every arithmetic truth.

The first incompleteness theorem can be interpreted in two different ways. For a realist there is "more" than what is derived from the axioms³²⁶. Arithmetic cannot be reduced to deduction from original axioms. However, there is a skeptical interpretation, according to which the first incompleteness theorem states that some arithmetic propositions lack truth-values.

That is the background of a present debate among philosophers and mathematicians around the status of mathematical objects and methods³²⁷. Do they exist? How do we have access to

³²⁰ A collection of axioms is consistent if they do not contradict each other. A formalized theory F_s is consistent if it not possible to derive a contradiction, such $A = B$ and $A \neq B$, using the axioms and the rules of F_s . That means that a theorem T_m and its negation could be proved in an inconsistent formalized system.

³²¹ S. SHAPIRO, *Thinking about mathematics*, p. 149.

³²² S. SHAPIRO, *Thinking about mathematics*, p. 22.

³²³ The Second incompleteness theorem can be expressed as follows: According to the first theorem, we can formalize "derivable in F_s " and derive in F_s the following proposition: (i) *If F_s is consistent, then P_s is not derivable in F_s* . However we can express the proposition " P_s is not derivable in F_s " as P_s^* . Consequently we can prove the following: (ii) *If F_s is consistent, then P_s^* is derivable in F_s* . This contradicts (i), which is the first incompleteness theorem. Consequently, no consistent theory can prove its own consistency. See S. SHAPIRO, *Thinking about mathematics*, p. 167.

³²⁴ A mathematical proposition is not provable in a system if it neither derivable from the axioms and rules of deduction nor refutable. See J. LADRIÈRE, *Les limitations internes des formalismes*, p. 40.

³²⁵ S. SHAPIRO, *Thinking about mathematics*, p. 166.

³²⁶ As we will see, for Ladrière there is "more" truth and for Zubiri there is "more" reality.

³²⁷ In philosophy of mathematics objects refer to numbers, points, functions, sets, geometric objects, etc.

them? There are some positions with respect to the mathematical objects and the status of mathematical truth³²⁸.

III.1.2 Jean Ladrière's transcendental realism and representational constructivism

Let's consider Jean Ladrière's position on the status of mathematical objects, mathematical method and truth. Ladrière develops his reflection around the formal axiomatic systems, their coherence and their limits. He seeks to understand the ground of mathematics, its rational project, and objectives³²⁹.

III.1.2.1 The status of the mathematical objects

For Ladrière, the mathematical object is characterized, at the same time, by being constructed and given before mathematical reflection³³⁰. Influenced by Gödel, Ladrière affirms that mathematical objects exist already before all intellectual activity³³¹. In what could be considered a platonic position, he states that these objects are ideal. Consequently, mathematics explores a realm that is already constituted. At the same time, he also argues that mathematics provides itself its own objects and their existence by means of definitions and axioms³³². The mathematical object manifests itself progressively through the history of mathematics. This

³²⁸ For pedagogical reasons, we group these positions into four major types or models concerning the status of mathematical objects. The following table summarizes the positions.

Models	Object	Status of mathematical truth
Realism (Gödel and Frege)	Exists independent of the mathematician.	A priori and necessary truths. Objective truth-value
Naturalism (Quine)	Only concrete and physical objects exist.	Neither a priori and necessary nor purely empirical. Objective truth-value.
Constructivism (Brouwer)	A mathematical object exists if it can be constructed.	A priori, independent of observations. Not necessary, they depend on construction.
Conventionalism (Russell and Putnam)	Mathematical objects are pure fictions. Mathematics does not make reference to existent mathematical objects.	Some sustain objective truth-value. Others think that truth-value of mathematics is vacuous.

We are in debt of Shapiro's work, although we modify some elements of his typology. See S. SHAPIRO, *Thinking about mathematics*.

³²⁹ J. LADRIÈRE, *La philosophie des mathématiques et le problème du formalisme*, p. 618.

³³⁰ Ladrière states: "l'être mathématique n'est ni purement construit ni purement donné". J. LADRIÈRE, *La philosophie des mathématiques et le problème du formalisme*, p. 615-616.

³³¹ Frege believed that natural numbers exist independently of the mathematician mind. They are not subjective product of the intellect. Gödel disagreed with the idea that mathematical objects are constructed out of definitions, concepts or attributes. Gödel affirmed that "we form our ideas also of those objects on the basis of something else which is immediately given" (quoted from Shapiro, p. 206). Gödel did not say what this "something" was. For him, we have access to objective mathematical objects due to a mathematical intuition, analogous to sense perception, which leads to mathematical knowledge. By means of this intuition, some mathematical principles "force themselves on us as being true". See S. SHAPIRO, *Thinking about mathematics*, p. 110, 205-206. R. NADEAU, *Logicisme*, p. 683.

³³² J. LADRIÈRE, *La philosophie des mathématiques et le problème du formalisme*, p. 614.

manifestation occurs due to a dynamical construction of necessary symbolism, which constitutes a new language achieved in formalism³³³.

Does that mean that Ladrière hesitates unsure between realism³³⁴ and constructivism³³⁵? In order to see how Ladrière clarifies his positions, we must understand his analysis of the mathematical axiomatic method. Ladrière establishes a clear principle: *an object cannot be understood without referring it to a particular rational method. An object is not a pure reference to itself. Its meaning is found in relation to the objective and method of mathematics*³³⁶.

III.1.2.2 Formal systems and the axiomatic method

Ladrière considers that a formal system is an system constituted by a group of theorems, which are derived from axioms following a set of rules³³⁷. An axiomatic formal system consists of a group of conventions that determine a set of objects, a set of propositions and a set of theorems. The set of objects consists of a collection of elementary objects, also named elementary symbols or atoms, and of certain number of operations that permit the construction of complex objects from atoms. An operation is a transformation that changes an entity into another entity, e.g., the arithmetic operations of addition, subtraction, multiplication, and division.

A formal system consists of elementary objects, operations, predicates, formation rules, a set of axioms, and rules of deduction. Consider the following example, the axiomatic formal system of natural numbers as expressed by Peano³³⁸. The example is shown from table 3.1 to table 3.3.

Table 3.1 Morphological components: elementary symbols, operations and rules of formation in a formal system.

Elements of a formal system	System of natural numbers
Elementary symbols	The elementary object: "0".
Operations	One operation: "S". For all "x" in the system, Sx is the successor of x.
Formation rules. A grammar that tells how formulas or propositions are to be constructed.	Predicate: "=" If x and y belong to the system, $x = y$ is a proposition of the system.

³³³ J. LADRIÈRE, *La philosophie des mathématiques et le problème du formalisme*, p. 614-615.

³³⁴ Mathematical realism considers that mathematical objects have an objective reality and existence that is independent of the mathematician's mind, language and convention.

³³⁵ A constructivist argues that mathematical objects exist but as free creations of the human spirit. He does not accept that mathematical propositions are true or false independently of the mathematician's mental activity. S. SHAPIRO, *Thinking about mathematics*, p. 25 and J. DUBUCS, *Constructivisme*, p. 276.

³³⁶ J. LADRIÈRE, *La philosophie des mathématiques et le problème du formalisme*, p. 612.

³³⁷ J. LADRIÈRE, *L'articulation du sens I*, p. 64-65.

³³⁸ See J. LADRIÈRE *L'articulation du sens I*, p. 65-66. J. LADRIÈRE, *Les limitations internes des formalismes*, p. 16.

This first part refers to the morphological components. Here we find concepts and symbols (also named elementary objects or atoms) that are explicitly introduced. First, there is the explicit list of elementary primitive components. In this example, it is “0”. Then there is a list of operations that operate over the elementary symbols. Finally, there are formation rules that, following a set of predicates, form the propositions of the system from elementary objects.

The second section is the axiomatic part. It consists of a set of axioms and rules of deduction. Axioms are propositions from which it is possible to derive theorems by following rules of deduction³³⁹.

Table 3.2 Axiomatic part: set of axioms and rules of deduction

Set of axioms	(i) There is a natural number “0” (ii) There is no natural number whose successor is 0. (iii) If x is a natural number, then the successor Sx is also a natural number. (iv) Distinct natural numbers have distinct successors. If $x \neq y$, then $Sx \neq Sy$. (v) If a property is possessed by 0 and also by the successor of every natural number, then it is possessed by all natural numbers. (principle of induction).
Rules of deductions	If $x = y$, then $Sx = Sy$

Axioms have definitions that are in some way arbitrary and are presented as valid. The axioms are chosen freely. The only criterion for choosing these axioms is internal coherence. These axioms fix the meaning of propositions. The formulation of deductive rules eliminates all recourse to intuition³⁴⁰.

Table 3.3 shows some examples of derived propositions.

Table 3.3 Examples of derived propositions in natural numbers.

Examples of derived propositions	$0 = 0$; $S0 = S0$; $S S0 = S S0$, etc. General proposition: If “ y ” is an object of our system, $y = y$.

Analyzing the axiomatic method, Ladrière states in an article of 1966, that there seems to be a paradox. Mathematics explores a domain that is unknown; we do not know in advance the properties of mathematical objects. At the same time, mathematics provides to itself its own objects by doing some construction and creation³⁴¹. Consequently, mathematics is partially constructed and partially given. Well, this paradox turns out to be apparent. Ladrière solves this

³³⁹ J. LADRIÈRE, *L'articulation du sens I*, p. 65

³⁴⁰ This is Ladrière's critic to Brouwer's and Gödel's notions of intuition. For Gödel mathematical objects exist independently of our constructions and we access them by means of mathematical intuition. Brouwer sustained that this mental construction of the mathematical edifice is grounded in a primordial intuition. Intuition is a way of knowing that is neither abstraction nor analogy. The primordial intuition is a direct insight, an *a priori* introspection in the individual mind leading to the awareness of time and mathematical construction. J. LADRIÈRE, *L'articulation du sens I*, p. 64-65. W.P. VAN STIGT, *Brouwer's Intuitionism*, p. 173.

³⁴¹ “Il y a dans la pensée mathématique, un apparent paradoxe : d'une part, elle s'efforce sans cesse de rejoindre une réalité qui lui paraît extérieure, elle explore un domaine inconnu, elle s'interroge sur des propriétés dont elle ne connaît pas d'avance la nature – mais d'autre part elle se donne à elle-même son projet, elle le crée au fur et à mesure qu'elle avance.” J. LADRIÈRE, *Objectivité et réalité en mathématiques*, p. 552.

paradox by distinguishing between the mathematical object and its representation. There is a duality between mathematical reality and its representation in a mathematical language. Let's consider these two aspects and their relation.

A. Priority of mathematical reality

We can formulate Ladrière thesis as follows:

*Mathematical reality is essentially objective and it has a priority and an autonomy with respect to the mathematical method. Mathematical objects are accessible by means of mathematical representations. These representations constitute a mathematical language that enables the object's concrete manifestation*³⁴².

He also states that the mathematical reality “*is before and beyond the formal language.*”³⁴³

According to Ladrière, three arguments sustain this thesis: the history of mathematics, the plurality of axiomatic approaches and the inadequacy of axiomatic systems³⁴⁴. The argument of the history of mathematics is as follows. There is a historical process marked by contingency in which we discover and grasp mathematical objects and their understanding. However, once we grasp these objects, we leave behind this contingent process and express it in a formal system. This formal system expresses and grounds what was known before³⁴⁵. The second argument, the plurality of axiomatic approaches, shows that the same mathematical objects can be represented through different axiomatic systems. The same object is delimited by different definitions that belong to different axiomatic processes³⁴⁶. The third argument is the inadequacy of the axiomatic systems. Ladrière interprets Gödel's theorem of incompleteness as an evidence of the insufficiency of axiomatic systems' representation of mathematical reality³⁴⁷. Therefore,

³⁴² Our formulation of Ladrière's thesis is found in the following sentences. “*Dans le langage mathématique [...] nous ne faisons que procurer aux formes un corps de manifestation, nous leur offrons la possibilité de se montrer*” (p. 556). “*La méthode axiomatique [...] se réfère toujours à une expérience de cet objet qui la précède et l'enveloppe*” (p. 558-559). “*Cette priorité de l'objet mathématique à l'égard de ses conditions génétiques d'apparition s'impose avec une évidence beaucoup plus grande encore lorsqu'on considère les situations où c'est à partir d'objets mathématiques déjà constitués que s'engendrent de nouveaux objets*” (p. 567). “*L'être mathématique nous apparaît donc doué d'un dynamisme propre ; les développements qu'il autorise de doivent rien à une initiative pure de la pensée, du type d'une création*” (p. 569). “*Si la réalité mathématique est de l'ordre d'un a priori objectif, d'un préalable de condition, il n'est pas étonnant qu'elle ne puisse nous apparaître que dans des représentations formelles*” (p. 580). “*Si les démarches de la pensée ne sont que la face subjective des exigences de la manifestation, on peut dire qu'en mathématiques l'objectivité est d'essence*” (p. 581). J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 556, 558-559, 567, 569 and 580-581.

³⁴³ J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 553.

³⁴⁴ J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 553.

³⁴⁵ J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 554.

³⁴⁶ For example, the number “2” can be expressed and delimited by different mathematical formal systems, e.g. natural numbers, integers, real numbers, complex numbers, etc.

³⁴⁷ J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 557.

mathematical reality exceeds all intellectual and linguistic effort. Mathematical reality even guides our intellectual effort³⁴⁸.

B. Mathematical representation as the conditions of the possibility to apprehend the mathematical reality.

Language enables the mathematical formal object to obtain, metaphorically speaking, a body to manifest itself³⁴⁹. The axiomatic method is a valuable instrument to study mathematical reality. It enables us to grasp and delimitate the object. The formalization helps us have access to mathematical formal objects through an experience that is neither an immediate intuition of the mathematical reality (against intuitionism) nor an empirical experience (against naturalism)³⁵⁰. The choice of criteria, rules, operations and axioms determines the type of object that will be manifested. In other words, our access to a particular type of object depends on particular choices we made in the internal structure of formal languages. These choices (axioms, rules, definitions and operators) do not determine the internal structure of the object, but our possible access to it. As a consequence, the method is proportioned to the nature of the object. The diversity of axiomatic methods corresponds to the diversity of mathematical objects³⁵¹. The apparent subjectivity in the choice of criteria, axioms, operators and rules is really an adaptation of the method to the rigorous requirements of the object itself. Mathematical axiomatic formal language should not be understood as a creation of an object, but as the development of an access to it³⁵².

Gödel's theorem is interpreted as follows: the linguistic manifestation is partial, historical and never total³⁵³. There is a horizon of mathematical reality that is always open and never fully apprehended in the formalization project. However, mathematical rationality is partial, historical and constantly becoming. Gödel's theorems show that reason is not always victorious, master of the world and of itself. On the contrary, it is a humble effort always uncertain, discontinuous, limited and in development. It is always in need to integrate its own failures³⁵⁴.

³⁴⁸ J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 581.

³⁴⁹ "Dans le langage mathématique [...] nous ne faisons que procurer aux formes un corps de manifestation, nous leur offrons la possibilité de se montrer". J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 556.

³⁵⁰ For Ladrière, there is no intuition that could give us a pre-formulated immediate grasp of the mathematical object. It is language that enables us to grasp mathematical objects in their formulations. For Ladrière, mathematical experiences refer to operations, articulations and manipulations of symbols by which we define, demonstrate and discover new objects. See J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 559 and 564.

³⁵¹ J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 562.

³⁵² "L'être mathématique nous apparaît donc doué d'un dynamisme propre ; les développements qu'il autorise ne doivent rien à une initiative pure de la pensée, du type d'une création." J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 569.

³⁵³ Ladrière's notion of the limit of formal systems should be understood in a positive sense: the reality of mathematical objects exceeds the representations of axiomatic formal method.

³⁵⁴ J. LADRIERE, *La philosophie des mathématiques et le problème du formalisme*, p. 621-622.

III.1.2.3 Mathematical truth and the criterion of truth

Ladrière's analysis of the axiomatic formal method makes him conclude that mathematical reality and truth are objective. However, we can never remove completely the uncertainties, shadows and opacity that surrounds our apprehension of mathematical objects and truths due to the fact that we cannot fully represent mathematical reality and its truth in a closed formal system.

Although Ladrière is not explicit about the criteria of truth in formal sciences, we can understand it thanks to the notion of interpretation. The criterion of correspondence is applied here because a formal system is “verified” in its relationships with other formal systems. It can also be verified with empirical phenomena, such as mechanical processes. The criterion of coherence is used to confirm that a particular proposition is “coherent” with the rules of deduction and with other propositions, including axioms of the formal system. The fact that a formal system would not have longtime interest if it is not interpreted, implies a version of the pragmatic criterion of truth: the utility of a formal system in terms of its use to interpret other formal system and the domain of empirical phenomena. Even highly abstract mathematical systems can become instruments of scientific development such as non-Euclidean Riemann's geometry, which inspired Einstein's General Theory of Relativity, and Hilbert's space, which enabled Quantum Mechanics. These examples imply that formal systems are open to be applied to the domain of empirical phenomena.

III.1.3 Xavier Zubiri: mathematics' reality as constructed by postulation

Let's consider in this section Zubiri's mathematical philosophy and his perspectives on the status of mathematical objects, method and truth. His reflection on the subject is grounded in his notion of “*sentient intelligence*”³⁵⁵.

III.1.3.1 Mathematical objects

For Zubiri, mathematical objects have reality when it is analyzed by human intelligence³⁵⁶. However, it is not a reality that subsists by itself, but a postulated reality³⁵⁷. Mathematical objects

³⁵⁵ Zubiri's notion of “sentient intelligence” will be developed below. We follow the three volumes in Spanish of “*Inteligencia Sentiente*”: *Inteligencia y Realidad*, *Inteligencia y Logos*, and *Inteligencia y Razón*. Most of the times we follow Thomas B. Fowler's English translation *Sentient Intelligence*.

are not only apprehended, they are constructed by the human intellect and they have a reality by postulation. According to Zubiri, there are two types of real things. First, there are things that are real in and by themselves, e.g., a stone, a tree, an animal, a human being, etc. Second, there are things that are made real by means of an intellectual construction according to concepts³⁵⁸. Mathematical objects correspond to the second type³⁵⁹. The content and the mode of reality are different between both types. The reality of a mathematical object is placed by a double act: (i) a definition of that reality, and (ii) a postulation of its reality³⁶⁰. Therefore, mathematical realities are realities defined and postulated.

Zubiri disagrees with mathematical platonism³⁶¹, because he denies that mathematical objects are in and by themselves real. He also disagrees with the notion that mathematics is grounded in language. Mathematics is neither a system nor a language defined by operations, concepts and rules. According to Zubiri, we do not have an intuition (immediate, direct or unitary vision of something) of a set of elements. A set of elements is the result of an act of construction in and by the intellect³⁶². Mathematics is not about objective concepts, it is about a real object intellectually constructed. A mathematical object is neither real by a simple definition nor by the execution of a series of operations. A mathematical object is real by a postulation that realized a content (properties) freely determined³⁶³. The mode of intellection is not a meager conceptuation, in the sense of idealization, but a realization. The reality and the properties of a mathematical object are freely postulated. It is a real object constructed according to concepts.

In order to understand Zubiri's notions of realization as construction according to concepts, we need to understand his conception of mathematical method.

III.1.3.2 Mathematical method: construction according to concepts

Formalists affirm that deduction is the heart of mathematical method. According to Zubiri, that is not the case. Deduction is not a method, but part of the logical structure of mathematics. Mathematical judgments and the logical structure of the reasoning process are not formally a

³⁵⁶ "La matemática [...] es un sistema de verdades necesarias acerca de un objeto que, a su modo, tiene realidad ante la inteligencia." X. ZUBIRI, *Inteligencia y Logos*, p. 129.

³⁵⁷ X. ZUBIRI, *Inteligencia y Logos*, p. 131.

³⁵⁸ X. ZUBIRI, *Inteligencia y Logos*, p. 130.

³⁵⁹ Literary characters are other examples of this type of intellectual construction.

³⁶⁰ X. ZUBIRI, *Inteligencia y Logos*, p. 325.

³⁶¹ For some realists, sometimes called Platonic realists, mathematics refers to an eternal, unchanging and ideal realm that is not part of space-time. They are called Platonist because their notion of mathematical objects resembles Plato's eternal, unchangeable form that not part of the physical universe. See S. SHAPIRO, *Thinking about mathematics*, p. 27.

³⁶² X. ZUBIRI, *Inteligencia y Logos*, p. 141.

³⁶³ X. ZUBIRI, *Inteligencia y Logos*, p. 144.

method, but something the mathematical structure must respect. It is not enough to define rules of deductions; we have to “make” the deduction by operating, transforming and constructing within mathematical reality³⁶⁴. For Zubiri, mathematical method is not the means by which we reach mathematical reality, as affirmed by Ladrière. The method is already installed in the mathematical reality by the process of postulation.

As we already discussed, Zubiri states that there are three essential components in a rational method: (a) the system of reference, (b) the sketch and (c) the experience as testing. Let’s consider how Zubiri understands the mathematical method, following the framework of these components.

A. The system of reference.

Mathematical reality has been postulated by suggestion of field reality³⁶⁵. Mathematical reality is not a synonym of field reality³⁶⁶. The field reality is converted into a system of reference in the sense that it suggests the content of mathematical reality. Let’s consider an example, the relationship between perceptive space (field reality as a system of reference) and geometric space (mathematical space). The perceptive space or field space has some real characteristics. Reason converts this perceptive field or space into a geometric space (Euclidean space, Hilbert’s, Riemann’s, or another), following suggestions of what we perceived (the system of reference). Geometry consists of a free system of axioms, definitions, rules of constructions, and rules of deductions that postulates the precise content of the geometric space³⁶⁷. Geometric reality is a postulated reality, a reality constructed according to geometric concepts. Although the perceptive field space suggests some elements to sketch a geometrical space, they are not identical. The content of the geometric space (real characteristics postulated by axioms, definitions and rules) is different from the perceptive pre-geometric space.

Every mathematical object is defined and postulated in a whole constructed group or set to which it belongs³⁶⁸. The reality of a mathematical object is apprehended in reference to this

³⁶⁴ X. ZUBIRI, *Inteligencia y Razón*, p. 208.

³⁶⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 251.

³⁶⁶ Let’s remember that **field** is the *ambit of reality* that encompasses many real things from where we intellectually know a real thing from the standpoint of other real things; I intellectually know it therefore in the field-sense. In this field of reality each thing manifests itself in interactions with others.

³⁶⁷ X. ZUBIRI, *Inteligencia y Razón*, p. 130.

³⁶⁸ X. ZUBIRI, *Inteligencia y Logos*, p. 326-327.

whole constructed set³⁶⁹. It is the whole system of reference which is defined and postulated. The mathematical realm is not a juxtaposition of independent mathematical objects. Every mathematical object has meaning and reality in a particular constructed set, space, etc.

B. The sketch.

The sketch is precisely what is constructed following suggestions from the system of reference³⁷⁰. This sketch of reality is a mathematical construction. The content of the sketch is freely constructed according to concepts. As Zubiri affirms:

*“The mathematical object is not constituted by the postulates; rather, what the postulates define is the “construction” in the intellect of that whose realization is postulated, and which acquires reality by this postulation.”*³⁷¹

This is not a construction of objective concepts, but the construction of the mathematical object through concepts³⁷². Mathematical objects have properties that are defined through axioms and other mathematical concepts³⁷³. However, there are more properties in these objects than those defined.

The sketch relies on the suggestion coming from the field reality and at the same time is independent from it. Its independence enables a free creation of the whole content, which implies that reason constructs the properties of objects and their basic structure³⁷⁴. In Zubiri’s words:

“Although my free construction adopts models or basic structures taken from the

³⁶⁹ For example, (i) the natural number “3” is apprehended in reference to whole set of natural numbers: $\{0, 1, 2, 3, \dots\}$, (ii) the triangle whose angles add 180° is apprehended in reference to the Euclidean space, (iii) the event “ E_1 ” receives its reality from the measure space: (Ω, F, P) with sample space Ω , event space F and probability measure P .

³⁷⁰ This sketch is analogous to the process of schematization, thematization and abstraction in Ladrière. See J. LADRIERE, *Objectivité et réalité en mathématiques*, p. 564-578.

³⁷¹ “El objeto matemático no está constituido por los postulados, sino que lo que los postulados definen es la “construcción” ante la inteligencia de aquello cuya realización se postula, y que por esta postulación cobra realidad”. X. ZUBIRI, *Inteligencia y Logos*, p. 144.

³⁷² Zubiri affirms that a concept is not something primarily logical but something primarily real. Through the concept we conceive what a thing *might be* in reality. We always conceive “what” might be an apprehended thing “from” others previously apprehended. A conception is not an empty free construction. It is always suggested by other things that have been already apprehended in the field reality. This conception is first of all an abstraction. Abstraction is an intellectual process by which we know one or more parts of a thing, “leaving aside” others. This abstraction is freely chosen. We can abstract a thing in a particular direction. Second, the concept is not only an abstraction, it is also a construction done by the intelligence. This construction operates over abstract properties. X. ZUBIRI, *Inteligencia y Logos*, p. 101-102.

³⁷³ Let’s consider a simple example, the construction, in Euclidean geometry, of a “circle” according to concepts. We will leave aside the complexity of this example in order to illustrate Zubiri’s idea of “construction according to concepts”. We can define a **circle** as the set of points that are equidistant from a special point, named center, in the plane. In this definition we are already following Euclidean geometry’s axioms, concepts, as well as other theorems. According to Zubiri this is not the construction of the objective concept “circle”. Rather it is the construction of the content of the mathematical object “circle” according to other mathematical concepts that have been already defined, constructed and apprehended, e.g., set, points, distance (or metric), plane, etc. The circle, as other geometrical figures in the Euclidean space, is suggested by our “experience” in the perceived space. However, the construction according to concepts, the content of the object “circle”, is independent of the perceived space.

³⁷⁴ X. ZUBIRI, *Inteligencia y Razón*, p. 127.

field, nonetheless the free construction is not formally constituted by what it adopts; if it does adopt it, it does so freely."³⁷⁵

This free construction consists in creating a content with full freedom by postulation. We "sketch a free system of axioms" that determines the content of reality³⁷⁶. These axioms are not truths that we freely state by means of linguistic affirmations. Axioms are about real characters that we freely sketch³⁷⁷.

What is the role of conclusion and deduction in the sketch? In any deduction, the conclusion has two moments that are inseparable but different. The first moment, called the moment of necessary truth of a mathematical judgment, refers to a conclusion that follows necessarily from axioms, definitions and rules of deductions. In the second moment, the moment of apprehension of reality, when I affirm that A "is" B, I am affirming not merely a truth, but a real property of a mathematical object: A "is really" B. Consequently, mathematics is not a pure logic about truths, but it is a science about reality³⁷⁸. The moment of apprehension of reality precedes the moment of necessary truth because mathematical axioms are about real characters and not truths³⁷⁹. Reality precedes logical judgments³⁸⁰. The intrinsic unity of these two moments, necessary truth and apprehension of reality, is what constitutes the testing as "*comprobación*", which is translated as "testing-together"³⁸¹.

C. Experience as testing³⁸²: "*comprobación*" as testing-together.

According to Zubiri, this is a mode of mathematical experience that tests postulated realities. What we are testing or verifying here is not the truth of a mathematical affirmation, but the verification of mathematical reality in its truth. Mathematical methods leads us to apprehend

³⁷⁵ "Aunque mi libre construcción adopte modelos o estructuras básicas tomadas de lo campal, sin embargo la libre construcción no está formalmente constituida por esto que adopta; si lo adopta, lo adopta libremente". X. ZUBIRI, *Inteligencia y Razón*, p. 129.

³⁷⁶ Consider, for example, the three axioms proposed by Kolmogorov in probability theory: (i) The probability of an event is a non-negative real number: $P(E) \geq 0$, $\forall E \in \Omega$; (ii) $P(\Omega) = 1$ and $P(\emptyset) = 0$; (iii) For mutually exclusive events, $E_1, E_2, \dots$, $P(E_1 \cup E_2 \cup \dots) = \sum_i [P(E_i)]$. They are the real content freely chosen that postulates the reality of probability theory. They are suggested by the field reality transformed into a system of reference, e.g., games of chance (die, playing cards, etc).

³⁷⁷ X. ZUBIRI, *Inteligencia y Razón*, p. 252.

³⁷⁸ X. ZUBIRI, *Inteligencia y Razón*, p. 253.

³⁷⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 253.

³⁸⁰ Zubiri interprets Gödel as follows: "Gödel demonstrated that what is postulated has properties which are not deducible from the postulates nor can they be logically refuted by them. The fact is, as I see it, that they are real properties of mathematical reality, and their apprehension independent of the postulates is a point in which the apprehension of reality does not coincide with logical intellection." X. ZUBIRI, *Inteligencia y Razón*, p. 253.

³⁸¹ "*Comprobación*" in Spanish is composed of "*com*" and "*probación*". The first part, "*com*", means "with" or "together". The second part, "*probación*", comes from "*prueba*" which means testing, proof, or verification.

³⁸² Zubiri affirms that experience cannot be reduced to an empirical sensible experience or perception.

the reality of A “as being” B³⁸³. By means of mathematical experience, we are testing together the reality of A and the reality of B in the expression A “as being” B³⁸⁴.

III.1.3.3 Mathematical truth and verification

Zubiri, as we will see, affirms that reality and truth are not synonyms. What is postulated is real before it is true. Therefore, mathematical reality precedes mathematical truth. Zubiri interprets Gödel’s theorem as follows:

*“[W]hat is constructed by postulation has more properties [...] than the properties formally postulated.”*³⁸⁵

After distinguishing between mathematical truths and mathematical reality, Zubiri asks if mathematics truths are exact or an approximation of mathematical reality. Zubiri concludes that mathematical truths are not completely adequate to mathematical reality. The adequacy between mathematical judgments and the mathematical reality is only a remote goal of a never-ending dynamism of the intellect. All true judgments point to this unreachable far-off goal of adequacy (correspondence)³⁸⁶. Consequently, all mathematical judgments that are true are structural approximations to what should be a truth totally adequate to reality. Approximation here does not mean inaccuracy, falsehood or deficiency. It means gradualness. Mathematical judgments are true and necessary, but they approximate the whole mathematical reality. We are not capable, in a mathematical judgment, to apprehend the whole reality of a mathematical object. However, our judgements can become more and more adequate in a dynamic and historical process³⁸⁷. As Zubiri affirms, if the mathematical reality:

*“had no more structural properties other than those defined and postulated, every mathematical judgment would be true in the sense of being just an aspect, and therefore everything defined and postulated would be adequately apprehended in each thing. But this is not the case.”*³⁸⁸

³⁸³ X. ZUBIRI, *Inteligencia y Razón*, p. 254.

³⁸⁴ Consider for example in Euclidean geometry the following mathematical judgment: “the diameter is the longest chord of the circle.” This conclusion has at the same time two moments: the moment of apprehension of reality and the moment of necessary truth. Here, mathematical experience is testing-together the reality of the “diameter” and the reality of “the longest cord of the circle” in the formula of “the diameter as being the longest chord of the circle”.

³⁸⁵ “[L]o construido por postulation tiene “de suyo” más propiedades que las formalmente postuladas.” X. ZUBIRI, *Inteligencia y Logos*, p. 145-146. In our English translation we omit the “de suyo” in order to avoid confusion. This expression “de suyo” is capital to understand Zubiri’s philosophy. We will explain it below in the following chapter about philosophy.

³⁸⁶ X. ZUBIRI, *Inteligencia y Logos*, p. 324.

³⁸⁷ X. ZUBIRI, *Inteligencia y Logos*, p. 321.

³⁸⁸ “no tuviera más propiedades estructurales que las definidas y postuladas, entonces todo juicio matemático tendría la verdad de ser un aspecto, y por lo tanto el todo definido y postulado resultaría adecuadamente apprehendido en cada cosa. Pero no es así”. X. ZUBIRI, *Inteligencia y Logos*, p. 327.

This follows from Zubiri's interpretation of Gödel's theorem. In his own words:

“Gödel's theorem shows that the whole thus postulated and defined necessarily has properties which go beyond what was defined and postulated. This definition and these postulates in fact pose questions which are not resolvable with them alone. And therefore these solutions are just the discovery of properties which go beyond what was defined and postulated. Then the adequate intellection of each thing in this whole is left, at each step, outside of what was defined and postulated, properties which intellectual movement does not achieve. These properties are not just “more” definitions and postulates, but rather are necessary properties of the thing and confer upon its reality a distinct structure in the complete whole.”³⁸⁹

Against Leibniz, Zubiri rejects the notion that mathematical truths are eternal truths grounded in concepts. Mathematical truths are necessary, but their necessity is grounded in reality as given in and by postulates³⁹⁰.

III.1.4 The status of mathematical objects: a comparative analysis between Ladrière and Zubiri

The major positions of Ladrière and Zubiri regarding some issues and debates in philosophy of mathematics show some similarities and proximities. Both agree in their affirmation that mathematical reality exceeds mathematical judgments. They sustain the idea that perceived reality suggests mathematical abstraction, although mathematical reality is autonomous. They also agree that mathematics is always open to be applied to physical realities, structures and situations.

However, there are some major differences. Ladrière sustains a dualism between mathematical reality and the mathematical symbolic language. The first is given while the second is constructed. In the background, Ladrière conceives mathematical reality as something given to the intelligence. Mathematicians conceptualize mathematical reality by means of mathematical symbols, defined concepts, rules and axioms of truth. For Ladrière, the essence of mathematics is language.

³⁸⁹ “El teorema de Gödel muestra que el todo así postulado y definido tiene necesariamente propiedades que rebasan lo definido y postulado. Esta definición y estos postulados plantean efectivamente problemas que no son resolubles con ellos solos. Y por tanto estas soluciones son justo el descubrimiento de propiedades que rebasan lo definido y postulado. Entonces, la intelección adecuada de cada cosa en ese todo se deja, en cada paso, fuera de lo definido y postulado, propiedades a las que no alcanza el movimiento intelectual. Estas propiedades no son meramente “otras más” que las definidas y postuladas, sino que son propiedades necesarias de la cosa y confieren a la realidad de ella una estructura distinta en el conjunto total”. X. ZUBIRI, *Inteligencia y Logos*, p. 327.

³⁹⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 281.

Zubiri avoids this dualism. Mathematical reality is not a realm separated from our intellect. We are already in this postulated reality constructed according to concepts and this is precisely the quintessence of mathematics.

Finally, Ladrière and Zubiri share an important aspect in their respective philosophy of mathematics: the historicity and fragility of mathematical reason. Before Gödel, mathematicians and philosophers thought mathematics provides an objective and exact knowledge of an ideal object. Mathematics was always in an unstoppable progress capable of total success and certainty. After the “foundational crisis”, this changes dramatically. Ladrière sustains that mathematical rationality, and rationality in general, is partial, limited and historical. It is discontinuous, bound to ensure permanently its own foundation and in need to integrate its own failures. Mathematics must be in constant adaptation and control of its methods in order to arrive at some certainty. For Zubiri, reason is a search that is accomplished, realized and verified historically³⁹¹. All knowledge is always open to be surpassed because all sketches are limited³⁹².

III.2 Natural sciences

In this section we will discuss the object and the method proper to sciences that study that aspect of reality called “nature”. Ladrière calls these sciences the empirical-formal sciences, which includes physics and chemistry. We reformulate his reflection on empirical-formal sciences to take into consideration life sciences and their contribution in the clarification of the idea of “science”, its objects and methods.

III.2.1 Empirical-formal sciences: physics and chemistry

III.2.1.1 Ladrière and the scientific object

Ladrière criticizes the position of scientific realism³⁹³. According to him, scientific objects and their properties (observed or unobserved) do not refer immediately to concrete real things and to their real properties. They refer to concepts and these concepts refer to “things”, or to their properties, that could be real and concrete or could be ideal in the sense of constructed³⁹⁴. He accepts that the aim of science is to reach the real world. However, sciences do not reach

³⁹¹ X. ZUBIRI, *Inteligencia y Razón*, p. 302-303.

³⁹² X. ZUBIRI, *Inteligencia y Razón*, p. 222.

³⁹³ For a realist, the entities assumed by physical theories are concrete objects that do indeed exist. An object of physico-chemical sciences has a real existence independently of the scientist’s mind and regardless of how is conceptualized. P. GODFREY-SMITH, *Theory and reality*, p. 6 and 175.

³⁹⁴ J. LADRIÈRE, *L’articulation du sens I*, p. 31.

immediately the real world but by means of scientific concepts. The objective of these sciences is knowledge of reality as given to an experience in the sense of perception and as represented by formal systems³⁹⁵. We will develop this point below.

Ladrière also disagrees with the idea that theories and models are simply useful devices that enable the organization of “data” gathered from phenomena³⁹⁶. According to Ladrière, formal models and theories enable us to relate to a real thing. They have the role of anticipations that enable the scientist to develop experiments and to choose relevant data, as we will see below³⁹⁷. He disagrees with the statement that empirical data is the sole foundation of science. There is no such a thing as “a pure fact” that grounds science. Scientific language and the scientific object cannot be reduced to empirical propositions. These empirical propositions are already an interpretation of the “real” world³⁹⁸. The scientist must select relevant data, perform experiments that are guided by a system of reference, theories and previous interpretations in the history of science. He accepts the distinction between two types of objects: (a) observable entities with observable properties (e.g., material bodies with length, weight, etc.) and (b) unobservable entities with some unobservable properties (e.g., electromagnetic fields, spin, etc.)³⁹⁹.

In addition, Ladrière affirms that experiments produce a series of observations or results that are expressed in propositions that are empirical in nature and not theoretical⁴⁰⁰. The data expressed by means of empirical propositions are the content of perception that enables the elaboration of formal models. There is a double foundation of empirical-formal science: formal models and empirical observations. Consequently, scientific objects are elaborated following this double foundation in a scientific method.

For Ladrière, the scientific object of empirical-formal sciences is constituted by a circle of interpretation of the real world⁴⁰¹. This circle is composed by two elements: schematic representations, which are theoretical in nature, and empirical determinations obtained by experiments. The schematic representation is a formal structure that is present provisionally⁴⁰². The scientist must choose the type of formalism to be used in this formal structure of the object. This choice depends on previous knowledge of the object, which is a type of pre-

³⁹⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 260-261.

³⁹⁶ J. LADRIÈRE, *L'articulation du sens I*, p. 34.

³⁹⁷ J. LADRIÈRE, *L'articulation du sens I*, p. 35.

³⁹⁸ J. LADRIÈRE, *L'articulation du sens I*, p. 37.

³⁹⁹ J. LADRIÈRE, *L'articulation du sens I*, p. 31.

⁴⁰⁰ J. LADRIÈRE, *L'articulation du sens I*, p. 36.

⁴⁰¹ J. LADRIÈRE, *L'articulation du sens I*, p. 38.

⁴⁰² Like Zubiri, Ladrière affirms that theories require a familiarity (pre-comprehension) with the reality. For Zubiri this familiarity is due to the system of reference. The theory is revised and there is always a movement from theory to experiment results and from results to theories. J. LADRIÈRE, *L'articulation du sens I*, p. 38-39.

comprehension⁴⁰³. However, this schematic representation is not independent of observations. The representation is chosen taking into consideration observations and at the same time it is used to interpret observations. *As a consequence, the objects of empirical-formal sciences are mathematical representations of our empirical observations*⁴⁰⁴. *It is a segment of a perceived reality that is interpreted and partially reduced to empirical interactions (principle of empirical reduction). In other words, the objects of empirical-formal sciences are schematic approximations of real objects*⁴⁰⁵.

According to Ladrière, the process of constructing the object of science is a process of interpretation⁴⁰⁶. This interpretation is a mediation between the schematic representation and the empirical observations⁴⁰⁷. The object of physics or chemistry is a construction, a possible object, which is an interpretation of empirical propositions already elaborated from phenomena. The “real” object, as something independent of the observer, and its properties are not directly accessible to the scientist. We have access only to the phenomenon by mediations of the empirical observations and by means of theoretical schematic representations⁴⁰⁸. The scientist expects that the scientific object be progressively more adequate to the real world by means of experimentations, improvements in the setting of observations, tests of our schematic elaborations and the verification process. The scientific verification process indicates if modifications of scientific models, objects and theories are increasingly adequate or if they require a radical shift.

As a consequence, the scientific objects of physics and chemistry are not disconnected from the scientific method and the notion of nature is not a synonym of the “real” world independent of the scientist. The world that these sciences explore is neither the world of our ordinary life nor something out there independent of the observer. It is nature as grasped by observation and by an

⁴⁰³ We will see that for Zubiri this pre-comprehension is provided by the system of reference that suggests some models and hypothesis. J. LADRIÈRE, *L'articulation du sens I*, p. 38-39.

⁴⁰⁴ J. LADRIÈRE, *L'articulation du sens II*, p. 152.

⁴⁰⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 152.

⁴⁰⁶ Zubiri affirms that it is a scientific explanation as one mode of comprehension (understanding). For him “interpretation” is another mode of comprehension. He prefers to use interpretation for the comprehension of our human (existential) experiences. This will be discussed below in chapter 4, section III.6.4.2. See X. ZUBIRI, *Inteligencia y Razón*, p. 330-331 and 339.

⁴⁰⁷ J. LADRIÈRE, *L'articulation du sens I*, p. 172-173.

⁴⁰⁸ In a similar way Zubiri affirms the following: “Probably the union of theoretician and experimenter in the very same person of the physicist has wider significance than the purely methodical one of erasing the isolation in which theoretical and experimental physics used to live. That union has a constructive sense for physics as such: the creation of experimental concepts, translatable into conceptual experiences. Both of them pertain essentially to the new physics. And by “experimental concepts” we do not mean concepts with which experience is in agreement, as if experience were something external to them and limited to “suggesting,” proving, or rejecting them; rather in the experimental concept experience is an essential part of the concept itself. In classical physics almost all concepts are substitutions for experience. In the new physics the concepts are experience itself made into a concept. The meaning of a physical concept is to be in itself a virtual experience. Reciprocally, experience has a conceptual structure. Experience is the actuality of the concept.” X. ZUBIRI, *Naturaleza, historia y Dios*, p. 285. See also J. LADRIÈRE, *L'articulation du sens I*, p. 176.

abstract sketch⁴⁰⁹. The understanding of this “nature” consists in a reconstruction of relations between different phenomena. The scientist presupposes that these general principles in some way reflect the immanent structure of reality and that these principles are capable of being thought by means of abstract and formal representations⁴¹⁰ with the assistance of mathematics or abstract concepts. For Ladrière, the world, as seen by these sciences, is a coherent totality accessible to empirical research and schematic representation. This notion of nature as a totality of scientific objects and their laws is already present in Kant⁴¹¹. Ladrière sometimes refers to this reconstructed domain as “nature”⁴¹² and sometimes as “cosmology”⁴¹³.

III.2.1.2. The method of empirical-formal sciences

The method of empirical-formal sciences is a process of permanent coming and going between an abstract theory that uses the tools of formal sciences and empirically controlled experiments⁴¹⁴. These empirical-formal sciences are based on hypotheses and observations. Following Zubiri’s description of the rational method, we will describe the system of reference, the sketch, the testing and finally the verification process of empirical-formal sciences.

A. Empirical-formal sciences’ system of reference:

We argue that the system of reference for empirical-formal sciences is composed of the setting of observations of local interactions, which is the world as sensed by the scientist. This system of reference is what constitutes the initial knowledge of physicists or chemists in their elaboration of hypotheses and theories.

This system of reference is dynamic. It changes within the history of a particular scientific field. One factor that causes this dynamism is the development of new instruments that transform the settings of observations. This transformation enables the collection of new data from which scientists discover new aspects and properties of the objects. The system of reference of today’s

⁴⁰⁹ Zubiri affirms the following about the evolution of the concept of nature in the history of philosophy and natural sciences: “Summarizing, for Aristotle nature is a system of things (material substances) which come to be though causes; for Galileo nature is mathematical determination of phenomena (happenings) which change; for the new physics nature is distribution of observables.” X. ZUBIRI, *Naturaleza, historia y Dios*, p. 303.

⁴¹⁰ J. LADRIÈRE, *L’articulation du sens III*, p. 302.

⁴¹¹ There is in Kant two senses of the term “nature”: nature as the totality of appearances and nature as the totality of rules that must be applied to all appearances if they are to be connected by thought in an experience. Ladrière also makes a distinction between nature as the domain of “visible things” and nature as that which is accessible through a direct investigation. See I. KANT, *Prolegomenos*, §36, p. 132-136. J. LADRIÈRE, *L’articulation de sens II*, p. 289. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 198.

⁴¹² J. LADRIÈRE, *L’articulation du sens III*, 254.

⁴¹³ J. LADRIÈRE, *L’articulation du sens III*, 303.

⁴¹⁴ J. LADRIÈRE, *L’articulation de sens II*, p. 261.

astronomy, which depends on powerful instruments of observation within earth and within satellite systems, is not the same as Galilee's system of reference based only on his telescopes.

B. The sketch: the proposed hypothesis

In empirical-formal sciences, the sketch is a hypothesis constructed by the scientist taking into consideration the system of reference. Hypotheses are propositions that intend to give a rational explanation to some phenomenon. Hypotheses are formulated to conform to formal systems⁴¹⁵. These propositions constitute “principles” from which we can derive other propositions according to the rules of formal disciplines used to formulate the hypothesis, e.g., algebra, calculus, differential equations, etc. The rational deduction of new propositions is not enough to confirm hypotheses. A derived proposition, also called “prediction” (in a logical sense not as a foretelling), provides the means by which a hypothesis can be tested by the use of experimental results and at the same time these derived propositions enable different interpretations of empirical results. Hypotheses are conjectures that must be tested by means of experiments. One must make sure that derived propositions, or at least a group of them, are true or as close to true as available knowledge permits⁴¹⁶.

C. Experience as testing by means of controlled experiments

Experimental tests in empirical-formal sciences must be controlled and able to be repeated by others. Through controlled experiment we eliminate the interactions of a concrete object with other unknown systems⁴¹⁷. Many processes are at work in the world and they interact with each other in a complicated yet unknown way. During these controlled experiments, what do we gather? Some consider that we gather empirical facts. There is a notion of pure empirical fact that entails the following characteristics: (a) facts are directly given by careful, unprejudiced observations via the senses; (b) facts are prior to and independent of theory; (c) facts constitute a firm foundation for scientific knowledge⁴¹⁸. Today this version of empirical fact is not accepted. Empirical-formal sciences have a dynamic relationship between the formal and abstract dimension of the theory and its experimental dimension, as we already discussed. For Ladrière,

⁴¹⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 261

⁴¹⁶ E. MAYR, *This is biology: the science of the living world*, p. 46

⁴¹⁷ D. ANDLER, A. FAGOT-LARGEAULT, and B. SAINT-SERNIN, *Philosophie des sciences*, p. 446.

⁴¹⁸ A.-F. CHALMERS, *What is this thing called science?*, p. 4.

this dynamic relationship between hypothesis and empirical testing is accomplished by means of modeling and interpretation.

Ladrière considers that in natural sciences an **interpretation** is nothing else than a **model** that assures the passage from a formal and theoretical construction to the real as apprehended⁴¹⁹. With respect to the theory, the model represents a “universe” where the propositions of the theory are validated. With respect to the empirical data, the model represents a more or less adequate schematization⁴²⁰. Affirming that scientific language is reduced to observational or pure empirical statements is an empirical reductionism. As we stated above, there is no “pure fact”. What we call scientific facts, empirical observations and data, are observation statements that a scientist formulates by applying previous appropriate conceptual framework⁴²¹. Mathematical formalization enables a pre-comprehension of experiments and at the same time it enables the implementation of the observational process⁴²². In other words, an empirical or factual statement is an interpretation⁴²³! This interpretation is relative to the theoretical and experimental development at a particular moment. By means of some initial knowledge and the suggestion of the system of reference, the scientist poses some questions, and then performs observations or experiments to search for answers. If the scientist lacks sufficient *a priori* scientific knowledge, the experiment he develops can be faulty and its results could be irrelevant⁴²⁴. Experimental results are theory laden and at the same time a theory advances or is falsified by the use of experimental results. As this interpretation progresses we modify or reject a theory and we modify or update our experiments⁴²⁵. There is a circularity in the relationship between theory and experiments, a methodological circle between the formal theory and the empirical aspect⁴²⁶. Although we use the image of a circle, we refer to a spiral due to the progress of the scientific method. Nevertheless, it is important to clarify that this does not imply that experiments are completely determined by the theory. Scientists use also other theories or scientific knowledge to develop and implement experiments.

III.2.1.3. The verification process

⁴¹⁹ J. LADRIÈRE, *L'articulation de sens II*, p. 262.

⁴²⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 262.

⁴²¹ This is also Zubiri's position. See X. ZUBIRI, *Inteligencia y Razón*, p. 184. A.-F. CHALMERS, *What is this thing called science?*, p. 10-12.

⁴²² The pre-comprehension is due to this mathematical formalization and to the system of reference.

⁴²³ J. LADRIÈRE, *L'articulation du sens I*, 37

⁴²⁴ A.-F. CHALMERS, *What is this thing called science?*, p. 31.

⁴²⁵ A.-F. CHALMERS, *What is this thing called science?*, p. 37.

⁴²⁶ See J. LADRIÈRE, *L'articulation du sens I*, p. 38-39. Zubiri does not formulate it as a circle. However, for him there is a permanent interaction between the system of reference that suggests models and hypotheses and their testing.

A. The notion of verification and falsification

The confrontation of the sketch with empirical observations was called “verification” by the Vienna Circle. According to Ayer, there are two versions of verification: the strong verification that confirms a proposition (a hypothesis in our case) as conclusively true by observations and the weak verification that can render a hypothesis highly probable⁴²⁷. If the results of the confrontation are positive, the hypothesis is confirmed. However, although verification can strengthen a theory, it does not always prove that it is true. One could verify a theory that was wrong⁴²⁸. Popper tried to correct this difficulty by insisting that falsification was the only way to eliminate an invalid theory.

*“We can, quite consistently, interpret natural laws or theories as genuine statements which are partially decidable, i.e., which are, for logical reasons, not verifiable but, in an asymmetrical way, falsifiable only: they are statements which are tested by being submitted to systematic attempts to falsify them.”*⁴²⁹

If the result of the confrontation is negative, the hypothesis is invalidated and should be replaced by another hypothesis. If the result of the confrontation is positive, that hypothesis should be subjected to new tests for validation purposes. This is the description of the scientific method as expressed by Popper for whom science proceeds by conjecture and refutation. Science progresses by means of eliminating false hypotheses and by imagining new hypotheses capable to be in agreement with an increasing number of empirical facts obtained from controlled experiments. Here the notion of hypothesis as falsifiable is a key idea.

B. The verification process and the criteria of truth:

We will now discuss the application of different criteria of truth in empirical-formal sciences already begun in the description of the methodology. The criteria of truth are part of the verification process. According to Ladrière the criterion of correspondence is applied as a confrontation between the hypothesis and empirical statements that express the experiment's results⁴³⁰. This is what is called the verification or validation process. As we stated before, these empirical statements are not “pure” empirical facts. They are already results of an experiment that has been guided by theory. Another point we should add is the fact that normally the results of

⁴²⁷ A.-J. AYER, *Language, Truth and Logic*, p. 9-11 and 36-37.

⁴²⁸ E. MAYR, *This is biology: the science of the living world*, p. 49

⁴²⁹ K. POPPER, *The logic of scientific discovery*, p. 313.

⁴³⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 60

experiments and data collection are measured by instruments built using a theory. Theories and experiments are interweaved in this validation process. A condition of possibility to validate a hypothesis is that it must be falsifiable. Each discipline has its own set of rules of correspondence also called validation protocols.

Ladrière affirms that there is a role for the criterion of coherence in the body of propositions derived from the hypothesis. Also, for the experiment results to become true empirical statements, they should be coherent with the experimental protocols already developed. Finally, we also find the criterion of pragmatism. Certain statements derived from the theory should be useful in the sense of being capable of being tested by empirical statements. A theory or a hypothesis is useful also in the sense of enabling the discovery of unknown properties that are verifiable⁴³¹.

This falsification process is not conclusive, because it is not possible to test all possible statements that could be derived from the theory. The truth of a scientific theory must be considered as relative to the validation process which never arrives at a definitive answer. The validation of a theory will remain open to possible cases that could falsify the hypothesis⁴³². This means that normally, there is no total adequation between a theory and the reality. There is partial adequation. Consequently, verification is progressive. This does not contradict the fact that there are theories that have been tested so many times that they could be considered established, at least under certain conditions. This partial verification, implies that the adequation between judgments or hypotheses and reality is only a remote goal of a never-ending dynamism of the intellect.

III.2.1.4. The objective of empirical-formal sciences: the universal laws of nature

The goal of these empirical-formal sciences is to uncover the universal laws of nature. Through the scientific endeavor we can discover regularities that are part of nature. These regularities are called universal scientific laws. This notion of law is not the same as the one in the legal and social sphere, which admits no exceptions⁴³³. On the contrary, it implies more the notion of regularity, from the Latin *regula*, in events of nature. These laws manifest different patterns and interactions in the cosmos. Due to the fact that these regularities or patterns can be disturbed by the interactions of different types of processes, we need to control the experiments.

⁴³¹ X. ZUBIRI, *Inteligencia y Razón*, p. 270-271.

⁴³² J. LADRIÈRE, *L'articulation du sens III*, p. 301

⁴³³ A.-F. CHALMERS, *What is this thing called science?*, p. 213-215.

These laws are symbolic in the sense that they are expressed in a mathematical form. This is a quantification and mathematization of nature that gives these empirical-formal sciences their universal character. In these processes we articulate scientific objects and concepts and quantify their properties⁴³⁴. As an example, let's consider Newton's universal law of gravitation: $F = G[m_1m_2/r^2]$. In this mathematical expression, the concepts of force (F), mass (m_1 and m_2), distance (r) and gravitational constant (G) were articulated and quantified⁴³⁵. These mathematical formulations or models summarize the history of interpretations as dynamic interactions between theory and experiments⁴³⁶.

All these methodological characteristics (e.g., the scientific object, the method and the verification process) describe physics and chemistry. These sciences have also been called exact sciences; "exact" in the sense of accurate quantitative expressions which rely heavily on mathematics and which emphasize on the roles of universal laws and their prediction capacity. Nevertheless, they are not the only type of science. Biology is a quite different science in terms of its object, method, and principles.

III.2.2 Life sciences

As we will see, the epistemological reflection on life sciences⁴³⁷ is characterized by another debate: is biology an autonomous science? or is it an extension of empirical-formal sciences⁴³⁸? The emergence of biology as an autonomous science implies the conviction that living systems is an original phenomenon that requires a specific thought process⁴³⁹. Ernst Mayr, who was a biologist, affirms that biology needs its proper epistemological, methodological reflection and conceptual framework. It is important to clarify that neither Ladrière nor Zubiri elaborates a particular epistemology of biology. However, their framework of a general scientific structure is

⁴³⁴ J. ULLMO, *La pensée scientifique moderne*, p. 28-33.

⁴³⁵ Another example is Ohm's law. Ohm developed the concepts of potential (V), electric resistance (R) and electric current (I): $V = RI$.

⁴³⁶ It is important to know that normally, in these scientific fields, these mathematical formulations are expressed into differential equations such as the relation between force, mass and acceleration: $F(x,t) = ma = m[dx^2(t)/dt^2]$. The use of this differential equation reflects a deterministic notion of nature, at least at the macro level, and a capacity of prediction attached to the regularity of nature. This deterministic notion of nature belongs to classical modern physics. However, we must remember that in Quantum theory there is an interpretation of Schrödinger's differential equation which is probabilistic and not deterministic. Schrödinger's equation is the following: $\nabla^2\psi + (8\pi^2M/h^2)(E - V)\psi = 0$. In Schrödinger's equation, V is the potential energy of a particle, M its mass, E its energy and h is Planck's constant. According to the standard interpretation proposed by Bohr, the square amplitude of ψ , $|\psi|^2$, measures the probability that the particle will follow a particular path or that the particle would be found in a particular volume. D. HALLIDAY and R. RESNICK, *Fundamentals of Physics*, p. 806. R.B. LINDSAY, and H. MARGENAU, *Foundation of Physics*, p. 436. R. TORRETI, *The Philosophy of Physics*, p. 333.

⁴³⁷ We use the term "life sciences" to refer to different fields of biology.

⁴³⁸ When we mention empirical-formal sciences we refer to the different fields of physics and chemistry.

⁴³⁹ J. GAYON, *La philosophie et la biologie*, quoted in D. ANDLER, A. FAGOT-LARGEAULT, and B. SAINT-SERNIN, *Philosophie des sciences*, p. 495.

useful to retrieve and to describe life sciences. We will rely on the works of Ernst Mayr and Jean Gayon in this area for further specific clarifications.

We will start by analyzing the debate around the epistemological status of life sciences and the project of reducing biology to empirical-formal sciences. Our thesis is the following: *biology is an autonomous science that cannot be reduced to empirical-formal sciences*. We will ground this thesis on the fact that biology has its distinct object, singular method (or methods) and particular process of verification different from those of empirical-formal sciences. Consequently, we will see that there is a plurality of the notion of “natural science”.

III.2.2.1 The project of reduction

Most biologists and philosophers of biology insist that biology is an autonomous science with a clear object of research and adequate method. However, some philosophers of physics and some physicists argue that biology is an extension of physics and chemistry. They consider that biology, or at least some of its theories, could be reduced to physico-chemical sciences. This reductionist position is influenced by the Vienna Circle’s standpoint that physics is the model of all sciences⁴⁴⁰. In addition, the Vienna circle shared the goal, already established by the *Encyclopédie des sciences unifiées*, of unifying all sciences around a comprehensive theory integrated by a common set of principles.

On this debate, what does the term reduction mean? The word reduction is not a univocal concept. It has different meanings. According to Mayr, there are three notions of the word reduction in biology’s scientific or philosophy of biology’s literature: constitutive reductionism, explanatory reductionism and theory reductionism⁴⁴¹. Let’s consider each one.

A. Constitutive reductionism

This type of reductionism affirms that the material composition of every living organism is exactly the same as the composition of inorganic systems. Furthermore, biological processes and events encountered in a living organism are not in conflict with physico-chemical phenomena since living systems follow physical and chemical laws. The difference between organic and inorganic systems is not in the material composition of each one, but in the organization of biological systems.

⁴⁴⁰ D. ANDLER, A. FAGOT-LARGEAULT, and B. SAINT-SERNIN, *Philosophie des sciences*, p. 518.

⁴⁴¹ E. MAYR, *The Growth of Biological Thought*, p. 60-62.

B. Explanatory reductionism

This type of reductionism claims that in order to understand the whole we have to dissect it into its components, and again these components into theirs, until we arrive at the lowest hierarchical level. In concrete terms, this means that biology's real object of study is found at the molecular level. Consequently, "molecular biology is all of biology". This is also known as metaphysical reductionism.

C. Theory reductionism

This type of reductionism affirms that theories and laws in biology could be shown to be special cases of physical theories and laws. Biology could be reduced to physics or chemistry by defining biological terms and concepts in terms of physical terms and then by deducing laws in biology from physico-chemical laws. People who sustain this position tend to claim that genetics has been reduced to chemistry after the structures of DNA and RNA were elucidated.

According to Mayr, constitutive reductionism does not pose any problem. Biologists accept it today. Only vitalists disagreed with this reduction because they considered that the living organism and their biological processes could be explained by means of a living force that could not be reduced to physico-chemical processes. Moreover, vitalists sustained that some biological processes did not obey physico-chemical laws⁴⁴². All biologists today do not believe that there is a biological force, process, function or event that is outside physico-chemistry laws or substances. Nevertheless, Mayr sustains that the other two reductionisms, explanatory and theory reductionism, render problematic the autonomy of life sciences. Do biology and chemistry share the same object, the same method and the same verification procedure? Our thesis is the following: *the goal of reducing biology to physico-chemistry sciences is not feasible because (i) biology's object of study cannot be reduced to physics's object (against explanatory reductionism), (ii) their methods do not coincide and (iii) their validation and verification process are different*. The last two are against theory reductionism. Consequently, biology is an autonomous science. However, nothing in biology escapes the laws and principles of physico-chemistry. Knowledge of physico-chemistry laws provides necessary but not sufficient information about biology's object.

⁴⁴² E. MAYR, *The Growth of Biological Thought*, p. 52.

III.2.2.2 The diversity of life sciences' objects

As we have already mentioned, explanatory reductionism, also called metaphysical reductionism, affirms that the object of biology can be reduced to the molecular level, which coincides with objects of empirical-formal sciences. The **objects** of biology are living organisms and their varieties: from bacteria to fungi, plants, animals and eco-systems. Living organisms differ in several fundamental ways from inanimate objects. Although biologists accept that there is nothing in the living organism that is in conflict or outside the laws of physics and chemistry, they do not accept that a living organism could be reduced to a non-living system that is a meager composition of physico-chemical constituents. Mayr mentions a series of special characteristics of living organisms that are not found in inanimate objects studied by empirical-formal sciences. Let's consider these characteristics:

A. Complexity and organization

Living organisms are concerned with many hierarchical levels of ever more complex systems: from macromolecules and genes to cells, tissues, through whole organisms, and the interaction and organization of whole organisms into families, communities, societies, populations, species, and biota⁴⁴³. In this hierarchy there are strong interactions that could not have been predicted from knowledge of lower-level components⁴⁴⁴. This complexity and its organization are not random because most of the structures of living organisms only make sense taking the complexity of the organism as a whole. There are other aspects that manifest the complexity of living organisms. Living systems are characterized by a feedback mechanism whose complexity and precision are unknown in non-living systems⁴⁴⁵. This feedback enables a complex response to external stimuli. We should add that living organisms have a regularized metabolism and a capacity to grow and to evolve into different forms maintaining an identity (it is the same object).

B. Chemical uniqueness

Living organisms are composed of macromolecules that do not differ in principle from other molecules, i.e., they follow chemical laws. However these macromolecules are far more complex than the molecules encountered in inanimate matter.

⁴⁴³ E. MAYR, *This is biology: the science of the living world*, p. 107.

⁴⁴⁴ E. MAYR, *This is biology: the science of the living world*, p. 19

⁴⁴⁵ E. MAYR, *The Growth of Biological Thought*, p. 53.

C. Quality

The physico-chemical world can be characterized by quantification. However the living system is characterized as a world of qualities. Quantification is important in biology, but it does not exclude the qualitative aspects. Many relational phenomena that dominate living nature can be described in qualitative terms and not in quantitative ones, e.g., species, classification, ecosystems, etc⁴⁴⁶.

D. Uniqueness and variability

In physics and chemistry we deal normally with classes of identical entities that have constant characteristics: atomic and subatomic particles, atoms, molecules, etc. Meanwhile, in biology we deal normally with populations of unique individuals in every level of the hierarchy, from cell to ecosystems. Biological individuals, although they have some structural constancy, are characterized by their changeability and diversity.

E. Possession of a genetic program: the organisms inherit a history

Living organisms have a genetic program, coded in the DNA or RNA, that has evolved in history. Every organism has aspects that are the results of a history that goes back to the origin of life. We incorporate in our genetic program, life and history of our ancestors. In addition, members of a species or a population are not assembled by similarity, but by a common descent from which they inherited their genetic program⁴⁴⁷.

F. Double set of causation: functional and evolutionary causation

In particular, living organisms differ from non-living matter in the fact that every biological process and activity is controlled by a double set of causations: functional and evolutionary causation. Proximate or functional causation refers to all activities involving instructions from a genetic or somatic program, e.g., physiological, developmental, and behavioral processes⁴⁴⁸. This type of causation is related to universal laws of nature in inorganic sciences because at the molecular and cellular levels living organisms are more directly influenced by the laws of physics

⁴⁴⁶ E. MAYR, *The Growth of Biological Thought*, p. 55.

⁴⁴⁷ E. MAYR, *The Growth of Biological Thought*, p. 56.

⁴⁴⁸ E. MAYR, *This is biology: the science of the living world*, p. 67

and chemistry⁴⁴⁹. This functional causation answers a type of questions raised by the scientist: the “how questions”⁴⁵⁰. Ultimate or evolutionary causation leads to the origin of genetic program or to the modification of existing ones. They are past events or processes that change the genotype. These causes cannot be investigated by methods of physics or chemistry. They must be reconstructed by historical inferences. This evolutionary causation refers to the “why questions” raised by the biologist. This double causation is manifested by the fact that living organisms possess a genotype and a phenotype. The genotype consists of nucleic acids that require evolutionary (historical) explanation. The phenotype, constructed on the basis of the genotype, requires a functional explanation to be understood.

As we can see, the argument that the object of biology can be reduced to its components, which are objects of inorganic sciences, has enormous difficulties. Living organisms are controlled by a double set of causations and their evolutionary causation cannot be reduced to physico-chemistry causation. Natural selection is a process that does not have an equivalent in the inanimate world⁴⁵¹. All this renders difficult if not impossible explanatory reductionism, i.e., the reduction of living organisms to its inert compositions in order to be an object of scientific studies. Physico-chemical knowledge of living organism, processes, and organic functions provides important but not sufficient information.

III.2.2.3 The criticism to theory reductionism: the differences between biological and physical-chemical methods

Theory reductionism, as explained earlier, is a type of reduction proposed at the level of theories. However, the development of a scientific theory is an integral part of the scientific method, which is a process of permanent coming and going between a theory and empirical observations. Do biologists develop their theories following the same method as physicists? Biologists opposed to reduction, also called organismic biologists, sustain that biology needs its proper epistemological, methodological and conceptual framework. They do not support the idea that physics is the paradigm of all sciences. Let's consider the particularity of biological methods.

A. Two types of biological methods

⁴⁴⁹ E. MAYR, *This is biology: the science of the living world*, p. 20

⁴⁵⁰ E. MAYR, *This is biology: the science of the living world*, p. 67

⁴⁵¹ E. MAYR, *The Growth of Biological Thought*, p. 57.

Based on two different but complementary causalities, proximate (functional) and ultimate (evolutionary) causation, Mayr affirms that the understanding of living organisms requires two different kinds of theories⁴⁵². He divides biology into two major fields that correspond to the two types of causality: functional and historical evolutionary biology. Functional biology deals with the physiology of living organisms, particularly with all cellular processes, including those of the genome. These functional processes can be explained by chemistry and physics at the molecular and cellular levels. This type of biology deals primarily with the analysis of processes and tries to respond to the “how question”. On the other hand, historical evolutionary biology is related to ultimate causation and tries to respond to the “why question”⁴⁵³. Knowledge of history is not needed for the explanation of a purely functional process. However it is important for the explanation of all aspects of the living world that involve the dimension of historical time. It deals with the historical and evolutionary factors that account for all aspects of living organisms that exist now or have existed in the past. These non-repetitive causes of historical evolution, grounded in the process of natural selection and historical unpredicted events, are difficult, if not impossible, to uncover by the use of controlled and repetitive experiments⁴⁵⁴. We must recognize that scientific research in biology can be broken down into these two very different questions (how? and why?) related to two different sets of causations (proximate and ultimate), which imply two different methods.

There are two types of methods in biology: one more appropriate for functional biology and the other to evolutionary biology. Proximate (functional) causations are largely influenced by universal physico-chemical laws. On the other hand, ultimate (evolutionary) causations are probabilistic and marked by possibilities. Proximate causations occur here and now, at a particular moment and space during the lifetime of an individual. Ultimate causations have been active for a long time, in the evolutionary past of the species. The determination of proximate causations is usually facilitated by experimentation. Ultimate causations are determined by inference from historical narratives⁴⁵⁵.

In general, methods of functional biology resemble those of physics and chemistry: conjecture and hypotheses, theory-laden facts from designed and controlled experiments, theories with high predictive value, and even some laws of nature⁴⁵⁶. However that is not the case in

⁴⁵² E. MAYR, *This is biology: the science of the living world*, p. 21.

⁴⁵³ E. MAYR, *This is biology: the science of the living world*, p. 115-116.

⁴⁵⁴ E. MAYR, *This is biology: the science of the living world*, p. 117

⁴⁵⁵ E. MAYR, *This is biology: the science of the living world*, p. 119

⁴⁵⁶ E. MAYR, *This is biology: the science of the living world*, p. 54

evolutionary biology. Some of the basic epistemological principles of the physical-chemical sciences do not apply to evolutionary biology. They had to be replaced by epistemological principles pertinent to evolution, including a more flexible system of theory construction than physics⁴⁵⁷.

B. Specific methodological aspects of historical evolutionary biology

(i) In terms of the system of reference

Functional biology's system of reference is a controlled experiment in a laboratory setting. It is more related with living organisms' anatomy, physiology and functional causality. It is important to realize that this system of reference is mostly organized around individual living organisms. Evolutionary biology's system of reference is observations *in situ*. It reflects historical causality and shared genetic heritage. Some constituents of the evolutionary biology's system of reference are, to mention a few, group of individuals that shares the phenotype and the genotype, variation among these individuals, their geographical distributions, lineage divergence, environment, ecosystems, geography, changes in geography, etc. This system of reference is organized, not around individuals, but around a group of living organisms that conforms to "populations" or "species".

(ii) In terms of sketch

One important element in evolutionary biology's sketches is the role of concepts in theory formation. The development of new **global concepts** and the discovery of new facts (observations) are two mayor factors that contribute to the development of new theories in this field⁴⁵⁸. There are global concepts that can integrate a mass of previously disparate facts⁴⁵⁹. Perhaps, the most important concept introduced by Darwin was that of "natural selection". Other examples are "species", "territory", "competition", "altruism", "population", etc⁴⁶⁰. In a population every individual is unique, while the term "population" is an abstraction. "Population" is neither a law nor an abstract essence but a concept.

Another important element in evolutionary biology is the **historical narrative**. Biologists have to study all known facts and infer consequences from reconstructed factors. Then they have to construct a scenario that will explain observed facts of a particular case where experiments are

⁴⁵⁷ E. MAYR, *This is biology: the science of the living world*, p. 56

⁴⁵⁸ E. MAYR, *This is biology: the science of the living world*, p. 62

⁴⁵⁹ E. MAYR, *This is biology: the science of the living world*, p. 39

⁴⁶⁰ E. MAYR, *This is biology: the science of the living world*, p. 63

not appropriated. In other words, they sketch (in the sense of construct) a historical narrative⁴⁶¹. The methodology of historical narratives is clearly a methodology of a historical science. Historical narratives, as reconstructions of a historical sequence, can explain unique events satisfactorily that might have testable predictions⁴⁶². However, most of the times a historical narrative cannot make accurate predictions due to a complex set of factors⁴⁶³ and causal relations.

Theories in empirical-formal sciences are usually based on quantitative laws expressed in terms of mathematics or another formal structure, while in evolutionary biology they are usually based on “concepts” and probability⁴⁶⁴. Laws in physics and chemistry refer to processes characterized by regularity and predictable outcome, e.g., the law of gravity and the laws of thermodynamics⁴⁶⁵. They are called universal due to their lack of spatial and temporal restrictions in their applications. In biology only a few theories are based on laws. Regularities exist in the living world but usually they are not universal. In evolutionary biology, regularities are probabilistic and limited in space and time⁴⁶⁶. The probabilistic nature of evolutionary events is due to the influence of several random factors⁴⁶⁷.

(iii) In terms of experience as testing

Historical narratives are tested to validate their explanatory value. The most important objective of a historical narrative is to discover causal factors in a historical sequence⁴⁶⁸. Although it is a causality not expressed by universal laws, historical narratives have explanatory value because earlier events in a historical sequence usually make a causal contribution to later events. Causation in evolutionary biology is based on comparison and inferences made on observations⁴⁶⁹. Thus, the evolutionary historical-narrative approach is scientifically and epistemologically valid⁴⁷⁰.

Although repeated and controlled experiments are stressed in functional biology⁴⁷¹, they are usually highly impractical if not impossible for historical evolutionary biology⁴⁷². Historical facts in evolutionary biology cannot not be repeated or controlled. Instead of gathering facts from

⁴⁶¹ E. MAYR, *This is biology: the science of the living world*, p. 64.

⁴⁶² E. MAYR, *This is biology: the science of the living world*, p. 65.

⁴⁶³ E. MAYR, *This is biology: the science of the living world*, p. 54.

⁴⁶⁴ E. MAYR, *This is biology: the science of the living world*, p. 63.

⁴⁶⁵ E. MAYR, *This is biology: the science of the living world*, p. 61-62.

⁴⁶⁶ E. MAYR, *This is biology: the science of the living world*, p. 62.

⁴⁶⁷ E. MAYR, *This is biology: the science of the living world*, p. 69.

⁴⁶⁸ E. MAYR, *This is biology: the science of the living world*, p. 65.

⁴⁶⁹ E. MAYR, *This is biology: the science of the living world*, p. 110 and 114.

⁴⁷⁰ E. MAYR, *This is biology: the science of the living world*, p. 64.

⁴⁷¹ E. MAYR, *This is biology: the science of the living world*, p. 110.

⁴⁷² E. MAYR, *This is biology: the science of the living world*, p. 29.

experiments in a laboratory, scientists in evolutionary biology gather facts from observations *in situ*. Usually these facts describe qualities rather than assign quantities⁴⁷³. In evolutionary biology, experience is a kind of interpretation that is the dynamic construction of historical narratives grounded in concepts and observational facts. As expressed by Mayr, research in evolutionary biology is about explanations and interpretations of observations based on previous experiences of the interpreter⁴⁷⁴. In other words, there is a circular relation between concepts and observations in the construction of historical narratives.

As a consequence, the testing in evolutionary biology is not a controlled experiment in a laboratory that could be repeated many times. Following Zubiri's typology, experience is *compenetration* (putting yourself in another's shoes) as in psychology, history and archeology. We can use the image of a detective who gathers multiple observable facts and who in some way installs himself in the object's reality in order to construct his hypothetical scenario or historical narrative. Controversies on the best explanation occur and every narrative should be tested many times⁴⁷⁵.

C. Difficulties in the reduction of theories in biology to physico-chemical theories.

Let's consider our original question: can theories in biology be reduced to physico-chemical theories? The answer is negative. We have found that some aspects related to the "why questions" could not be reduced to theories developed to answer the "how questions". First, how can we define concepts such as "natural selection", "territory", "competition", "altruism", "population", "phylogenesis", "ecosystems" among others, in terms of physico-chemistry terms?

In terms of the sketch (hypothesis, theories or laws), can laws or generalizations from evolutionary biology be derived from molecular biology, genetics and chemistry? Following other terminology used by biologists, we can ask the same question as follows: can we derive macro-evolutionary phenomena from micro-evolutionary processes? Macro-evolutionary phenomena are those phenomena that happen at a geological scale that are studied by paleontologist and ecologists (among others), e.g., organism's morphological modification, massive extinction, etc. Micro-evolutionary processes are those related to the genetic composition and mechanisms that are studied by molecular biology and genetics⁴⁷⁶. Jean Gayon, following Francisco Ayala, argues that macro-evolutionary phenomena are not derived from micro-

⁴⁷³ E. MAYR, *This is biology: the science of the living world*, p. 28.

⁴⁷⁴ E. MAYR, *This is biology: the science of the living world*, p. 113.

⁴⁷⁵ E. MAYR, *This is biology: the science of the living world*, p. 65

⁴⁷⁶ J. GAYON, *La biologie darwinienne de l'évolution, est-elle réductionniste?*, p. 117-116.

evolutionary process⁴⁷⁷. At least there are three kinds of factors in macro-evolution that cannot be derived from micro-evolutionary processes.

(i) Biotic communities' factors. These are factors related to complex interactions inside communities of different species that share an ecosystem. Micro-evolutionary processes are sufficient to explain intra-species modification. However, we cannot derive from these processes all the complexity of macro-evolutionary interactions across different species in an ecosystem. Molecular biology and genetics alone cannot explain how some species become extinct and are replaced by others that fulfill the same ecological role.

(ii) Bio-geographic factors. These are factors related to complex interactions with the physical environment. Micro-evolutionary processes are not sufficient to derive the effect that physical environment has over the evolution of species and over the history of life taken as a whole. Important environmental perturbations, which most of the times are unexpected, are factors that cannot be explained by using molecular biology and genetics. Some of these geographical perturbations are the appearance of geographic obstacles that change the mobility of organism⁴⁷⁸, volcanic explosions, asteroid collision with earth that could provoke massive extinctions⁴⁷⁹, etc.

(iii) The factor of natural selection. There are many factors that affect the evolutionary process: genetic mutations, biotic communities' factors and bio-geographical factors, to mention a few. However, there is one factor that predominates over others in the Darwinian theory of evolution: natural selection. Natural selection is the major force that orients the evolution of species. It is a principle capable of grounding a theory that reconstructs natural history as a totality and as a unity from a group of different facts⁴⁸⁰. Natural selection does not have a parallel in the world of inert matter. We cannot derive it from principles in functional biology.

Biology and physico-chemistry have different methodological principles, i.e., dissimilar concepts, modes of constructing hypotheses and theories and testing procedures. All of these render extremely difficult, if not impossible the reduction of life sciences to physics and chemistry.

III.2.2.4 The verification process and the criteria of truth

⁴⁷⁷ J. GAYON, *La biologie darwinienne de l'évolution, est-elle réductionniste?*, p. 124-125.

⁴⁷⁸ J. GAYON, *La biologie darwinienne de l'évolution, est-elle réductionniste?*, p. 129.

⁴⁷⁹ J. GAYON, *La biologie darwinienne de l'évolution, est-elle réductionniste?*, p. 133.

⁴⁸⁰ J. GAYON, *La biologie darwinienne de l'évolution, est-elle réductionniste?*, p. 127-128.

We have discussed already the methodological difference between biological sciences and empirical-formal sciences. We will discuss now the difference in terms of the verification process. Functional biology follows the same criteria as physics and chemistry, verification as falsification of theories and predictions through observable facts obtained in controlled and possibly repeated experiments. However, there are some differences with respect to evolutionary biology. According to Mayr, falsification is ill-suited for testing probabilistic theories in evolutionary biology. An exception to probability theories does not constitute necessarily a falsification. It is often very difficult to decisively falsify a historical narrative⁴⁸¹. The criterion of abandoning one theory by a single falsification is effective for universal laws in physics and chemistry. However, it does not work for theories in evolutionary biology⁴⁸². The criterion for testing evolutionary biology's theories cannot be the falsification of predictions⁴⁸³. It is more similar to the criterion of historical narratives that belongs to human sciences, in particular to historical sciences, psychology, sociology, history, archeology, etc. The evolutionary biologists install themselves in the scene like a detectives⁴⁸⁴ in order to reconstruct a useful and coherent historical narrative that explains a phenomenon⁴⁸⁵. Then they verify the hypothetical historical narrative through a series of elements: (i) the correspondence between theories and different sets of available facts from different fields (e.g., morphological similarity, embryology, vestigial structures, biogeography and molecular evidence⁴⁸⁶), (ii) the explanatory usefulness of his hypothesis (pragmatic criterion of truth), and (iii) the hypothesis' coherence with itself and with other historical narratives.

Consequently, evolutionary biology does not have the same type of verification as physics, chemistry or functional biology, i.e., falsification or refutation through facts obtained in controlled experiments. How can a theory that is verified as a probability theory and as a historical narrative, grounded in multiple correlated observations realized at a temporal and physical distance, be reduced to a theory that can be falsified by one experiment realized in a

⁴⁸¹ E. MAYR, *This is biology: the science of the living world*, p. 49.

⁴⁸² E. MAYR, *This is biology: the science of the living world*, p. 50.

⁴⁸³ This is not against the position of René Rezsóhazy for whom the observations and their correlations in evolutionary biology allows the elaboration of models that are descriptive, explicative and predictive that are *falsifiable*. Although he calls the verification process in evolutionary biology "falsification" his description of it as a verification process is different from the process of refutation in physics, chemistry and functional biology. His description of "*falsification*" in evolutionary theory grounded in correlated observations realized not in a controlled environment but at a certain temporal and even physical distance, and the difficulty to find an observation that refutes a hypothesis coincides with our description of verification and its criterion. See R. REZSOHAZY, *L'étude de l'évolution: proprement scientifique*, p. 139-141.

⁴⁸⁴ The image of the detective is not originally ours. It comes from Juan Luis Arzuaga, from the Atapuerca Project, in his book: J.L. ARZUAGA, and I. MARTÍNEZ, *La especie elegida*, p. 25.

⁴⁸⁵ E. MAYR, *This is biology: the science of the living world*, p. 54.

⁴⁸⁶ E. MAYR, *What evolution is*, p. 12-39.

controlled environment in a laboratory? Darwinian evolution and particular hypotheses in evolutionary biology cannot be falsified by one experiment produced in a laboratory.

III.2.2.5 The autonomy of biology

Fulfilling Ladrière's definition of science, biology is an autonomous science with its proper epistemological and methodological framework. It is capable of adapting and controlling its method (or methods) to the nature and complexity of its object, the living organism. Does this imply that evolutionary biology is independent of functional biology and its connection to physico-chemistry theories? Evidently there is no separation between evolutionary biology and functional biology. As we have discussed, every biological process and activity in living organisms is controlled by the double set of causations: functional and evolutionary causation. As a matter of fact, there has already been an enormous contribution of molecular biology and genetics in the understanding of the Darwinian theory of evolution. However, evolution is not and cannot be reduced to genetic and molecular factors because everything is not in the DNA. Physics, chemistry, molecular biology and genetics contribute with very important and necessary knowledge that answer many questions around the "how". However, they are not sufficient to answer the "why" question.

The affirmation that biology is an autonomous science is an evidence that *the notion of "natural science" does not have a unique model*. Even accepting the fact that there was a historical primacy of physics, today most philosophers of science affirm a plurality of natural sciences.

III.2.2.6 Natural sciences and the formal system as a framework of interpretation of the world.

The starting point of natural sciences is the system of reference. From this system of reference, the scientist chooses the framework that he will use in order to understand the object⁴⁸⁷. This framework could be a formal system such as a mathematical system in physics or the historical narrative in biology. The choice of framework enables the elaboration of sketches in the form of hypothesis and theories. Then the scientist tests the hypothesis and theories by means of experimentations and observations. Following the results of these "tests", the scientist modifies the sketch and sometimes even the framework of analysis. The change of framework,

⁴⁸⁷ J. LADRIÈRE, *Vie sociale et destinée*, p. 198.

which is less frequent, could imply the use of another type of formal language⁴⁸⁸. In all this process, there is no such a thing as an absolute objectivity. There are choices that the scientist must do based on his apprehension, previous knowledge and the system of reference. There is a certain interpretation of a phenomenon and the interpretation of our image of the world⁴⁸⁹.

III.3 Human sciences⁴⁹⁰

We witness since the mid 19th century the emergence of human sciences. They are called human sciences due to their reference to the human reality, meanwhile natural sciences refer to “nature”. Among human sciences there is linguistic, economy, psychology, history, anthropology, archeology, sociology, and political sciences⁴⁹¹. We distinguish between sciences of the individual (e.g., psychology) and social sciences⁴⁹², which are a subset of human sciences⁴⁹³.

During the short history of these sciences there has been an intense debate around their objects. First, we will consider the wide variety of scientific objects and the difficulty to gather them into one overall object. Then we will discuss the debate around the status of these scientific objects and the methods proper to human sciences.

III.3.1 Human sciences and their objects

One characteristic of human sciences is the wide variety of different objects that correspond to different fields. Table 3.4 shows some examples that show this broad variety. There has been an effort to bring together these wide variety of objects into one general object. For Dilthey, the object of social sciences is the socio-historical reality to which we belong⁴⁹⁴. For Martín Baró, the object is social reality. For others, the objects can be grouped into the category

⁴⁸⁸ For example, the introduction of calculus by Newton in mechanics, and the use of non-euclidean geometries by Einstein in his General Theory of Relativity.

⁴⁸⁹ As we already mentioned, in his last period Zubiri prefers to use the term “comprehension” than “interpretation” when he refers to natural sciences. However, in his second period in *Naturaleza, historia y Dios* we find some examples of the use of “interpretation” as an act of understanding in natural sciences. See X. ZUBIRI, *Naturaleza, historia y Dios*, p. 249, 258, 266, 267, 268, 295 and 298. X. ZUBIRI, *Inteligencia y Razón*, p. 330-331 and 339. J. LADRIÈRE, *Vie sociale et destinée*, p. 200.

⁴⁹⁰ Ladrière calls them hermeneutical sciences in *L'articulation du sens I* (p. 40) and *L'articulation du sens II* (p. 155). Also he calls them “human sciences” in *L'articulation du sens II* (p. 155). Later he calls them hermeneutical disciplines in *La foi chrétienne et le destin de la raison* (p. 91).

⁴⁹¹ D. ANDLER, A. FAGOT-LARGEAULT, and B. SAINT-SERNIN, *Philosophie des sciences*, p. 674.

⁴⁹² D. ANDLER, A. FAGOT-LARGEAULT, and B. SAINT-SERNIN, *Philosophie des sciences*, p. 739.

⁴⁹³ A similar position is taken by Daniel Andler. See D. ANDLER, A. FAGOT-LARGEAULT, and B. SAINT-SERNIN, *Philosophie des sciences*, p. 677-678.

⁴⁹⁴ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 46.

of human action and its meaning. However, we are far from reaching an agreement on this debate.

Table 3.4 Human sciences and their wide variety of objects

Field of human science	Objects of study
Anthropology	Physiological, social, cultural, intellectual, material aspects of the human being, their evolutions during time ⁴⁹⁵ , and human actions or creations, e.g., narrations, texts, artifacts, beliefs, institutions, social habits, etc.
Psychology	Person's conduct, mental (cognitive) processes (conscious and unconscious) and interaction with the environment ⁴⁹⁶ .
Sociology	Human relationships in groups, social organizations, institutions and structures ⁴⁹⁷ .
Political sciences	Observed political actions in relation to public interests, legal institutions, organizations, structures of power or political forces, e.g., political parties, lobbying groups, elections, press' influence, economical influence and the state ⁴⁹⁸ .
Economy	Productive social relations, systems and processes and the rational satisfaction of needs, e.g., market, transport, natural resources, business, consumers, among others ⁴⁹⁹ .
Geography	Spatial and territorial organization, distribution and structure of human societies and the mutual conditioning of this organization with the environment ⁵⁰⁰ .
Linguistics	Language as a problem of coding, transmission and decoding from social and cultural perspective ⁵⁰¹ .
History	Events of the past ⁵⁰² .
Archeology	Material rests of past societies ⁵⁰³ .

III.3.2 Human sciences as autonomous sciences

Human sciences have experimented a debate on their autonomy, which is analogous to the debate on biology's epistemological autonomy. Ladrière criticizes the position of naturalism⁵⁰⁴ that affirms that the human phenomenon is exclusively an object of natural sciences. According to Ladrière, those that sustain the naturalist position have not been able to justify their thesis that the discourses of natural sciences are the ultimate discourses of all aspects of human phenomena⁵⁰⁵. Nevertheless, this does not mean that natural sciences cannot be applied to some aspects of human reality. Ladrière's position affirms that both types of sciences, natural and human sciences, have something to say about different aspects of the human being. For him,

⁴⁹⁵ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 84-85. D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 809

⁴⁹⁶ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 186 and 207.

⁴⁹⁷ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 136.

⁴⁹⁸ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 235-237, 242.

⁴⁹⁹ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 282-283.

⁵⁰⁰ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 321.

⁵⁰¹ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 89 and J. LADRIÈRE, *Vie Sociale et destinée*, p. 208.

⁵⁰² J. LADRIÈRE, *Vie Sociale et destinée*, p. 204.

⁵⁰³ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 89.

⁵⁰⁴ According to naturalism human sciences are fields that belong to natural sciences. Either the methods of human sciences follows natural sciences' method or the objects of human sciences are nothing else than objects of natural sciences just more complex due to the evolutionary process. D. ANDLER, A. FAGOT-LARGEAULT, and B. SAINT-SERNIN, *Philosophie des sciences*, p. 817.

⁵⁰⁵ J. LADRIÈRE, *Vie Sociale et destinée*, p. 204.

human reality is a complex combination of acts of conscience and objective situations⁵⁰⁶. The first one belongs to the domain of human sciences. The second refers to “human nature” as studied by natural sciences. Consequently, to study human reality we must follow natural and human sciences. Ladrière neither reduces human sciences to natural sciences nor denies the fact that the natural sciences have something to say about the human reality. Every scientific discourse and method must be autonomous.

On these matters, Ladrière is close to Andler who argues that there is a dimension of the human being that can be successfully studied following the method of natural sciences (anatomy, physiology, medicine, evolutionary biology, cognitive sciences, etc)⁵⁰⁷. However there is another region of properties that cannot be reduced to objects of natural sciences. These are properties that “emerge” from biological systems but cannot be reduced to pure biological aspects. This is analogous to biological properties of living organisms that cannot be reduced to physical-chemical properties⁵⁰⁸. Societies cannot be reduced to meager aggregates or interactions of sub-atomic particles or to no more than aggregates of brains. Although, natural sciences can enlighten us about some aspects of human properties, e.g. neurology can shed light on some psychological aspects, they are not sufficient to understand the whole of human reality. The world of human intentions cannot be appropriately studied by the methods of natural sciences. Human intention and meaning require interpretations⁵⁰⁹.

Consequently, some aspects in the human being are objects of natural sciences, while others are objects of human sciences⁵¹⁰. We argue that the interaction between both should follow the *a priori* principles that guide scientific research in its access to the order of manifestation: formal expressions, empirical reduction, connectivity, self-sufficiency and emergence⁵¹¹. The first five principles justify a necessary methodological (non ontological) reduction that grounds the autonomy and contribution of each science. This **methodological reduction** enables the scientist to distinguish human aspects that belong to natural sciences from aspects related to human consciousness, intention and meaning. Without a methodological reduction we will mix up and confused different objects and aspects. At the same time, the principle of emergence grounds the unity of the human reality and avoids an **ontological reduction**, which is not

⁵⁰⁶ J. LADRIÈRE, *Vie sociale et destinée*, p. 201.

⁵⁰⁷ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 813.

⁵⁰⁸ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 681.

⁵⁰⁹ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 721.

⁵¹⁰ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 699.

⁵¹¹ We have already discussed this in chapter 2. See J. LADRIÈRE, *Approches philosophiques de la création*, p. 15-16.

scientific in nature. The principle of emergence grounds the autonomy of human sciences without reducing them to natural sciences.

III.3.3. Human sciences as hermeneutical sciences

III.3.3.1. Hermeneutical sciences' objects and goals

According to Ladrière, human sciences are hermeneutical sciences or hermeneutical disciplines⁵¹², i.e., sciences that seek to interpret human meaning and intention. Hermeneutical sciences take into consideration human beings in terms of their conscience, sensibility to meaning, intentions, norms, material products, arts, systems, representations and collective institutions⁵¹³. The **objects** of these sciences are conducts, texts, cultural artifacts, historical events, institutions, and social customs. These are traces of human actions that attest to the presence of meaning⁵¹⁴. In reality, it is human existence as a whole that bears meaning and consequently, is the ultimate object of the hermeneutical sciences⁵¹⁵. The meaning of human existence is manifested by means of the life project, particular projects and actions. To interpret a human action or creation is to search for its particular meaning and for the intention of its agents⁵¹⁶.

The **goal** of hermeneutical sciences is the total meaning of human actions.

III.3.3.2. Hermeneutical sciences' method

Human science constitutes and delimitates their objects following the criterion of unity of meaning. The searched meaning is an internal agent's meaning. The human scientist tries to infer the internal meaning from the agent's manifested external actions. This is the case even when sometimes these internal meanings are in conflict with the external actions. This conflict could be the consequence of a false conscience or an ideological alienation⁵¹⁷. When compared with natural science, we find another methodological difference. The phenomenon of "empathy" is part of the human sciences' methods. The human scientist must "install" himself in the interiority of the agent and must project his imagination onto the agent's situation. The scientist must live, think, imagine the situation in order to experience and understand the agent's intentions and

⁵¹² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 109-110.

⁵¹³ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 702.

⁵¹⁴ J. LADRIÈRE, *L'articulation du sens I*, p. 26.

⁵¹⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 61.

⁵¹⁶ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 719, 725. J. LADRIÈRE, *L'articulation du sens II*, p. 155.

⁵¹⁷ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 706.

meaning⁵¹⁸. In that way the scientist interprets the actions of the agent and proposes an agent's internal meaning. Human sciences' methods of interpretation are different from natural sciences' methods⁵¹⁹. They require the pre-comprehension of the human experience⁵²⁰. Following this fact, some theorists of social sciences, such as Dilthey and Weber, sustain that social science are essentially hermeneutical⁵²¹. All of this forces on us the following question: how a scientist, who follows his empathy, his pre-comprehension and the method of interpretation, escapes the simple projection of his desires, fears, and ideological positions?

A. System of reference: the pre-comprehension

Due to the fact that the scientist is also an agent whose actions have meaning, the understanding that he has of himself, of society and the world influences his analysis⁵²². The scientist is already immersed in the reality he is trying to understand. This *a priori*, which operates as a pre-comprehension, depends on the scientist's previous experiences, ideas, values, life project and his interpretation of human existence. This pre-comprehension is inevitable due to the fact that the scientist is immersed in a social, cultural and historical context. In human sciences, the scientist is self-implicated in his interpretation. Every interpretative effort maintains an irreducible subjective part. This difficulty in human sciences is not shared by natural sciences. There is another aspect of this system that depends on previous knowledge: the *a priori* knowledge of the agent's biographical, cultural and historical context. Consequently, this *a priori* understanding is the system of reference from which the scientist starts his analysis. The scientist elaborates his initial criteria of interpretation from this system of reference. This pre-comprehension enables the scientist's empathy by which he participates and experiences the existential and emotional states that he observes, at least indirectly, in the agent. When we interpret the meaning of an object by means of this empathy, we interpret our own life project, which correlates with our notion of human existence meaning. When we interpret another, we re-interpret ourselves⁵²³ because the human being is a self-interpreting animal⁵²⁴.

A text, a human conduct, a psychological narrative does not reveal its meaning by itself. The scientist must have a system of reference in order to infer the meaning of the text, of a

⁵¹⁸ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 706.

⁵¹⁹ Although evolutionary biology also proposes an interpretation of facts by means of historical narratives, there is a difference here. The interpretation here infers the intention and the meaning inside the agent's consciousness (even an alienated consciousness).

⁵²⁰ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 726.

⁵²¹ L. TORRES and L.M. TORRES, *Introducción a las ciencias sociales*, p. 46.

⁵²² J. LADRIÈRE, *Vie Sociale et destinée*, p. 201.

⁵²³ J. LADRIÈRE, *Vie Sociale et destinée*, p. 202-203.

⁵²⁴ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 73.

cultural artifact, a religious rite, or a psychological narrative. As we will see in the process of testing, there is a circularity that characterizes human sciences⁵²⁵. There is a hermeneutical circle that is a going and coming between my system of reference, the hypothesis of interpretation and the observations of the object.

B. The sketch or hypothesis

In all hermeneutical work, hypotheses play an essential methodological role⁵²⁶. Nevertheless, the nature of hypotheses in hermeneutical sciences is different from the nature of hypotheses in natural sciences. A hypothesis in hermeneutics consists of an interpretation of a plausible meaning that will be tested by means of reasoning and available information. The genre of hypothesis will vary according to the particular hermeneutical science in question, and its object. If the object is a text, for example, the hypotheses will be about the meaning of that text, in connection with the author's biography, other literary texts, the historical context, etc. If the object is the psychological interpretation of a person's behavior, the hypothesis could be about the person's unconscious intentions, given his background and situation. If it concerns the results of political elections, the scientist will propose a hypothesis to explain the results, considering propaganda, debates, the recent political history of that community or country and even international relationships. Depending on the field in question, we can use statistical representations (in economy and demography) or concepts and narratives (textual analysis, psychology, and sociology) to analyze the meaning. What is essential is to propose a meaning that is intelligible.

The scientist expresses the apprehended meaning in a social or semantic system. These systems are analogous to mathematical representations in empirical-formal sciences and to concepts or historical narratives in evolutionary biology. Given the holistic relation between the system and its components, one needs to understand the whole in order to understand the parts. The hypothesis is expressed by means of a discourse and concepts that belong to specific discipline⁵²⁷. Hypotheses are formulated by means of words, concepts or narratives. Even economy, that sometimes uses mathematical models, requires an interpretation in terms of the meaning of human actions. Language is a semiotic medium that enables the interpretation and communication of a hypothesis or theory⁵²⁸.

⁵²⁵ J. LADRIÈRE, *Vie Sociale et destinée*, p. 201.

⁵²⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 155-156.

⁵²⁷ J. LADRIÈRE, *Vie Sociale et destinée*, p. 204.

⁵²⁸ In the following chapter about the philosophical rationality we will discuss the language as a milieu of meaning.

C. Experience as Testing

The type of experience as testing followed in human sciences is *compenetration* (which in Spanish literally means “mutual understanding” or “putting yourself in another’s shoes”) as an internal vision by “installing” myself in the interiority of the agent or agents⁵²⁹. The process of empathy enables this compenetration. The hermeneutic circle is the dynamic movement between two subjectivities: the scientist’s subjectivity and the agent’s subjectivity. To interpret is to interact with what we interpret. To understand the human world we must be part of it⁵³⁰. In hermeneutical sciences, the interpretation must be confronted with the circumstances of production, the agent’s biography, the cultural milieu, and with the whole of the agent’s works (e.g., a section of a book confronted with other sections of the same book, other written works by the same author, other authors of the same tradition, etc.)⁵³¹. Every detail of an interpretation should be justified by its connection to the totality of meaning in the agent’s works, life and cultural context, including its social, economical, political and historical aspects⁵³².

In order to interpret an object, the interpreter needs instruments of analysis elaborated from previous experiences and studies, i.e., the system of reference. In addition, the interpreter must have an empathy with the agent’s position, feelings, desires, beliefs and intentions in order to infer the meaning of the agent’s action⁵³³.

However, the observer is not neutral in collecting and interpreting data due to his social, political and religious values, which he cannot leave behind completely⁵³⁴. Is the solution to leave all these preconceptions and motivations behind? Bernard Lonergan has called this hypothetical possibility “the *Principle of Empty Head*”, which he formulated as follows: “*the less one knows, the better interpretation one will make*”⁵³⁵. However, Lonergan critiques this “naive intuitionism” by pointing out that the less we know, the more likely is that we will impute to authors or agents opinions or intention they did not intend to express. The wider the interpreter’s experiences, the deeper and fuller the development of his understanding would be. As a consequence, the scientist will produce more balanced judgments and with greater likelihood will discover just what the author meant.

⁵²⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 249-250

⁵³⁰ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 729.

⁵³¹ J. LADRIÈRE, *L’articulation du sens III*, p. 61.

⁵³² J. LADRIÈRE, *L’articulation du sens II*, p. 156.

⁵³³ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 726.

⁵³⁴ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 710. J. LADRIÈRE, *L’articulation du sens I*, p. 42.

⁵³⁵ B. LONERGAN, *Method in Theology*, p. 157.

The solution to misinterpretation, caused by imputing opinions or intentions of the interpreter to the author, is in the hermeneutic circle itself. The scientist must be aware of his own presuppositions at the beginning of his interpretation⁵³⁶. As Ladrière explains, by understanding the object, the interpreter interprets himself⁵³⁷. The criteria of interpretation, the unconscious motivations, the ideas or images that one has of the object is revised, changed and transformed in more adequate principles and ideas to understand his object. The scientist revises also his understanding of the meaning of life, his life project and his intentions. Interpretation modifies the interpreter and he is then able to modify his presuppositions. This hermeneutic circle consists of undefined cycles of consecutive approximations from partial apprehensions of elements to the totality of meaning. In order to understand, we must have some previous understanding. At the same time, we will deepen our understanding by continuing the process. The circle is never completed because the interpreter never understands completely the meaning of an action or the agent's intention. There will always be new discoveries (for example, new aspects of the author's biography, historical events, archeological artifacts, etc.) that will produce new insights and understandings. Even so, the circle is effective as we do not return to the starting point but we arrive at a point of superior understanding. To interpret is to act and to modify our previous interpretations⁵³⁸.

Consequently, the hermeneutic circle continues without ending because the comprehension is never total. The circle is however fruitful and the metaphor is more a spiral. We never return to the same starting point.

III.3.3.3. Verification and criteria of truth

The verification process in human sciences is provisional since it is a dynamic progressive adequation always unfinished. In this progressive effort different rival sketches are tested. There is no complete and total adequation between the hypothesis and the human reality. The total correspondence between the sketch and the human reality is only a remote goal of a never-ending dynamism of the intellect. Consequently, all human sciences hypotheses and theories that are true are structural approximations to what should be a truth adequate to reality. Human sciences' hypotheses approximate the whole human reality because we are not capable of apprehending it

⁵³⁶ J. LADRIÈRE, *L'articulation du sens I*, p. 47.

⁵³⁷ J. LADRIÈRE, *L'articulation du sens I*, p. 46.

⁵³⁸ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 729

as a whole. Nothing prevents new observations from being integrated into different hermeneutical hypotheses as expressed above⁵³⁹.

In terms of criteria of truth, there is no apodictic evidence in this science. The criterion of truth is the criterion of maximal meaning of the object. Ideally, we arrive at total meaning when we exhaust the effort of interpretation, which could happen when supplementary elements added to a hypothesis cannot further enrich the meaning. In practice, this is an ideal⁵⁴⁰.

Here the criteria of correspondence and coherence play a fundamental role. They work as a unity. The hypothesis should be coherent and should correspond to the finality of the object (text, institution, etc.), to the agent's intention and to the context or tradition in which the agent belongs. An interpretation should make the object of study totally coherent: i.e. the parts should be coherent with the whole system. Finally, the interpretation should be coherent with available historical and cultural information. The criterion of pragmatism is used to choose the hypothesis that will enable more progress in the understanding of meaning⁵⁴¹. If all hypotheses have equal power of interpretation, we should choose the simplest⁵⁴².

III.4 Plurality of sciences

It is clear that the notion of "science" does not have a unique model. Even accepting the fact that there was a historical primacy of physics, today most philosophers of science affirm a plurality of sciences. This plurality of sciences is due to a plurality of objects, methods and process of verifications.

IV. Conclusion

In this chapter we have discussed the general attributes and elements of the scientific rationality. All scientific knowledge is characterized by some general epistemological attributes: it is critical, systematic and capable of self-expansion. Grounded in Ladrière's and Zubiri's work we have retrieved the essential elements that belong to any science: the scientific object, the scientific method and the verification procedure. In terms of the scientific method we have discussed three essential moments: a system of reference, a sketch and an experience as testing. Then by means of this framework of essential elements we have analyzed different fields of

⁵³⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 156.

⁵⁴⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 62.

⁵⁴¹ J. LADRIÈRE, *L'articulation du sens I*, p. 43

⁵⁴² J. LADRIÈRE, *L'articulation du sens II*, p. 156

scientific knowledge: mathematics, physics-chemistry, functional biology, evolutionary biology and hermeneutical sciences. We have retrieved without difficulty these epistemological attributes and essential elements in the studied scientific fields. Consequently, we have shown that formal, natural and social sciences share a *rational structure: objects, methods (i.e., a system of reference, a sketch and an experience as testing), verification processes and notions of truth.*

Moreover, we have justified the hypothesis about the plurality of sciences: there is no unique model of science, e.g., physics. There is a plurality of scientific objects and methods that share the epistemological attributes. Each scientific discipline is autonomous and cannot be reduced to other scientific disciplines. This already has some consequences in the dialogue between natural sciences and theology. Christian theologians must respect the autonomy of each scientific discipline. When a theologian considers natural sciences, he should be conscious of the specific object and method that produces the scientific worldview he tries to articulate into his theological discourse. More concretely, the theologian should be conscious that the scientific worldview is born out of a system of reference that is not identical to the system of reference of Christian theology. In addition, as we will see, theologians should respect the autonomy of the theological method and should not try to ground it in other methodologies.

Another consequence of the analysis is the fact that hermeneutical disciplines are also characterized by scientific attributes. As we will see, theology has a hermeneutical character. The theologian is self-implied in his interpretation in a similar manner that a social scientist. As a consequence, this rational and scientific character of theology is one of the fundamental conditions that render possible a dialogue between natural sciences and theology.

Furthermore, as we will see, many of the elements that characterize sciences are also shared by all type of rationalities as well. As we already stated in the previous chapter, scientific knowledge is not the only rational knowledge. Besides scientific rational knowledge there is philosophical and theological rational knowledge⁵⁴³. In other words, sciences belong to the general movement of rationality. As stated by Ladrière,

“That which can be said about scientific knowledge can be generalized to all knowledge, more exactly to all efforts of knowledge that are not focused only in a particular and concrete apprehension, but that are related to the idea of knowledge as a task open to an infinity”⁵⁴⁴.

⁵⁴³ J. LADRIÈRE, *L'articulation du sens III*, p. 105, 110 and 112-115. J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 84-118.

⁵⁴⁴ “Ce qu’on peut ainsi dire du savoir scientifique peut se généraliser et se dire du savoir en général, plus exactement de toute forme d’entreprise de connaissance qui ne se fixe pas simplement sur un savoir déterminé mais se rapporte à l’idée de savoir comme à une tâche ouverte sur un infini.” J. LADRIÈRE, *L'articulation du sens III*, p. 163.

The following two chapters, chapter 4 and 5, seek to justify that the same rational structure is found also in philosophy and theology.

Finally, there is a significant epistemological aspect present in all sciences: sciences cannot justify the legitimacy of their rational structure, i.e., their inseparable couple object-method. Consider the following factors. Gödel's theorem states that it is at least difficult if not impossible, for a formal system to be self-justified. Natural sciences presuppose a series of non-demonstrable axioms: intelligibility of nature and universality of laws. Furthermore, there is no pure fact since all observations are theory laden. In addition, we stated that there is an irreducible element of subjectivity in all sciences. The choice of axioms in formal sciences and the observer's involvement in data collection in natural sciences acknowledge that reality. In hermeneutical sciences the relation between observer and the object is more explicit and complicated, as we have already mentioned. As in other sciences there is a group of axioms in hermeneutical sciences. The interpreter presumes that the agent possesses internal coherence that confers continuity of his beliefs, rationality and rules of thinking⁵⁴⁵. In addition, he presumes that the meaning of an object is intelligible and that he can reach the intention of the agent. All of these demonstrate the inability of science to objectively justify itself in an apodictic sense.

Due to a plurality of sciences, discourses and methods, Ladrière affirms that we must renounce to finding an ultimate foundation understood as a unique method and unique rational discourse that would be universal and valid for all sciences⁵⁴⁶. Ladrière's criticism is aimed against the pretention of finding one meta-language and one meta-method that would justify one unified system of the whole reality⁵⁴⁷. In other words, there is neither one unique model of science (e.g., physics) nor one apodictic meta-language that reduces all sciences to one unified scientific system of the whole⁵⁴⁸. In pragmatic terms, the justification of every science, which is also the justification of the plurality of sciences, is the fecundity that a particular scientific method has when it is applied. However, Ladrière already point to a solution of this problem of the foundation of science: all sciences and all rationalities seek a truth.

“There is a plurality of discourses, sciences and meta-sciences, and this shows that there is a plurality of modes of understanding. However, through all discourses,

⁵⁴⁵ D. ANDLER, A. FAGOT-LARGEAULT, et B. SAINT-SERNIN, *Philosophie des sciences*, p. 733-734.

⁵⁴⁶ J. LADRIÈRE, *Vie sociale et destinée*, p. 208. J. LADRIÈRE, *L'articulation du sens I*, p. 46-50.

⁵⁴⁷ We saw that that was one of the goals of the Viena Circle.

⁵⁴⁸ J. LADRIÈRE, *L'articulation du sens I*, p. 49.

*theoretical and meta-theoretical, as in all efforts to seek the foundation, there is one same idea, that at the same time unifies and reveals, the idea of truth.”*⁵⁴⁹

For Ladrière in the *L'articulation du sens I*, philosophy has the task of understanding the process of understanding, where the problem of “truth” is shown⁵⁵⁰. In his last mature period, Ladrière argues that the role of philosophy, in specific phenomenology, is to find that irreducible *datum* that shows how sciences and all rationalities are possible. There is a fundamental experience through which the concrete things give themselves to us in what Ladrière calls the manifestation, i.e., as the process through which things in the world become phenomena⁵⁵¹. Again, this is the role of philosophy and it will be elucidated in the following chapter.

In our reflection we have discussed different aspects of modalities of reality: postulated reality, inert matter, living systems and the human reality. Reality is something presupposed in science, but we have not yet clarified what is “reality”. We have not even discussed the relationship between “reality” and the question of truth that grounds all scientific rationalities. Philosophy, as an understanding of understanding, has the task of providing a foundation to scientific knowledge and of answering what is reality⁵⁵². The plurality of sciences shows something already known in philosophy: reason is a question that will always remain open to be apprehended; it is a clarity that entails an enigma. The limits of reason becomes a finite experience open to a hope in the future. There is an endless call to go beyond reason’s own limits⁵⁵³.

The next chapter will discuss how philosophy grounds rational knowledge (e.g., scientific knowledge) and answer the question about reality.

⁵⁴⁹ “Il y a une pluralité de discours, de sciences et de métasciences, et cela indique qu’il y a peut-être une pluralité de modes de compréhension. Cependant, à travers tous les discours, théoriques et métathéoriques, comme à travers toutes les entreprises de fondation ou justification, circule une même idée, à la fois unificatrice et révélatrice, qui est l’idée de vérité”. J. LADRIÈRE, *L’articulation du sens I*, p. 49.

⁵⁵⁰ J. LADRIÈRE, *L’articulation du sens I*, p. 49-50.

⁵⁵¹ For Ladrière, the task of finding a ground in the human experience is the role of philosophy not of science. The ultimate foundation would not be one meta-language or meta-theory that unifies all scientific knowledge. It is the *a priori* structure (or irreducible *datum*) of the human experience. We will see this in chapter 4. See J. LADRIÈRE, *L’articulation du sens III*, p. 294-295. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 97.

⁵⁵² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 97.

⁵⁵³ J. LADRIÈRE, *L’articulation du sens I*, p. 49-50.

Chapter 4. The order of manifestation and the project of rationality: philosophy

I. Introduction: specific objectives and hypotheses of this chapter

The main objective of this chapter is to render explicit what is philosophical rationality. We will see that philosophical rationality has its own distinct object and methodology. Consequently, it cannot be reduced to the scientific rationality. Both of these rationalities seek to describe, explain, understand and interpret the order of manifestation.

Related to the previous one, there is another objective. The present chapter seeks to render explicit the structure of all human rationalities. This is not at odds with a chapter about the philosophical rationality. For Ladrière and for Zubiri the effort to uncover and ground all rationalities belongs to philosophy. Once we clarify the structure of rationality, we will be able to respond to a problem that emerged at the end of last chapter: how to justify the legitimacy of the scientific rational structure? Although this second objective is subordinated to the main one, we will start with it. The philosophical effort to clarify the general structure of human rationality will shed light to the specific and distinctive rationality of philosophy.

There is one hypothesis related to both objectives:

Hypothesis of specific rationalities that share a homologous structure. *Sciences, philosophy and theology have their own distinctive rationalities. Nonetheless, they share a homologous rational structure: objects, methods (i.e., a system of reference, a sketch and an experience as testing), verification processes and notion of truth. The distinctiveness lies in the fact that each component is specific and particular to each science, philosophy and theology.*

A third objective of this chapter is to clarify what we mean by the term “reality” and how do we access it. Reality and truth are presupposed in science, but we have not yet discussed the relationship between “reality” and the question of truth. Philosophy, as an understanding of understanding, has the task of answering what is reality⁵⁵⁴, what is truth and what is the ground of all rationalities. Ladrière argues that the role of philosophy, in specific phenomenology, is to find that irreducible *datum* that shows how all rationalities are possible. In this chapter there is another hypothesis related to this third objective:

Hypothesis of three moments to access reality. *Each rational method (scientific, philosophical and theological) is grounded in three inseparable moments: (i) a fundamental*

⁵⁵⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 97.

immediate experience in the sense of an apprehension of reality, (ii) a milieu where we apprehend things in relation to previous knowledge (language and a field of reference) and (iii) an elaboration of theories or sketches. Through experiences one apprehends each real thing as individual. Through the field of references and language one intellectually knows what the real thing is in function of other realities previously apprehended. Elaborated theories or sketches are the methodological explanation of what things are and why they are. Finally, the notion of “reality” is intimately related to these three inseparable moments of the rational method.

This hypothesis grounds and justifies the legitimacy of all rationalities.

These three objectives and two hypotheses are relevant to our effort to relate natural sciences and theology. They will enable us to articulate a theological truth and a scientific truth. By means of this chapter and chapter 5 we will know if a theological truth and a scientific truth are at the same level, we will know if natural sciences have access to a reality or if it no more than a construction founded in a void, and if theology has access in some way to a revealed reality or if it constructs its systems without any ground. In this chapter we will address issues related to natural sciences and philosophy. At the same time we will prepare the terrain to address issues pertaining to theology in chapter 5.

We consider the reflections of Jean Ladrière and Xavier Zubiri in order to address these two objectives and justify these two hypotheses. We will start by considering Jean Ladrière. Then we will continue with Zubiri’s contribution. At the end of the chapter we will see how both of them complement each other and justify our hypotheses.

II. The notions of rationality and philosophy in Jean Ladrière

The present section will present Ladrière’s notion of rationality. The objective is not to systematize the philosophy of Ladrière as a whole. First of all, that is outside the scope of our present work. Second, Ladrière’s did not write a work that could be considered his final system or synthesis. Third, Ladrière wrote about many subjects: mathematics, science, logic, ethics, politics, theology, hope, the city, the foundation of sciences, etc. The list of subjects studied only in philosophy is already highly impressive⁵⁵⁵. All of this renders it very difficult to systematize his thought. However, there are clear lines of thought that are permanent. It is our objective to present them in order to prove our hypotheses and to accomplish our objective.

⁵⁵⁵ J.-F. MALHERBE, *Jean Ladrière. Des limitations internes aux espérances de la raison*, p. 415.

We will start by Ladrière's diagnostic of the contemporary situation. Then we will explain Ladrière's concept of rationality and its different moments. Finally, we will expose his notion of philosophical rationality.

II.1 Diagnostic of a situation

II.1.1 The foundational crisis and the crisis of rationality

Ladrière analyses the contemporary crisis of rationality. For him this crisis was produced due to three major events. First of all, we have experienced a development of science and technology that leads to a particular concept of rationality as synonym of natural sciences related to objectivity and certainty⁵⁵⁶. The developments of mathematics and quantum physics make us abandon a precise idea of certainty and objectivity in natural sciences⁵⁵⁷. Second, we have experienced a political development during the 19th and 20th centuries that calls for a revision of our concept of political action, peace and the role of the state⁵⁵⁸. After experiencing wars in almost every corner of the world and at every moment, the idea of a perpetual peace based on reason is questioned⁵⁵⁹. Third, we are heirs to a critique of rationalism and of "grand narratives" produced in the last two centuries. These critiques are founded in Nietzsche's philosophy and the emergence of concepts such as the unconsciousness and alienation. These three major events lead us into a time of disillusion. Today, more than ever we are conscious of the limits of rational knowledge and the ideological pretention that science is pure objective knowledge⁵⁶⁰. Therefore the idea of rationality is today problematic⁵⁶¹.

Paradoxically, this time of disillusion is parallel to a phenomenon of hyperrationality that guides and regulates our lives.

II.1.2 Modernity and its tendency to hyperrationalism

⁵⁵⁶ J. LADRIÈRE, *Vie sociale et destinée*, p. 8-9.

⁵⁵⁷ The Twentieth Century has witnessed the erosion of certainty in fields such as physics and mathematics. In the past, they were considered models of rationality that made incontestable progress in objective knowledge. Nevertheless, this has changed. In physics, research at the quantum level showed an irreducible uncertainty. Formal sciences have been marked by the foundational crisis in mathematics and logic due to Gödel's theorems.

⁵⁵⁸ J. LADRIÈRE, *Vie sociale et destinée*, p. 8

⁵⁵⁹ The 19th and the 20th centuries is a period characterized by terrible collective events, e.g., wars, genocides, etc. and some of them in the name of rational systems. The history of wars, the establishment of torture, the suffering of children and innocents, the collapse of the economy and the manipulation of the financial systems show dramatic elements of irrationality in our reality. J. LADRIÈRE, *Vie sociale et destinée*, p. 26.

⁵⁶⁰ See J. LADRIÈRE, *L'articulation du sens III*, p. 181-183.

⁵⁶¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 23.

Ladrière describes the present situation as one marked by four traits. First, contemporary sciences, e.g., cosmology, quantum physics and evolutionary biology, have changed our worldview⁵⁶². Second, modern technology has created instruments capable to replace some human actions, such as the communication of information and mass production, according to the criterion of efficiency⁵⁶³. This corresponds not only to fundamental needs but also to the creation of artificial necessities based on current technologies⁵⁶⁴. Third, the expansion of the industrial mode of production, tied to the market economy, is capable of creating a systematic surplus of wealth⁵⁶⁵. Today this type of production and economy depends on the latest technological development and demands the transfer of resources from one point of the planet to another. Fourth, the emergence of a political organization, inspired by the idea of democracy, is based more on a system of competition analogous to economic competition than on the active participation of citizens in political life. Our contemporary organization is the constitutional state and the Rule of Law (*État de Droit*)⁵⁶⁶ that seeks to eliminate the arbitrariness in the organization and function of the state.

Modernity is the common culture that has emerged with the foundation of modern science, the impact of technology, the modern state and the development of global capitalism⁵⁶⁷. A process of abstraction and formalization produced by these four elements characterizes this modern culture. Progressively we are detached from traditions, contexts and beliefs, which are sources of existential meaning⁵⁶⁸. We reduce our perception to empirical aspects that can be apprehended, formalized, represented by concepts and are available to calculations⁵⁶⁹. This generates what Ladrière calls a **hyperrational world**. This hyperrationalism is driven by an internal dynamism that assures its continuous expansion and self-construction toward an increased efficiency. This form of hyperrationalism is a narrow form of rationality⁵⁷⁰ that produces a breach between the constructed hyperrational world and the ordinary life with its traditions that are sources of existential meaning⁵⁷¹.

According to Ladrière, this crisis of rationality has a positive aspect. The rejection of certain forms of inadequate rationalities, e.g., rationalism, hyperrationalism and the “grand

⁵⁶² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 37.

⁵⁶³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 37.

⁵⁶⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 38.

⁵⁶⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 38.

⁵⁶⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 39.

⁵⁶⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 39.

⁵⁶⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 41.

⁵⁶⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 44.

⁵⁷⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 44.

⁵⁷¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 45.

narratives” that operate as synthesis of the whole, is the acceptance of the limits of reason. This time of disillusion could be a calling for new forms of thoughts and reflections and new forms of existence⁵⁷². As a consequence, we have an unavoidable task: the revision of the idea of rationality.

II.2 Some background of Ladrière’s reflection about rationality

Ladrière retrieves the notion of rationality through the history of philosophy. Through the philosophy of Hegel and Husserl he reexamines the relationship that reason has with culture, ordinary life, human existence and culture.

II.2.1 Ladrière’s second period and his reading of Hegel

For Ladrière, in his second period, Hegel’s philosophy is a reflection about the absolute and an effort to reconcile nature and the *logos*. Nature represents the exteriority while the *logos* represents the interiority. The opposition between nature and *logos* is a moment in the constitution of the whole of reality that passes through a dialectical process of unification⁵⁷³. In that movement the Absolute Spirit emerges showing the true essence of nature. The Absolute Spirit is manifested as a total reflection and discourse of self-comprehension that recapitulates the whole reality⁵⁷⁴. For Hegel, reason is immersed in a process of self-achievement in the form of a total reflection in a global system of absolute knowledge⁵⁷⁵. The finite subject is the place where the Absolute Spirit manifests and becomes conscious of itself in the form of a total system. Hegel announces that history has arrived at the Absolute Spirit’s manifestation by means of his philosophy, which recapitulates all that is reasonable⁵⁷⁶.

Although we will see traces of Hegel’s philosophy in Ladrière, he considers that Hegel’s conception of reason is too high, maybe the highest, the boldest, the most totalitarian and excessive idea of the *logos*. In Hegel’s system, reason is identified with reality. The absolute reality is the Spirit, reflection, system, discourse and *logos*⁵⁷⁷. Nevertheless, Ladrière retains some fundamental ideas from Hegel. First of all, Ladrière retains the ideal of a knowledge that is conscious of itself. Second, he retains the idea that nature and the *logos* are related. Nature

⁵⁷² J. LADRIÈRE, *Vie sociale et destinée*, p. 12.

⁵⁷³ J. LADRIÈRE, *Vie sociale et destinée*, p. 22.

⁵⁷⁴ J. LADRIÈRE, *Vie sociale et destinée*, p. 23.

⁵⁷⁵ J. LADRIÈRE, *Vie sociale et destinée*, p. 31.

⁵⁷⁶ J. LADRIÈRE, *Vie sociale et destinée*, p. 27.

⁵⁷⁷ J. LADRIÈRE, *Vie sociale et destinée*, p. 24.

possesses in itself a hidden rationality that the historical movement of reason tries to manifest⁵⁷⁸. The human *logos* is the place where the *logos* of nature is explicitly manifested. However, we will see that Ladrière in his fourth period revises this idea of the relation between the human *logos* and the intelligibility of the world from a heideggerian perspective.

II.2.2 Ladrière's second period and his reading of Husserl⁵⁷⁹

For Husserl, the foundational crisis is not about rationality, but about rationalism and its narrow conception of reason as synonym of natural sciences. For him, sciences such as mathematics and physics do not describe the real world, but a constructed world. Natural sciences presuppose a pre-scientific experience, the *Lebenswelt*⁵⁸⁰. This is the world around us as it can be experienced in ordinary life. One thing is to experience thirst and then to drink a glass of water. Another thing is to formulate, by means of symbols, "H₂O". The first one is an experience that belongs to the *Lebenswelt*. The second one is a scientific formulation.

As Husserl himself expresses it, the *Lebenswelt* (life-world) is "*the spatiotemporal world of things as we experience them in our pre- and extra-scientific life and as we know them to be experienceable beyond what is [actually] experience. We have the world-horizon as a horizon of possible thing-experience. Things: that is, stones, animals, plants, even human beings and human products [...]*"⁵⁸¹. *It is the world of sense-experience constantly pregiven as taken for granted unquestioningly*⁵⁸².

In a similar manner, Lyotard affirms that the *Lebenswelt* is the world not in the sense of the natural world studied by natural sciences, but in the sense of the unity of the things that give themselves to the subject. This is the world as the primordial reality of experiences⁵⁸³. Actually it is not about one particular experience but about a flow of experiences⁵⁸⁴. According to Ricœur, the *Lebenswelt* is the environment of the ordinary life of a living being. It is the world as a world of meaning⁵⁸⁵ and as a world perceived⁵⁸⁶.

The objective world constructed by sciences is not equivalent to the subjective life-world. The life-world is the world of experiences. These experiences enable us to have access to the

⁵⁷⁸ J. LADRIÈRE, *Vie sociale et destinée*, p. 28.

⁵⁷⁹ One of the texts that highly influenced Ladrière was Husserl's *Crisis of European Sciences*.

⁵⁸⁰ This concept has been translated in English as the "life-world" and in French as "*le monde vécu*".

⁵⁸¹ E. HUSSERL, *The Crisis of European Sciences*, p. 138.

⁵⁸² E. HUSSERL, *The Crisis of European Sciences*, p. 76.

⁵⁸³ J.-F. LYOTARD, *La Phénoménologie*, p. 42.

⁵⁸⁴ J.-F. LYOTARD, *La Phénoménologie*, p. 40.

⁵⁸⁵ P. RICOEUR *A l'école de la phénoménologie*, p. 288-289.

⁵⁸⁶ P. RICOEUR *A l'école de la phénoménologie*, p. 291.

world. “*The life-world is a realm of original self-evidences. That which is self-evidently given is, in perception, experienced as ‘the thing itself,’ in immediate presence, or, in memory, remembered as the thing itself; and every other manner of intuition is a presentification of the thing itself.*”⁵⁸⁷ According to Ladrière, in his second period, this *Lebenswelt* is the root and absolute foundation of all rational activities, truth and meaning⁵⁸⁸. All rationalities are constituted from the life-experience⁵⁸⁹.

Ladrière’s understanding of Husserl in his second period implies that philosophy’s task is to describe and understand this *Lebenswelt*. For Ladrière, Husserl’s *epoché* is a reduction to the life-world and as such it becomes the source of a new conception of reason beyond rationalism’s positions⁵⁹⁰. Phenomenology as a description of the ego’s structures is nothing else than the description of the structures of the life-world experience. Our rational capacity and the intelligibility of the world are joined in our experience⁵⁹¹.

Although Ladrière is very much influenced by Husserl, he acknowledges some limits of his philosophy. Husserl has the merit of opening a new type of conception of rationality as a life of the *logos*, which is different from modern rationalism. However, he was not always successful with his forms of expressing it. Ladrière affirms that the philosophy of the transcendental ego is not the best expression of a philosophy grounded in the *Lebenswelt*. This philosophy of the pure ego can block our vision of the *Lebenswelt*⁵⁹². Consciousness is neither pure receptivity nor pure

⁵⁸⁷ E. HUSSERL, *The Crisis of European Sciences*, p. 128.

⁵⁸⁸ J. LADRIÈRE, *Vie sociale et destinée*, p. 28-29.

⁵⁸⁹ In Husserl words: “*The knowledge of the objective-scientific world is “grounded” in the self-evidence of the life-world. The latter is pregiven to the scientific worker, or the working community, as ground; yet, as they build upon this, what is built is something new, something different.*” E. HUSSERL, *The Crisis of European Sciences*, p. 130. “*One must fully clarify, i.e., bring to ultimate self-evidence, how all the self-evidence of objective-logical accomplishments, through which objective theory (thus mathematical and natural-scientific theory) is grounded in respect of form and content, has its hidden sources of grounding in the ultimately accomplishing life, the life in which the self-evident givenness of the life-world forever has, has attained, and attains anew its prescientific ontic meaning. From objective-logical self evidence (mathematical “insight,” natural-scientific, positive-scientific “insight,” as it is being accomplished by the inquiring and grounding mathematician, etc.), the path leads back, here, to the primal self-evidence in which the life-world is ever pregiven.*” E. HUSSERL, *The Crisis of European Sciences*, p. 128.

⁵⁹⁰ We should ask if Ladrière’s understanding of Husserl’s philosophy does not take into consideration previous works of Husserl. In *Ideen*, Husserl distinguishes two types of attitudes. There is a natural attitude that consists in the belief that there is a real world (*Weltglaube*) that is composed of the totality of real things in which I am as one of them. With the *epoché*, we put in suspension this attitude, the whole real world and the cultural world, including my own reality as part of this world. Consequently, we pass to the phenomenological attitude that only contemplates the mere data of conscience. See E. HUSSERL, *Ideas I*, p. 51-62, in D. WELTON, (ed.), *The Essential Husserl*, p. 60-65. According to the Husserl of *Ideen*, the *Lebenswelt* belongs to the natural attitude more than to the phenomenological attitude of the *epoché*. Ladrière seems more influenced by Merleau Ponty and his notion of the *monde vécu*. “*Tout ce que je sais du monde, même par la science, je le sais à partir d’une vue mienne ou d’une expérience du monde sans laquelle les symboles de la science ne voudraient rien dire. Tout l’univers de la science est construit sur le monde vécu et si nous voulons penser la science elle-même avec rigueur, en apprécier exactement le sens et la portée, il nous faut réveiller d’abord cette expérience du monde dont elle est l’expression seconde.*” M. MERLEAU-PONTY, *Phénoménologie de la perception*, p. II-III.

⁵⁹¹ This *Lebenswelt* is the ground in which the truth of theoretical knowledge is built. This truth is grounded in the evidence of the immediate experience by which the human being and the world are in an original agreement. J.-F. LYOTARD, *La Phénoménologie*, p. 42.

⁵⁹² J. LADRIÈRE, *Vie sociale et destinée*, p. 33-34.

production. The world is neither pure transparency nor pure opacity. There is a never-ending exchange between our consciousness and the world. The world makes us and we make the world⁵⁹³.

II.2.3 Ladrière's third and fourth period and his reading of Heidegger

Although Ladrière does not mention it explicitly, he is highly influenced by Heidegger's notion of the relationship between the world and human thinking. In his last fourth period Ladrière shifts from the topic of the *Lebenswelt* to the topic of the manifestation of the world.

In a 1964 conference in Paris, which was published in 1969, whose title was translated in English as *The End of Philosophy and the Task of Thinking*, Heidegger exposed his reflections about the relation between thinking and Being. If in *Being and Time* Heidegger translated *aletheia* as truth, in 1964 he translated it as "unconcealment"⁵⁹⁴. In his analysis of Parmenides' poem Heidegger wrote:

*"It is not for the sake of etymology that I stubbornly translate the name aletheia as unconcealment, but for the sake of the matter which must be considered when we think adequately that which is called Being and thinking. Unconcealment is, so to speak, the element in which Being and thinking and their belonging together exist. Aletheia is named at the beginning of philosophy, but afterward it is not explicitly thought as such by philosophy."*⁵⁹⁵

This "*aletheia*" is not truth understood as correspondence or *adaequatio rei et intellectus* but the possibility of truth. The translation of *aletheia* as unconcealment enables Heidegger to rethink the ordinary concept of truth as a correctness of statements in light of the disclosure or revelation of beings⁵⁹⁶. *Aletheia* as unconcealment is an appearance or manifestation that occurs in luminosity⁵⁹⁷. This *aletheia* as unconcealment is an experience that becomes the foundation of the relation between Being and thinking⁵⁹⁸. Through it Being is present. This is previous and

⁵⁹³ J. LADRIÈRE, *Vie sociale et destinée*, p. 34-35

⁵⁹⁴ The term in English "unconcealment" means to step out of its invisibility, to become visible, to appear or to show itself.

⁵⁹⁵ M. HEIDEGGER, *The End of Philosophy and the Task of Thinking*, p. 445-446.

⁵⁹⁶ Heidegger already affirmed that in another article published in 1961, *On the Essence of Truth*. "If we translate *aletheia* as "unconcealment" rather than "truth," this translation is not merely more literal; it contains the directive to rethink the ordinary concept of truth in the sense of the correctness of statements and to think it back to that still uncomprehended disclosedness and disclosure of beings. To engage oneself with the disclosedness of beings is not to lose oneself in them; rather, such engagement withdraws in the face of beings in order that they might reveal themselves with respect to what and how they are and in order that presentative correspondence might take its standard from them." M. HEIDEGGER, *On the Essence of Truth*, p. 125.

⁵⁹⁷ M. HEIDEGGER, *The End of Philosophy and the Task of Thinking*, p. 441.

⁵⁹⁸ "The possible claim to a binding character or commitment of thinking is grounded in this bond. Without the preceding experience of *aletheia* as the opening, all talk about committed and noncommitted thinking remains without foundation." Underlined emphasis is ours. M. HEIDEGGER, *The End of Philosophy and the Task of Thinking*, p. 445.

foundation to any understanding that is formulated in an statement. All truth understood as correspondence between knowledge and Being is grounded in this appearance or unconcealment.

“Insofar as truth is understood in the traditional “natural” sense as the correspondence of knowledge with beings, demonstrated in beings, but also insofar as truth is interpreted as the certainty of the knowledge of Being, aletheia, unconcealment in the sense of the opening, may not be equated with truth. Rather, aletheia, unconcealment thought as opening, first grants the possibility of truth. For truth itself, just as Being and thinking, can be what it is only in the element of the opening. Evidence, certainty in every degree, every kind of verification of veritas already move with that veritas in the realm of the prevalent opening.”

The influence of this reflection on Ladrière is clear in some texts of the three volumes that compose *L’articulation du sens*. Let’s consider one text on volume III in a chapter about the notion of truth as correspondence where he discusses the Parmenides’ poem⁵⁹⁹. There Ladrière mentions that the decisive issue of truth is the reference to an adequacy between the discourse and the real, between the thinking process and being⁶⁰⁰. The problem is how to think that relation. Evidently it is not an immediate relation between human thought and the real. There is a distance between the discourse or the thinking process and the real. This distance is obvious when there is an error in the proposition. When Ladrière frames that relationship between the proposition and the real he does it in terms very similar to Heidegger. For Ladrière the discourse is the place of the manifestation of the real while for Heidegger is the place of unconcealment.

*“The discourse, the proposition, in someway makes the thing emerge in its visibility, it enables that thing to appears according to what it is. [...] In the discourse [...] is the logos of the world that appears in its own intelligibility, it is the clarity of things that shows itself in its own light. The discourse tries to be in agreement to what is given, but in active way, in an initiative this is its own. [...] The true discours is the one that is accomplished in the sense of an effective agreement: it welcomes, receives, it makes us value, it carries things to the clarity, to a second order of manifestation. The real manifests itself. But it receives in the discourse that is granted to it the magnification (enhancement) by means of the word, and through it the real is received in a new space of manifestation.”*⁶⁰¹

⁵⁹⁹ There are other texts with a clear influence of Heidegger’s notion of *aletheia* as unconcealment. See J. LADRIÈRE, *L’articulation du sens I*, p. 217-218 (this is a text at the end of the second period and beginning of the third period). J. LADRIÈRE, *L’articulation du sens II*, p. 201-202. J. LADRIÈRE, *L’articulation du sens III*, p. 29-33 and 241-242.

⁶⁰⁰ J. LADRIÈRE, *L’articulation du sens III*, p. 57.

⁶⁰¹ “Le discours – la proposition – fait en quelque sorte surgir la chose dans sa visibilité, lui donne de se montrer selon ce qu’elle est. [...] Dans le discours [...] c’est le logos du monde qui apparaît dans sa propre intelligibilité, c’est la clarté de choses qui se montre dans sa propre lumière. Le discours tente de s’accorder à ce qui est donné, mais de façon active, à partir d’une initiative qui est vraiment la sienne. [...] Le discours vrai est celui qui a réussi à s’accorder effectivement : il accueille, il recueille, il fait valoir, il porte les choses à la clarté, à une sorte de régime second de la manifestation. Le réel est manifeste par soi. Mais il reçoit dans le discours qui lui est accordé comme la magnification que lui donne la parole, et par là il est en effet reçu dans un nouvel espace de manifestation”. J. LADRIÈRE, *L’articulation du sens III*, p. 57.

The terms “manifestation”, “visibility”, “clarity” and the appearance of the world in words as a second moment of manifestation refer to Heidegger’s reflection on the experience of *aletheia*.

II.3 Ladrière’s reflection on rationality

According to Ladrière, “*rationality is the character of what is in conformity with reason*”⁶⁰². In this section we will analyze Ladrière’s concept of reason, which is grounded in a fundamental experience and in language. This analysis will help us understand the object and the role of philosophy.

II.3.1 The point of departure: the *Lebenswelt* and the fundamental immediate experience

According to Ladrière, the point of departure of reason is an experience, or flow of experiences, from which we can analyze natural, historical and cultural reality⁶⁰³. This experience is characterized by an inseparable couple sense-reason⁶⁰⁴. As he himself affirms:

*“The rational is not only that which is representable in a physical-mathematical knowledge, but the rational is coextensive with the self-explicitation of the Ego by itself, in other words by experience itself. The rational, reason, is inside the experience itself, which makes it [the experience] open to be self-explicitated without limits.”*⁶⁰⁵

*“Philosophy has the task of understanding the ‘experience’. Philosophy is one dimension of the experience, because it is from the interior of itself that the experience undertakes its own reflection (comprehension).”*⁶⁰⁶

It is this experience in the *Lebenswelt* itself that is the foundation of all rationalities, even natural sciences⁶⁰⁷. That experience is a correlation between the process of manifestation of the real thing and the act of apprehension of that manifestation. In Ladrière’s words:

⁶⁰² J. LADRIÈRE, “Rationalité”, p. 933. J. LADRIÈRE, *L’articulation du sens III*, p. 178.

⁶⁰³ Ladrière uses the expression “*expérience vécue*”. We think this is in reference to the expression “*monde vécu*”, which is the french translation of *Lebenswelt*. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 35.

⁶⁰⁴ We will see that this is also fundamental in Zubiri’s philosophy.

⁶⁰⁵ “*Le rationnel ce n’est plus seulement ce qui est représentable dans une connaissance physico-mathématique, mais le rationnel est coextensive à l’auto-explicitation de l’Ego par lui-même, c’est-à-dire de l’expérience par elle-même. Le rationnel, la raison, c’est dans l’expérience elle-même, ce qui fait qu’elle est ouverte pour une auto explicitation sans limites”.* Underlined emphasis is ours. J. LADRIÈRE, *Vie sociale et destinée*, p. 29-30.

⁶⁰⁶ “*La philosophie se donne la tâche de comprendre l’expérience. Elle est du reste elle-même une dimension de l’expérience, puisque c’est de l’intérieur d’elle-même que l’expérience entreprend de se réfléchir*.” Underlined emphasis is ours. J. LADRIÈRE, *L’articulation du sens III*, p. 269.

⁶⁰⁷ In other texts Ladrière affirms that the fundamental experience in the *Lebenswelt* is perception, which is characterized by a multiplicity of “givenness” or “presentations” of things. J. LADRIÈRE, *Vie sociale et destinée*, p. 31.

“The manifestation is the process by which beings become visible. The term of visibility refers to the vision; it indicates the possibility for that which is visible to be apprehended indeed by the vision. It thus seems to suggest a kind of fundamental correlativity between becoming manifested and the act that apprehends it as a unity.”
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From the point of view of the “thing”, this experience is the manifestation understood as presence⁶⁰⁹ and as “givenness”⁶¹⁰ to the subject. From the point of view of the subject, this experience is an apprehension of the “thing” being present. Both constitute one act. This experience is a correlation between the manifestation of things and the apprehension of the person. This is the ground of the relation between rationality and the world⁶¹¹. This experience is the foundation of all rational knowledge. For that reason we call it the “fundamental experience”.

Every experience consists of two components that render it possible: receptivity and spontaneity (understood as capacity of initiative)⁶¹². If there were only receptivity, there would only be a simple interaction, like those interactions that happen in the physical universe. If there were pure spontaneity, we would only develop pure ideal constructions (e.g., mathematics). Through our experience as fundamental receptivity and capacity of initiative, we are engaged in a complex relation with the world composed of nature, history, culture, and social relations⁶¹³. In other words, this dimension of experience is *“that by which there is, for the human being, a world, significations, a conscious life, interpersonal relations, culture, possibilities of actions, norms and an existence capable of giving to itself a meaning”*⁶¹⁴. We must add that for Ladrière this fundamental immediate experience precedes the distinction between subject and object, even the emergence of the ego⁶¹⁵. The fundamental immediate experience grounds all philosophical and scientific endeavor⁶¹⁶.

⁶⁰⁸ “*La manifestation est le processus par lequel les étants entrent dans la visibilité. Le terme de visibilité renvoie à la vision ; il indique la possibilité pour ce qui est visible, d’être appréhendé effectivement dans la vision. Il semble donc suggérer une sorte de corrélativité fondamentale entre le devenir manifeste du manifesté et l’acte qui le recueille dans l’unité de son appréhension.*” Underlined emphasis is ours. J. LADRIÈRE, *L’articulation du sens III*, p. 32.

⁶⁰⁹ J. LADRIÈRE, *Vie sociale et destinée*, p. 31.

⁶¹⁰ “Givenness” is “donation” in French, which is the term used by Ladrière.

⁶¹¹ We see here Ladrière’s synthesis between Husserl’s concept of the *Lebenswelt* with the immediate presence of things and Heidegger’s concept of *aletheia* as unconcealment of Being.

⁶¹² Ladrière also formulates it as a combination of passivity-productivity. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 200. J. LADRIÈRE, *L’articulation du sens III*, p. 269.

⁶¹³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 200.

⁶¹⁴ J. LADRIÈRE, *L’articulation du sens III*, p. 269.

⁶¹⁵ This is a criticism to Husserl and his statement that the transcendental ego is the foundation of rational knowledge. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 267. J. LADRIÈRE, *L’articulation du sens III*, p. 269.

⁶¹⁶ “*La philosophie se donne la tâche de comprendre l’expérience. Elle est du reste elle-même une dimension de l’expérience, puisque c’est de l’intérieur d’elle-même que l’expérience entreprend de se réfléchir. [...] La pensée scientifique se comprend en reconstituant le processus de sa propre émergence et de son propre déploiement.*” J. LADRIÈRE, *L’articulation du sens III*, p. 269.

One characteristic of the fundamental experience is the fact that it always remains open because there is no experience that is exhaustive in the sense of being total and complete. Through it we live immersed in the process of self-constitution and manifestation of the cosmos and of the human actions and projects in all its aspects, i.e., political, social, economic, religious and artistic dimensions. We are not detached from that world but we never experience it completely.

II.3.2 The *logos* as discourse and language

II.3.2.1 Relationship between the *Lebenswelt* and language

For Ladrière, reason is not only grounded in the fundamental immediate experience but also in language. There is no point of departure that is absolute, without presuppositions⁶¹⁷. There is always the mediation of language, which is not an instrument detachable from the thinking process. There is not a pure thinking process that happens before and then is manifested by means of phrases⁶¹⁸. In a certain sense, language precedes thoughts because in the background of every thought there is the life of language⁶¹⁹. We formulate every thought from available concepts, categories and discourses. We always think in a particular linguistic and semantic context.

There is a relation between language and the real experienced world (*Lebenswelt*)⁶²⁰. For Ladrière,

*“the most elementary forms of language that constitute the basic significations, concern the segments of reality that are accessible to the immediate experience and that we can characterize as components of the ‘universe of perception’. The experience of perception is always accompanied of a language that let us talk about things that surround us and about elementary forms of interaction between persons.”*⁶²¹

The fundamental immediate experience enables us to constitute the basic significations of languages. Languages would not be possible without this experience. At the same time there is always a linguistic affirmation about this fundamental experience. We experience a field of

⁶¹⁷ J. LADRIÈRE, *L’articulation du sens II*, p. 200.

⁶¹⁸ J. LADRIÈRE, *L’articulation du sens II*, p. 110.

⁶¹⁹ J. LADRIÈRE, *L’articulation du sens II*, p. 110.

⁶²⁰ J. LADRIÈRE, *L’articulation du sens II*, p. 96 and 114.

⁶²¹ “Or les formes les plus élémentaires du langage, en lesquelles se constituent les significations de base, concernent les segments de la réalité qui sont accessibles à l’expérience immédiate et que l’on pourrait caractériser comme composant l’« univers de la perception ». L’expérience de la perception s’accompagne d’un langage qui nous permet de parler des choses qui peuplent notre environnement et des formes élémentaires d’interaction entre personnes”. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 267. The underlined emphasis is ours.

reality⁶²², field of reference, or field of experience⁶²³ composed by things that surround us and our interrelation with persons. We can talk about the experience of a field of reality due to this correlation language-fundamental immediate experience.

Language structures the meaning of perception. In that sense language is creative⁶²⁴. This access to reality by the mediation of language is not an act of immediate apprehension of a real thing⁶²⁵, which is the case of perception, but an act of **interpretation**⁶²⁶. Interpretation is the intellectual act that understands (comprehends) the signification or meaning⁶²⁷. That interpretation is the manifestation, in the sense of linguistic formulation that can be communicated, of a meaning⁶²⁸. There are different modalities of interpretation, as there are different languages, as we will see below. For Ladrière, the fundamental hermeneutical problem is “*to understand how, in an interpretative discourse, language adjust itself to the aimed reality, it covers itself with meaning.*”⁶²⁹

We understand Ladrière’s reflection as follows. The world is open for the human being as a universal field of manifestation⁶³⁰. If the fundamental immediate experience is a first moment where the world becomes manifested and the human being apprehends things in this world, then language becomes a second moment (not chronologically), a milieu of such manifestation⁶³¹. This fundamental experience (perception) is the ground of this openness of the world. Language operates as a milieu of interpretation and articulation between the fundamental experience and the manifestation of the world⁶³². This linguistic manifestation (expression) of an interpretation of the

⁶²² Ladrière refers to a “**champ de référence**,” a “**champ de réalité**” and a “**domaine de réalité**.” J. LADRIÈRE, *L’articulation du sens II*, p. 192.

⁶²³ Ladrière refers to “**champ de l’expérience**.” J. LADRIÈRE, *L’articulation du sens III*, p. 159-160.

⁶²⁴ J. LADRIÈRE, *L’articulation du sens II*, p. 98-100.

⁶²⁵ J. LADRIÈRE, *L’articulation du sens III*, p. 55 and 58-59.

⁶²⁶ Ladrière seems to include in the act of interpretation other intellectual acts, e.g., description, explanation and understanding (in the sense of comprehension). In other words, the concept of interpretation subsumes many intellectual acts. J. LADRIÈRE, *L’articulation du sens I*, p. 28-30, 66-67, and 211-214. J. LADRIÈRE, *L’articulation du sens II*, p. 12-13. Moreover, interpretation is an act that happens in many rationalities. There is interpretation of meaning in the axiomatic formal systems. See J. LADRIÈRE, *L’articulation du sens I*, p. 66. There is also interpretation of facts in the empirico-formal sciences. See J. LADRIÈRE, *L’articulation du sens I*, p. 37. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 109. Finally, human or social sciences are hermeneutical disciplines that interpret the meaning of human acts, intentions and existence. See J. LADRIÈRE, *L’articulation du sens I*, p. 26. J. LADRIÈRE, *L’articulation du sens II*, p. 155. J. LADRIÈRE, *L’articulation du sens III*, p. 61. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 109-110.

⁶²⁷ J. LADRIÈRE, *L’articulation du sens III*, p. 285.

⁶²⁸ J. LADRIÈRE, *L’articulation du sens II*, p. 171. Already for Heidegger the *logos* manifests that about which we talk. V.-M. TIRADO-SAN JUAN, *Fenomenología del logos. Zubiri y Heidegger*, p. 257.

⁶²⁹ J. LADRIÈRE, *L’articulation du sens II*, p. 124.

⁶³⁰ J. LADRIÈRE, *L’articulation du sens II*, p. 201.

⁶³¹ Here we see the influence of Heidegger. For Heidegger, the *logos* does not mean judgment, “*if by judgment we understand connecting two things*”. The *logos* enables something to manifest itself and thus makes it accessible to another. Because the *logos* lets something be apprehended, then the “*logos can mean reason*”. M. HEIDEGGER, *Being and Time*, p. 28 and 30.

⁶³² “*Si l’homme peut parler, c’est que le monde est ouvert pour lui comme champ universel des articulations possibles. Mais cette ouverture elle-même est comme don qui est accordé à l’homme. Ce don, c’est la manifestation, le dévoilement, l’aletheia. Le champ de sens, c’est-à-dire du langage, c’est précisément l’ouverture disponible par le dévoilement.*” J. LADRIÈRE, *L’articulation du sens II*, p. 201-202.

fundamental experience could be an object of further interpretation. This linguistic manifestation is nothing else than the capacity of language to **present** anew what was present in perception (perceptive manifestation).

Language is also the possibility of communicating the experience (perceptive manifestation) as a linguistic manifestation (expression) to others. However, although language expresses, communicates and interprets what we experiences, any languages also impoverishes what is manifested and apprehended⁶³³. There is a level of reduction and that is a limit of languages.

Reality is never presented directly and totally⁶³⁴. Our access by means of experience and language is gradual. The objective of comprehension consists in the saturation of signification. However, this is a limit-situation, which implies that the task of interpretation is never finished⁶³⁵. The efficiency of our access of reality and our interpretation of it depends on the efficiency of the adopted language used to interpret our experiences⁶³⁶. The choice of language must be appropriated to the reality aimed (mathematical-symbolic-logic language, scientific-conceptual language, philosophical language, theological language, etc.)⁶³⁷. Even in science, there is no pure fact independent of language, as there is no pure perception detached from reason. We cannot talk about scientific facts without interpreting them by means of language⁶³⁸. Research and truth in science and philosophy seek an agreement between language and the reality aimed⁶³⁹.

II.3.2.2 Speculative discourse and language

For Ladrière there are different types of languages. There are descriptive languages that are formed by observational terms⁶⁴⁰. There are also interpretative languages that access reality and express it. These interpretative languages are also called speculative. A speculative language transgresses the frontiers of the perceptive experience in order to interpret and understand beyond what is visible, beyond the possibilities of perception⁶⁴¹. Speculative here must be understood as synonym of theoretical⁶⁴². The speculative (theoretical) interpretation is a movement and an

⁶³³ J.-F. MALHERBE, *Jean Ladrière. Des limitations internes aux espérances de la raison*, p. 418.

⁶³⁴ J. LADRIÈRE, *L'articulation du sens II*, p. 122.

⁶³⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 286.

⁶³⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 122-123.

⁶³⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 115-116.

⁶³⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 121.

⁶³⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 123.

⁶⁴⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 126.

⁶⁴¹ J. LADRIÈRE, *L'articulation du sens II*, p. 126.

⁶⁴² J. LADRIÈRE, *L'articulation du sens II*, p. 126.

action of transgression⁶⁴³. Ladrière's concept of transgression means to go beyond some limit⁶⁴⁴. The speculative discourse (scientific or philosophical) reconstructs the self-constitution of the world by means of the series on linked concepts⁶⁴⁵. The transgressive movement of the speculative discourse goes to what is beyond the fundamental perceptive experience, what is not immediately manifested⁶⁴⁶. This *non-immediately-manifested* is constituted by the internal structure of reality (studied by sciences) and the foundation of all realities (studied by philosophy).

Scientific and philosophical languages are speculative because they introduce terms that refer to realities that are not perceptible⁶⁴⁷. Theoretical speculation in science is mediated by mathematical formulations in empirical-formal sciences⁶⁴⁸ or by concepts and historical narratives in evolutionary sciences. Sciences model the empirical perception⁶⁴⁹ through a language of representation in order to provide a description of the inner structure of reality. The second speculative language, philosophical discourse, cannot be reduced to scientific language. It does not seek to characterize an object by means of a scientific conceptual framework⁶⁵⁰.

Philosophical language is speculative. As scientific language, the point of departure of philosophical language is the fundamental experience⁶⁵¹. Nevertheless, the philosophical language does not stay in the phenomenon but goes beyond it to the phenomenon's process of self-constitution and manifestation⁶⁵². However, the transgressive-speculative character of the philosophical language is different from the transgressive-speculative language of science. Scientific language is a language of representations⁶⁵³. It uses mathematical models, scientific concepts and historical narratives in order to reproduce the cosmic reality reduced to observable data⁶⁵⁴. Scientific representations re-produce an ideal image or observable simulation from a model elaborated as formal operations⁶⁵⁵.

The philosophical speculative discourse interprets an experience (*vécu*) and expresses it in a linguistic milieu. Moreover, philosophical language is the interpretation and speculation of the

⁶⁴³ J. LADRIÈRE, *L'articulation du sens II*, p. 224.

⁶⁴⁴ **Transgression** comes from Old French *transgression* and from Latin *transgressionem* (nom. *transgressio*) which means "a transgression of the law". It comes also from Latin *transgressus*, past participle of *transgredi* which is translated as "a going over" or "to go beyond". Ladrière uses it in this second sense as to go beyond what is obvious and noticeable.

⁶⁴⁵ J. LADRIÈRE, *L'articulation du sens I*, p. 215-217.

⁶⁴⁶ J. LADRIÈRE, *L'articulation du sens I*, p. 221.

⁶⁴⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 126.

⁶⁴⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 127.

⁶⁴⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 207.

⁶⁵⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 287-288.

⁶⁵¹ J. LADRIÈRE, *L'articulation du sens II*, p. 288.

⁶⁵² J. LADRIÈRE, *L'articulation du sens II*, p. 127-128.

⁶⁵³ J. LADRIÈRE, *L'articulation du sens II*, p. 209.

⁶⁵⁴ J. LADRIÈRE, *L'articulation du sens II*, p. 127, 209.

⁶⁵⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 210-211.

human existence's constitution by means of its freedom, actions and projects. Therefore, the speculative-philosophical language becomes an existential language⁶⁵⁶. In terms of the world, philosophical discourse interprets the foundation of the world's becoming and manifestation⁶⁵⁷.

Consequently, the human subject is the place of a linguistic manifestation of reality's self-constitution⁶⁵⁸. This linguistic manifestation is not a synonym of manifestation as perception. It is a linguistic manifestation, in the sense of expression, where the *logos* of the human being makes explicit the internal *logos* of the world through speculative discourses of sciences (representative)⁶⁵⁹ and philosophy (existential)⁶⁶⁰. That is the reason why philosophy since the beginning has called this speculative discourse the *logos*⁶⁶¹.

II.3.3. The *logos* as reason

Ladrière expresses that reason is not only a group of intellectual representations (scientific language); it is a way of life⁶⁶². Following Wittgenstein, Ladrière affirms that a way of life is that which gives a global meaning to the human existence. The project of reason is to make the human existence more rational by conquering its contraries: irrationality, obscurantism and the archaic mentality. According to Ladrière, there are two notions of reason, which are correlated: subjective and objective reason.

II.3.3.1 Subjective and objective reason

First of all, reason is the human capacity or faculty to understand our own existence and the world⁶⁶³. Reason is the power to grasp in the manifested reality an internal universal principle of intelligibility⁶⁶⁴. Reason's power to understand is not independent to what we apprehend in perception. There is a fundamental correlation between the accessible (manifest) world and its comprehension⁶⁶⁵. Consequently, theoretical thinking is rooted in the experience of the different modalities of manifestation. This capacity elaborates a progressive understanding through complex operations of abstraction, thematization, and generalization. New domains of reason are

⁶⁵⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 127.

⁶⁵⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 128.

⁶⁵⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 128-129, 204 and 271.

⁶⁵⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 270-273.

⁶⁶⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 58.

⁶⁶¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 57.

⁶⁶² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 80.

⁶⁶³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 59 and 82.

⁶⁶⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 298-299.

⁶⁶⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 295.

based on previous rational elaborations⁶⁶⁶. However, we must verify the agreement between the more complex rational elaboration and the reality given to us through experience⁶⁶⁷.

Moreover, reason is not only a human capacity, but also the objective articulation of the thinking process by means of the concept⁶⁶⁸ that seeks to develop a total system of intelligibility. This total system of intelligibility is a limit idea, an ideal⁶⁶⁹. Reason recognizes itself as a creative power by being a movement of discovery-constructions of a multiplicity of objects⁶⁷⁰. It constructs mathematical objects, logical forms, physical theories and philosophical systems. Reason gives to itself its own content in a process of self-constitution⁶⁷¹. Consequently, it is an autonomous endeavor⁶⁷².

This objective reason manifests and constitutes the order of rationality through the human *logos* in a historical process. Reason is an active principle in history that inspires and manifests itself through theoretical development in sciences, philosophy, technology, economy, politics and ethics⁶⁷³. It is also made manifested through institutions that have an objective existence that substitutes progressively the natural world by a constructed world. These institutions are technological development, research laboratories, juridical and political systems, communication networks, public records and archives, the network of actions that organizes the mass production and the world trade⁶⁷⁴. Ladrière affirms that this dimension of reason is an exterior power that uses human capacities to constitute itself⁶⁷⁵. The human being as such is just the medium that is responsible for the full manifestation and constitution of reason and its internal dynamic⁶⁷⁶.

As we will see, Ladrière not only distinguishes between subjective and objective reason, he differentiates theoretical from practical aspects of rationality.

II.3.3.2 Theoretical rationality: a quest for universal knowledge

This aspect of reason is related with the search of universal knowledge⁶⁷⁷. It is reason considered from the horizon of truth⁶⁷⁸. Moreover, theoretical reason also searches for meaning.

⁶⁶⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 59-60.

⁶⁶⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 208.

⁶⁶⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 107.

⁶⁶⁹ We see here the influence of Hegel in Ladrière's thought. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 59.

⁶⁷⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 59.

⁶⁷¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 60.

⁶⁷² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 82.

⁶⁷³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 13-14.

⁶⁷⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 178-179.

⁶⁷⁵ We see here vestiges of Hegelian philosophy.

⁶⁷⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 21-22.

⁶⁷⁷ J. LADRIÈRE, *Vie sociale et destinée*, p. 33.

⁶⁷⁸ J. LADRIÈRE, *Vie sociale et destinée*, p. 33.

A. The search for truth: the epistemological dimension of theoretical reason

Theoretical reason as *episteme* is the search for authentic knowledge and the validity and truth of this knowledge⁶⁷⁹. However, what is the notion of truth and its criteria? We already discussed in chapter 3 different notions of truth applied to sciences: correspondence, coherence and pragmatism. In this section we will present Ladrière's general notion of truth applied to all rationalities, including philosophy.

Ladrière affirms that the idea of truth and the criterion of truth connote the idea of a adequacy between a discourse and a segment of reality to which the discourse refers⁶⁸⁰. This implies that we must have an access to reality. We ground the criteria of truth of propositions, discourses or even theories elaborated by reason in an intuitive moment that is the condition that renders possible our immediate contact with the reality⁶⁸¹. This intuitive moment is characterized by a receptivity from the part of the subject and the givenness as manifestation from the part of the reality that appears. Intuition here is not Husserl's transcendental or eidetic intuition⁶⁸². This intuitive moment is what we call the **fundamental immediate experience**. The criterion of truth is nothing else than the fidelity to what the reality manifests. A true proposition, discourse or theory enables a real thing to manifest what it is⁶⁸³. The *logos* of the world, in the sense of the intelligibility of the world, appears in the human *logos*⁶⁸⁴.

Truth is the correspondence between reality and knowledge apprehended and comprehended⁶⁸⁵. However, the mode of correspondence depends on the mode we access reality or the mode reality manifests itself⁶⁸⁶. There are different modalities by which a reality can manifest itself: a givenness of a formal object in an axiomatic system, a perception of an object, an ontological givenness where an object manifests its essence, an anthropological givenness that manifests the structure of human existence and its meaning⁶⁸⁷. To each mode of givenness and

⁶⁷⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 58.

⁶⁸⁰ J. LADRIÈRE, *L'Articulation du sens III*, p. 13.

⁶⁸¹ J. LADRIÈRE, *L'Articulation du sens III*, p. 14.

⁶⁸² Husserl's transcendental experience, also called eidetic evidence, is the intuition of the *eidos*, the essence of the thing that enables the experience of concrete and singular facts. According to Husserl, the intuition of the essences is an act given immediately to conscience. It is analogous to the sensible perception. We should receive the evidence of what is given. D. MORAN, *Edmund Husserl. Founder of phenomenology*, p. 97-98. I. GOMEZ-ROMERO, *Husserl y la crisis de la razón*, p. 122.

⁶⁸³ J. LADRIÈRE, *L'Articulation du sens III*, p. 58-59.

⁶⁸⁴ J. LADRIÈRE, *L'Articulation du sens III*, p. 58.

⁶⁸⁵ J. LADRIÈRE, *L'Articulation du sens III*, p. 65.

⁶⁸⁶ J. LADRIÈRE, *L'Articulation du sens III*, p. 66.

⁶⁸⁷ J. LADRIÈRE, *L'Articulation du sens III*, p. 66. Here Ladrière is clearly influenced by Husserl. According to the phenomenology born with Husserl, there are different types of realities or objects that have different modes of givenness. This means that there are different types of manifestations. V.-M. TIRADO-SAN JUAN, *Fenomenología del logos. Zubiri y Heidegger*, p. 263.

manifestation that gives us access to different realities there is a different modality of the criterion of correspondence⁶⁸⁸.

B. The search for meaning: the semantic dimension of theoretical rationality.

Truth and meaning do not signify the same. Truth is a quality of a proposition that is able to manifest something real⁶⁸⁹. We can judge a proposition, with respect to the quality of truth, as “true” if it is faithful to the manifested reality. However, meaning is beyond the judgment of “true” and “false”, although it is not independent of the quality of truth. Meaning is not a well-defined entity that could be grasped in a simple act of apprehension. A simple act of apprehension, which is the fundamental immediate experience, does not provide the an immediate meaning of a real thing. Meaning does not appear immediately in the manifested thing. It requires the mediation of interpretation⁶⁹⁰.

Meaning is one of the most difficult concepts to comprehend. Meaning is a set of directions, indications, and instructions that orient human beings to see the world in a certain way⁶⁹¹. The question of meaning is the question of the point of view from which we consider reality. This particular point of view determines the project of understanding. It is important to see that meaning has an anthropological orientation; something has a meaning not in itself but for the human person!

(i) Meaning and discourse: the analytic philosophy’s perspective.

Wittgenstein, in the *Tractatus*, raises the question of truth in relation to the question of sense, which was the most fundamental for him⁶⁹². The sense of a proposition is related to the

⁶⁸⁸ Ladrière mentions some. First of all, there is the criterion of mathematical or logical refutation following derivations from some well-established premises. This criterion is suitable for formal systems. Second, there is the criterion of verification as falsifiability between hypothesis (formulated in natural or hermeneutical sciences) and available empirical facts. In natural sciences this verification is achieved by means of empirical tests. In hermeneutical science the criteria of verification becomes a criterion of saturation of meaning. We choose the hypothesis that provides the emergence of maximal meaning. However, what is the criterion (or criteria) suited for speculative philosophy? Ladrière mentions two. There is the immediate criterion of an authentic evidence of truth. Here Ladrière seems to refer to eidetic evidence grasped by means of the transcendental or eidetic intuition in the sense expressed by Husserl. Although he does not mention it, this criterion seems more suited for philosophy, in concrete for a phenomenological analysis and description. From eidetic evidence we can establish the truth of some fundamental premises or principles directly without the need for a syllogistic demonstration. They are “foundational” because they allow an interpretation of all phenomena. Another criterion suited for philosophy is refutation by argumentation, which consists in showing a contradiction between a discourse and the set of first principles solidly established. Finally, for hermeneutical sciences there I also the criterion of fidelity to a tradition. We will see below that this criterion is fundamental for theology. See J. LADRIÈRE, *l’articulation du sens III*, p. 59-63.

⁶⁸⁹ J. LADRIÈRE, *l’articulation du sens III*, p. 134.

⁶⁹⁰ J. LADRIÈRE, *l’articulation du sens I*, p. 26.

⁶⁹¹ J. LADRIÈRE, *l’articulation du sens III*, p. 285 and 306.

⁶⁹² “I myself still find my way of philosophizing new, & it keeps striking me so afresh, & that is why I have to repeat myself so often. It will have become part of the flesh & blood of a new generation & it will find the repetitions boring. For me they are necessary. - This method consists essentially in leaving the question of truth and asking about sense instead.” L. WITTGENSTEIN, MS 105, p. 46.

representation and description of a state of affairs⁶⁹³ that is explicit in the quality of true or false⁶⁹⁴. According to the Wittgenstein of the *Tractatus* the meaning of a proposition is the condition that enables such proposition to be acknowledged as true or false using a criterion of truth. Here the theory of meaning is related to the truth-value of a proposition, which has natural sciences as a model.

However, in the analytic tradition there is another theory of meaning, the semantics of speech acts. Wittgenstein took some distance from his original position in the *Tractatus* and affirmed in his *Philosophical Investigation* that the meaning of a linguistic expression is related to its use. This conception of meaning enables the development of the semantics of ordinary language and speech acts for which the meaning of a linguistic expression cannot be reduced to the values of “true” or “false”. John Austin, following the second Wittgenstein, develops the semantics of speech acts⁶⁹⁵. For Austin, the speaker “does” something when he speaks. Ladrière embraces this perspective of analytic philosophy. For Ladrière, language is not only about truth of propositions or discourses. Language is also about meaning. Meaning is never clear before the discourse. It is clear due to the discourse. However, there is never an absolute meaning because there is never an ultimate and absolute expression in the form of a discourse⁶⁹⁶.

Moreover, there is an anthropological notion of meaning besides the one found in propositions and discourses. The human being has a *logos*, which is an achievement that gives meaning to our lives⁶⁹⁷.

(ii) Meaning and human existence: the phenomenology’s perspective

The relation between meaning and truth exists at a more holistic level: the meaning of human life and the cosmos. Human life is immersed in a flux of particular meanings that constitute, as a whole, the possibility of making sense of human existence. Here meaning designates the horizon from which a language, an action, an encounter, a thought, a desire and affection is understood⁶⁹⁸. In other words, meaning is the horizon from which different aspects of human existence and the cosmos “make sense”. According to Ladrière, meaning generates all attitudes in human beings⁶⁹⁹. From this holistic notion, meaning is manifested in discourses and

⁶⁹³ L. WITTGENSTEIN, *Tractatus Logico-Philosophicus*, No. 4.031

⁶⁹⁴ J. LADRIÈRE, *l’articulation du sens III*, p. 228

⁶⁹⁵ This subject and its influence in Ladrière is well studied in chapter 3 “L’opération du langage” in J.-F. MALHERBE, *Le Langage théologique à l’âge de la science. Lecture de Jean Ladrière*, p. 55-78.

⁶⁹⁶ J. LADRIÈRE, *Vie sociale et destinée*, p. 24.

⁶⁹⁷ J. LADRIÈRE, *Vie sociale et destinée*, p. 32.

⁶⁹⁸ J. LADRIÈRE, *L’articulation du sens III*, p. 306.

⁶⁹⁹ J. LADRIÈRE, *L’articulation du sens III*, p. 235-236

actions. This is the theory of semantics developed in the school of phenomenology by figures such as Husserl and Heidegger⁷⁰⁰.

For Ladrière, the meaning of life affects the existence as a whole⁷⁰¹. Existence does not mean simply the fact of human life. It is the mode of being that is distinctive to that human reality⁷⁰². Existence is the human reality as called to decide his Being vis-à-vis a set of possibilities, to deploy itself in a space of meaning⁷⁰³. A calling that must be deciphered at the same time in action and in thought⁷⁰⁴. This is possible because human existence is unaccomplished. It is situated in the tension between what we have received and our future Being⁷⁰⁵. That is why we must find a meaningful way of life that could put the human existence on the path to its own destination (in the sense of a possible future and not in the sense of fate or predestination)⁷⁰⁶.

Human existence encounters its meaning in the co-existence with the human environment surrounded by language, symbols, art, rites and ceremonies. All of these compose what we call culture. Here culture is the milieu, a symbolic universe, from which we formulate the meaning of human existence⁷⁰⁷.

In a text Ladrière distinguishes between signification and meaning. For Ladrière, **signification** is the process by which the linguistic signs could make sense. It is a unity of sense that has a local character or significance⁷⁰⁸. The signification of a predicate is not rigid and fixed once for all. They come from a dynamic process that could be stabilized⁷⁰⁹. The term **meaning** (or “sense”) is reserved to the global quality that characterizes all that has significance. It gives to all significations the capacity to make sense⁷¹⁰. It is more global than the particularity of signification because it is part of the whole human life⁷¹¹. Meaning is the milieu where the significations are elaborated⁷¹². In other words, the signification is the linguistic sense at the propositional level developed by the analytic philosophy’s perspective. The meaning is the sense

⁷⁰⁰ M. BEUCHOT, *Historia de la filosofía del lenguaje*, p. 290-313.

⁷⁰¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 49.

⁷⁰² Here Ladrière seems to be influenced by Heidegger’s notion of *Dasein*. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 49.

⁷⁰³ J. LADRIÈRE, *L’articulation du sens III*, p. 108-109.

⁷⁰⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 49.

⁷⁰⁵ J. LADRIÈRE, *L’articulation du sens III*, p. 109.

⁷⁰⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 49.

⁷⁰⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 50.

⁷⁰⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 252.

⁷⁰⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 264.

⁷¹⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 252.

⁷¹¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 252.

⁷¹² J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 252-253.

of the human existence developed by the phenomenology's perspective. Signification and meaning are the condition of possibility that enables the human existence to structure itself.

It is important to stress that most of the times Ladrière uses the term “meaning” in the first two senses (the linguistic sense at the propositional level and the global quality that characterizes all that has significance) without distinguishing one from the other⁷¹³. There are also moments where he uses “signification” in the sense of meaning⁷¹⁴. Moreover, he uses the “horizon of meaning” in the second and third senses: as the human milieu where the significations are elaborated and as a principle of unity that subsumed a systematic network of significations⁷¹⁵.

C. Theoretical rationality: beyond scientific rationality

What we have discussed about the epistemological and semantic foundations of rationality shows that theoretical reason is not reduced to scientific reason⁷¹⁶. Theoretical reason is not only about scientific knowledge or objects that we “encounter” in laboratories. Theoretical reason is grounded in an intuitive moment that we call the fundamental immediate experience where we apprehend reality and real things manifested to us. One of the modalities of this manifestation is empirical observation. However, there are other modalities as well⁷¹⁷. In addition, reason is not only about objects that are outside our own human reality. Ladrière affirms that reason is also about the meaning of our life and acting upon this understanding. It is also the modality of the self-understanding of the human reality and existence⁷¹⁸. This effort of self-comprehension is possible because our understanding of human existence can be expressed by means of the transgressive capacity of concepts, categories and speculative discourses. The interpretative-transgressive capacity of languages renders explicit what is already implicit and presupposed in the structure of the human existence.

II.3.3.3 Practical rationality

Following Kant's philosophy, Ladrière affirms that reason is not only the effort to understand reality as a whole and to interpret the meaning of cosmic and human existence.

⁷¹³ Examples where Ladrière interchanges the terms “signification” and “meaning” (*sens* in French) or uses “meaning” when he should have used “signification” are in J. LADRIÈRE, *Vie sociale et destinée*, p. 24. J. LADRIÈRE, *L'articulation du sens III*, p. 112 and 229.

⁷¹⁴ For example see J. LADRIÈRE, *L'articulation du sens III*, p. 108-109. J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 49-50.

⁷¹⁵ See section II.4.2.2 of this chapter.

⁷¹⁶ Following Ladrière's reflections Malherbe calls this reduction of reason to scientific reason “*l'impérialisme méthodologique*”, which is a product of scientism with a strong influence in our scientific culture. J.-F. MALHERBE, *Le Langage théologique à l'âge de la science. Lecture de Jean Ladrière*, p. 24.

⁷¹⁷ In terms of theology this is an essential issue. We will see in the next chapter that with respect to theology the modality of “givenness” is revelation.

⁷¹⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 109.

Beside the horizon of theoretical knowledge, there is also the horizon of action. Action is the power to influence or determine something. Although it is not arbitrary, human action is characterized by being free or autonomous⁷¹⁹. Therefore, it implies the responsibility to our existence in every decision we make⁷²⁰. Here reason is in a process of self-constitution through the achievement of personal and political actions⁷²¹.

A. Practical rationality and personal action: the horizon of personal fulfillment and freedom.

Life according to practical reason is the effort to make explicit the conditions by which actions fulfill our human existence. An action is a pure initiative, an efficient intervention in the path of events and the emergence of something new in the world⁷²². Consequently, when an agent acts he exercises his responsibility with respect to human existence⁷²³. Our actions are creative, necessarily local, and conditioned by cosmic and social circumstances where they operate⁷²⁴.

Actions emerge from interpretations of the meaning of particular events and the meaning of human existence as a whole⁷²⁵. Life according to practical reason is life according to freedom, which is the a priori condition of the possibility to fulfill our personal life. Freedom is the capacity to accomplish a deliberate and justified action⁷²⁶.

B. Practical reason and the horizon of political action: the human community and the ideal of justice.

The project of practical reason is also associated with the practical organization of common life. Practical reason is not only about personal fulfillment and freedom. It is also about the fulfillment of all members of the community through righteous actions and institutions. Justice is a condition that makes possible a good life and an authentic community. All members of an authentic community seek to organize themselves in order to make possible for each one a life according to reason. If theoretical reason is related to authentic knowledge, practical reason is

⁷¹⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 170.

⁷²⁰ J. LADRIÈRE, *Vie sociale et destinée*, p. 10-11.

⁷²¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 169-171.

⁷²² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 48.

⁷²³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 21.

⁷²⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 31-32.

⁷²⁵ Here Ladrière distinguishes between an automatic operation and a human action. The last one emerges out of a deliberative process.

⁷²⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 61.

associated with an authentic community based on freedom and justice⁷²⁷. An authentic community (*polis*) is opposed to all forms of social organization grounded only in the preoccupation for wealth or power. Here the objective of practical reason is the mutual recognition of human dignity⁷²⁸. Practical reason seeks the constitution of a form of life that is consecrated to the construction of the city as a community of virtue⁷²⁹.

C. Dimensions of practical rationality and their criteria of action.

According to Ladrière, there are three dimensions of action. One is the instrumental dimension (in the sense of Habermas' instrumental reason), which is related to technology. Its objective is the adaptation of means to ends⁷³⁰. The criterion of action here is efficiency. Sometimes this criterion becomes the optimization of resources vis-à-vis costs.

There is also the strategic dimension that elaborates and implements action plans in collaboration with other agents⁷³¹. Here the criterion is also efficiency, but in the contexts of agents' interactions in particular situations (political, religious, economical, etc.). Finally, there is the dimension of decision, which is a choice of one particular objective or action in the context of partial uncertainty. Here the criterion, according to Ladrière, is the maximization of the usefulness of the product and the minimization of possible damage caused by the decision.

II.3.4 Different modes of rationality in the order of manifestation

Ladrière argues that the idea of rationality is related to knowledge according to principles and to a method that uncovers what is true⁷³². The principles and the method that ground rational knowledge are pertinent to the studied object. This concept of rationality includes all domains of rational knowledge. Ladrière proposes a classification of the idea of rationality, which in modern times is characterized by a plurality of modes. According to him there are five groups of rational disciplines that study the order of manifestation⁷³³. Three of them are related to the idea of science. Two are related to the idea of philosophical rationality.

⁷²⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 60.

⁷²⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 52.

⁷²⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 60.

⁷³⁰ J. LADRIÈRE, *Rationalité*, p. 934.

⁷³¹ J. LADRIÈRE, *Rationalité*, p. 934.

⁷³² Here Ladrière is following the Greek notion of science as authentic and rigorous knowledge. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 86.

⁷³³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 87.

Although we have already discussed them amply, we will briefly summarize them and add the component of practical reason. There are the disciplines of formal sciences, e.g., mathematics and logic. These disciplines show us an aspect of rationality: the possibility of defining and constructing objects and the possibility of studying them in an adequate matter⁷³⁴. Associated to theoretical formal sciences there are some “applied” sciences that belong to practical reason. Although Ladrière does not mention them, we consider in this category applied mathematics, financial mathematics, economic modeling, etc. There is also the domain of computational sciences, which are applied and axiomatic in nature.

Second, there is the mode of natural sciences that have a theoretical and an experimental element⁷³⁵. From theoretical models proposed (mathematical or conceptual in nature) we turn to empirical objects by means of controlled experiments in order to verify our hypothesis. These sciences provide us with a second aspect of rationality: theory and experiments are intermingled in the elaboration of the hypotheses, the construction of tests and the verification processes. Associated with natural sciences there are some applied sciences or technologies that seek to accomplish specific projects by technological means, e.g., engineering as an application of empirical-formal sciences. There are also the applications of life sciences, e.g., agronomy, medicine, and biotechnologies.

Third, there are the hermeneutical disciplines or sciences⁷³⁶. These are disciplines whose domain is fundamentally the question of meaning. They contribute with a third aspect of rationality: the self-understanding of the human being⁷³⁷ and the meaning of his actions and projects based on the hermeneutical circle. Hermeneutical disciplines are open to personal, social, political and historical actions in order to modify the situations of communities or personal behavior-actions.

However, these are not the only possible rationalities. For Ladrière there are two forms of philosophical rationalities: an analytical form and a speculative form.

II.4. Philosophy and rationality

II.4.1 Ladrière’s concept of philosophy

⁷³⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 89.

⁷³⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 89.

⁷³⁶ In some texts written before this one Ladrière refers to hermeneutical sciences. Here Ladrière uses the term “discipline” instead of “science”. This apparent evolution has the objective to avoid a confusion that hermeneutical disciplines have the same type of rationality than natural sciences. See J. LADRIÈRE, *L’articulation du sens II*, p. 153-157. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 91 and 95.

⁷³⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 96.

Besides scientific rationality and its three major modes, there is another rationality that enters into our ordinary life. It is philosophy, which is related to the reflection we make of our existence as experienced (*vécu*)⁷³⁸. Philosophy has the task of discovering the authentic meaning of human existence by means of a broadened reason⁷³⁹.

II.4.2 Two types of philosophical rationalities: analytical and speculative

According to Ladrière there are two types of philosophical rationalities: analytical rationality and speculative rationality. Analytical rationality seeks to clarify our thinking process and its linguistic milieu. There is also a speculative rationality that follows the transgressive movement of philosophical language. It is a movement from the visibility of the human experience to the invisible conditions that render possible the manifestation, our experience of it and the ultimate foundation of the process of self-constitution. According to Ladrière, there are two speculative philosophical rationalities: descriptive phenomenology and metaphysical philosophy.

II.4.2.1 Analytical rationality: analysis and language⁷⁴⁰

The analytical form of philosophy proceeds from the idea of clarification⁷⁴¹. There is opacity in the thinking process due to the ambiguities of our languages. Analytical rationality has as a task the analysis of language and its clarification⁷⁴². Let's consider the object, objective and method of this rationality.

A. The object and objective of analytical rationality

The objects of this rationality are concepts or categories, propositions, principles and discourses that are foundational of the thinking process. The objective of this rationality is to

⁷³⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 80. J. LADRIÈRE, *L'Articulation du sens II*, p. 287-288. J. LADRIÈRE, *L'Articulation du sens III*, p. 272-275 and 279.

⁷³⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 52.

⁷⁴⁰ Here Ladrière is influenced by the linguistic turn. The linguistic turn is the name of a major shift in twentieth-century philosophy from traditional themes of metaphysics and epistemology to a focus on the structure and usage of language and its relation to human understanding. This movement has turned our attention from questions about properties and concepts to questions about words, linguistic usage and linguistic meanings. Language is conceived as central to our acts and to our interpretation of reality as something constructed by our discourses. Different disciplines related to language took part in this linguistic turn: linguistics, philosophy of language, and hermeneutics among others. Two major traditions of this movement are analytic philosophy, with figures such as Wittgenstein and Austin, and hermeneutics related to Dilthey, Heidegger, Gadamer and Ricœur. See M. BEUCHOT, *Historia de la filosofía del lenguaje*, p. 9. W.-G. LYCAN, *Philosophy of language*, p. 176. A.-S. JENSEN, *Theological Hermeneutics*, p. 105-107, 115-123, 135-151.

⁷⁴¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 96-97. J. LADRIÈRE, *L'Articulation du sens III*, p. 270.

⁷⁴² J. LADRIÈRE, *L'articulation du sens III*, p. 75.

arrive at the apprehension of the clear idea and meaning expressed by a concept, a proposition or a discourse. Due to the amount of ambiguities in our ordinary language, linguistic analysis seeks to separate the different significations of words that could be in conflict. These ambiguities are born from the fact that signification is not a well-defined linguistic entity that can be grasped in a simple act of understanding⁷⁴³. It is an indication that points to a direction, to a particular perspective, to an affirmation or negation of the world. The signification of a predicate (as something affirmed or negated of a subject) is not static and fixed once for all. The signification of a predicate has a history related to its linguistic usage⁷⁴⁴. It has the potential to be transformed but this transformation is not predetermined. A concept or a proposition already has a meaning that is always open to new reinterpretations and developments.

Meaning changes according to historical usage of the concepts or propositions. They could become more limited or more global and inclusive⁷⁴⁵. This is true not only for the meaning of predicates but also of more complex linguistics unities, e.g., sentences and discourses. The sense of a predicate, a sentence or a discourse is always open to transformations. As a consequence, the process on understanding and interpretation remains always open.

B. The method of analytical rationality: the hermeneutics of language

The idea of clarity is related to the method of decomposition from complex to simple⁷⁴⁶. Although Ladrière does not mention it, we argue that the *Lebenswelt* is the cultural matrix of the historical elaboration of concepts. Concepts are culturally and historically conditioned. Analytical rationality refers to this cultural matrix. In terms of the speculative and transgressive capacity of philosophical concepts, the historical matrix of their meaning is found in the different philosophical traditions and schools⁷⁴⁷. Here a philosopher seeks to develop a sketch that traces the historical meaning of concepts, propositions, principles and discourses⁷⁴⁸.

⁷⁴³ J. LADRIÈRE, *L'Articulation du sens III*, p. 285.

⁷⁴⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 286.

⁷⁴⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 285-286. Here we see the influence of Wittgenstein and his notion of meaning as use. See L. WITTGENSTEIN, *Philosophical Investigation*, p. 45-46. R. MONK, *How to read Wittgenstein*, p. 69-82.

⁷⁴⁶ J. LADRIÈRE, *L'Articulation du sens III*, p. 96.

⁷⁴⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 36. J. LADRIÈRE, *L'Articulation du sens III*, p. 264 and 270.

⁷⁴⁸ Ladrière claims there are six historical stages in the elaboration of the philosophical concepts: (i) the discovery of the capacity of language to establish meaning through concepts and discourse; (ii) the display of the human capacity, by means of language, to argue, explain and demonstrate; (iii) the ability to go back to principles on which we can construct a demonstration; (iv) the potential to submit these demonstrative operations and explications to rules; (v) validation and judgment of these rules; (vi) induction of the idea of an absolute foundation. These stages show the relationships between concepts and principles. From concepts, we can infer principles and an absolute foundation of reality. At the same time, these principles and the ultimate ground of reality can be expressed and articulated by the use of concepts. J. LADRIÈRE, *L'articulation du sens III*, p.107-108.

We affirm that the method of this rationality includes a moment of experience as testing. The experience is a testing-together between different concepts or categories and their historical elaboration: “the category A^1 in a cultural context A^2 is elaborated from the category B^1 in a cultural context B^2 ”. The interpretation of the meaning of philosophical concepts or discourses is tested in its historical elaboration in the history of philosophy. Our reinterpretation of existing concepts or the elaboration of new ones is also tested in their capacity to describe and interpret our experiences.

C. The verification process

The verification process consists in the encounter between the sketch, the formulation of the historical meaning of concepts, and our experience as testing. The verification process follows the three criteria discussed already: correspondence, coherence and pragmatism. If we have developed new concepts of categories, or reinterpreted existing ones, experience consists in testing their capacity of carrying on a new interpretation. Does this concept or discourse correspond to what we experience in our own reality? As happens in sciences, the elaboration of sketches is a partial adequation because concepts, categories, and discourses only partially grasp reality.

The second criterion is coherence. Are categories coherent with other categories born in other historical contexts in the history of philosophy: “is the category A^1 in a cultural context A^2 coherent with the category B^1 in a cultural context B^2 ”? There is also partial coherence because a category or concept partially covers the meaning of another concept born from a different cultural and historical context. The third criterion is pragmatism: do our interpretation and analysis of categories and discourses provide us more clarity and the capacity to communicate our ideas with less ambiguity? Are new categories and discourses useful to interpret the life-world experienced by us. This is also partial because we never elaborate the ultimate discourse that reduces completely all ambiguities.

D. Practical analytic rationality

Following the idea of self-implication rooted in the studies of language from Wittgenstein, Austin and Evans, Ladrière sees a connection between the analysis of language and human

engagement⁷⁴⁹. The human person is capable of engaging himself and his existence by means of language.

Ladrière analyzes scientific language, which is grounded in constative statements⁷⁵⁰. A scientific statement is a constative statement, which is either true or false. In addition, the scientist does something by using one of the linguistic operators related to constative expressions: he commits himself to demonstrate and to validate his scientific constative statement.

Ladrière also analyses philosophical language, which is grounded in statements of self-involvement. Philosophical language is not a constative language, as is the scientific language. This language is not only about propositions that are true or false, it implies also a self-involvement and commitment⁷⁵¹. The person makes explicit his option, his commitment and his responsibility with respect to the meaning of the cosmos and of human life. He commits himself in a course of actions and attitudes to construct his existence according to this “meaning”. The linguistic operators commonly used in this type of expression are, among others: “*I consider life meaningful*”, “*the meaning of life is ...*”, “*I am involved*”, “*I am committed*”, “*I choose*”.

II.4.2.2 Speculative philosophy: descriptive phenomenology and theoretical philosophy

According to Ladrière, speculative philosophy is an effort to understand the human experience and, correlatively, reality as a whole⁷⁵². Philosophy has as one of its task the clarification of what we mean by “reality” as reality and what it means in particular domains of research⁷⁵³. Human experience and reality are correlative, they overlap⁷⁵⁴. The understanding of reality is correlated to the understanding of the human experience. In addition, to understand the foundation of the human experience implies to know the reality to which this experience is oriented. That is why we must go beyond the duality subject-object⁷⁵⁵ and show their inseparable interrelation.

⁷⁴⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 77.

⁷⁵⁰ Austin distinguishes between locutionary act, illocutionary act and perlocutionary act. The locutionary act is the action of “saying something”, which has a meaning and a reference. The illocutionary act is the speaker’s intention, what he does in fact when he says something, e.g., a promise, an order, a judgment, etc. The perlocutionary act is the actual psychological effect on the hearer and his reaction. Evans develops further the concepts of speech acts. For him there are different classes of illocutionary acts. One class of illocutionary acts refers to constative expressions. One does something by expressing a constative statement. The linguistic operators commonly used in this type of expression are: “I affirm”, “I conclude”, “I declare”, “I confirm”, “I deny”, “I contest”, “I oppose”, etc. J. LADRIÈRE, *L'articulation du sens I*, p. 97-100.

⁷⁵¹ J. LADRIÈRE, *L'articulation du sens II*, p. 28.

⁷⁵² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 97. J. LADRIÈRE, *L'articulation du sens III*, p. 279.

⁷⁵³ J. LADRIÈRE, *L'articulation du sens III*, p. 291 and 302.

⁷⁵⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 97.

⁷⁵⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 203.

Why does Ladrière call speculative this type of philosophy? This type of philosophy is based on a transgressive-speculative language. As we already discussed, a speculative language transgresses the frontiers of perception and ordinary life. Transgression is the movement of description, interpretation and understanding whose point of departure is the manifestation of things but that seeks to go beyond what is visible, beyond the possibilities of perception⁷⁵⁶.

What is the root of the transgressive potentiality of concepts and discourses? As we already explained, the meaning of concepts or propositions is always open to transformation. Ladrière affirms that we can participate consciously in the process by which the meanings of concepts, propositions and discourses change or are reinterpreted. Ladrière calls this process: “*semantic transgression*”⁷⁵⁷. This process is a reinterpretation of concepts or propositions by a new set of relationships to new concepts and new uses in sentences or discourses. This transgressive movement enables us to go from one horizon of meaning to another. As Ladrière affirms:

*“A concept operates in relation to a horizon. Without doubt a concept takes its particular signification in relation to other concepts. Due to the mutual relationship between concepts there can be a logic of a systematic articulation between concepts. But the system of concepts, always in process of elaboration, is constituted in a horizon”*⁷⁵⁸.

The horizon of meaning⁷⁵⁹ is the principle of unity that subsumed the network and system of signification⁷⁶⁰. A horizon of meaning is the point of view, the perspective from which we talk

⁷⁵⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 126.

⁷⁵⁷ In the three volumes of “*L'articulation du sens*” Ladrière uses many terms to refer to the same concept: “*transmutation*” (II, p. 173, 175)(III, 298), “*transposition*” (II, 187-188)(III, 112), “*transgression*” (II, 188-189, 224)(III, 162, 266), “*transmutation sémantique*” (II, 190, 192), “*transformation*” (I, 222)(III, 112, 120, 286), “*mouvement sémantique*” (II, 191), “*opération de déplacement*” (II, 192), “*mouvement de transvaluation*” (I, 238)(II, 194), “*transfiguration*” (II, 194).

⁷⁵⁸ “*Un concept n'est opérant que relativement à un horizon. Sans doute un concept ne prend-il sa signification particulière que relativement à d'autres concepts. C'est en vertu de ce renvoi mutuel des concepts les uns aux autres qu'il peut y avoir une logique, au sens très général [...] d'un domaine d'articulation systématique des concepts. Mais le système des concepts, toujours en voie d'élaboration d'ailleurs, ne peut se constituer que relativement à un horizon.*” J. LADRIÈRE, *L'articulation du sens III*, p. 112.

⁷⁵⁹ In order to better understand Ladrière's notion of “*horizon of meaning*” we should understand the background of that concept. Ladrière inherits the notion of horizon from Husserl and Gadamer. Husserl stated that in the process of grasping an object, there are aspects that are not directly apprehended. This is precisely what he meant by the concept “horizon”. A horizon is constituted by the aspects of an object that are not apprehended, at least directly. These aspects are possibilities which can be grasped in further acts of perception or reflection. A horizon is composed of all the expectations and anticipations with respect to an object. In that sense the horizon is a “pregiven” that works as a reference, a pre-apprehension that enables a possible confirmation or a negation. For Husserl, there are various layers or horizons of reference contained in the acts of perception or reflection. As we confirm or deny our anticipations of an object we change a particular horizon. For Gadamer, a horizon “*is the range of vision that includes everything that can be seen from a particular vantage point*”. The concept of horizon suggests a superior vision of a higher universality from which an interpreter overcomes his particularities. This horizon enables the interpreter to “see” better in a larger whole. As Husserl, Gadamer considers that a horizon is not something static but “*something into which we move and that moves with us. Horizons change for a person who is moving*”. D. MORAN, *Introduction to phenomenology*, p. 161-162 and 165. E. HUSSERL, *Cartesian meditations*, p. 32 and 122. H.-G. GADAMER, *Truth and Method*, p. 301-304.

⁷⁶⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 253.

in a particular language⁷⁶¹. It is a particular perspective of seeing the world, from which things have signification and meaning⁷⁶². It is the ultimate condition of possibility of all significance⁷⁶³ and in that sense is more global than “signification” and “meaning”. This horizon of meaning has the character of absolute generality⁷⁶⁴. It is the clarity in which the existence (human reality) discovers itself and discovers the world in which it is immerse⁷⁶⁵. There are different horizons of meaning that are like worlds of meanings. They are like particular systems of meaning that have particular languages, e.g., a horizon of meaning from which scientific languages are elaborated, theoretical horizon from which philosophical discourses are elaborated, etc.

Furthermore, the meaning of a concept, constituted in a particular horizon, could be

*“transmuted into another signification that captures, extends and transforms the previous sense [...]. The concept’s surplus of meaning, its capacity to go beyond its original meaning [the original horizon], is grounded in the articulation of horizons.”*⁷⁶⁶

This process is not random, but guided intentionally. It aims to develop a particular potential meaning existing in a concept, sentence or discourse. We can transform the meaning of concepts, sentences or even discourses by taking into consideration the meaning already present in their use⁷⁶⁷. Semantic transgression is a movement of transformation from a present meaning to another. The predicate already has a meaning that is not static, but dynamic, always open to new reinterpretations, to new developments. The process of semantic transformation has two phases. First, the predicate (concepts, sentences or a discourse) is detached from its previous linguistic use rooted in a particular horizon of meaning. Then the predicate can receive a new meaning in a new linguistic use that belongs to another horizon⁷⁶⁸ by means of a new set of relationships to new concepts and new uses. The semantic transformation can go as far as changing not only the usage, but also from one particular horizon of meaning to another⁷⁶⁹.

⁷⁶¹ J. LADRIÈRE, *L’articulation du sens III*, p. 284.

⁷⁶² J. LADRIÈRE, *L’articulation du sens III*, p. 285.

⁷⁶³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 266.

⁷⁶⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 253.

⁷⁶⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison* p. 266.

⁷⁶⁶ The original text was about the transmutation of a philosophical meaning and the possibility to change its meaning: “la signification que recevait le concept dans l’horizon philosophique, en lequel il s’était constitué, est transmuée en une autre signification, qui à la fois reprend, prolonge et transforme la première [...]. Ainsi l’excédence du concept, sa capacité de viser au-delà de son sens originaire, est fondée elle même sur l’articulation des horizons”. J. LADRIÈRE, *L’articulation du sens III*, p. 112.

⁷⁶⁷ J. LADRIÈRE, *L’articulation du sens II*, p. 173.

⁷⁶⁸ J. LADRIÈRE, *L’articulation du sens II*, p. 175, 187.

⁷⁶⁹ As we will see this has the potential even to go from the order of manifestation to the order of revelation and viceversa.

Therefore, speculative language by means of its transgressive capacity is a milieu that enables one to describe, uncover, interpret and comprehend the fundamental immediate experience and reality as a whole. According to Ladrière, speculative philosophy has two versions: descriptive phenomenology and theoretical philosophy, which is expressed by means of philosophical systems. They are speculative because of their transgressive movement: from the visible to the invisible.

A. Descriptive phenomenology

Descriptive phenomenology describes as faithfully as possible that which is experienced⁷⁷⁰. It is a description and not a theoretical explanation or construction, which breaks with the domain of perception⁷⁷¹. The objects of this descriptive phenomenology are things-experiences or facts⁷⁷². Among the objects there is also the human being, “*with all their action and concern, works and suffering, living in common in the world-horizon in their particular social interaction.*”⁷⁷³

Finally, another object of this descriptive phenomenology is the analysis of the fundamental immediate experience as a place of the world’s manifestation that grounds all knowledge. This descriptive phenomenology seeks the ultimate structure, the irreducible *datum* of experience. In Ladrière own words:

*“Phenomenology analyzes the relationship between the human being and the cosmos, seeking to describe how the world gives itself to the human existence, in perception and in action. As such it makes explicit the initial presupposition of science: the fundamental correlation that makes the world accessible and comprehensible. Science has the task of articulating the world’s intelligibility by means of conceptual representations that take the form of theories. The task of phenomenology, with respect to the scientific work, is to establish the possibility of theoretical works by showing how theoretical thinking is grounded in perception.”*⁷⁷⁴

⁷⁷⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 97.

⁷⁷¹ J. LADRIÈRE, *L’articulation du sens II*, p. 207.

⁷⁷² Let’s consider Husserl’s words about this. “*Things: that is, stones, animals, plants, even human beings and human products; but everything here is subjective and relative, even though normally, in our experience and in the social group united with us in the community of life, we arrive at ‘secure’ facts[...]*”. E. HUSSERL, *Crisis of the European Science*, p. 138.

⁷⁷³ E. HUSSERL, *Crisis of the European Science*, p. 146.

⁷⁷⁴ “*La phénoménologie analyse la relation entre l’être humain et le mode cosmique, s’employant à décrire comment le monde s’offre à l’existence, dans la perception et dans l’action, et rendant explicite par là la présupposition initiale de la science, cette corrélation fondamentale qui rend le monde accessible et compréhensible. La science comme telle se donne la tâche d’articuler cette intelligibilité dans des représentations conceptuelles qui, au mieux, prennent la forme de théories. Le rôle de la phénoménologie, par rapport à ce travail, est d’établir la possibilité de théorisation, en montrant l’enracinement de la pensée théorique dans la perception.”* The underlined emphasis is ours. J. LADRIÈRE, *L’articulation du sens III*, p. 295.

This ultimate structure, the irreducible *datum* of the fundamental immediate experience, as we will see, is also the conditions that make possible the religious experience⁷⁷⁵.

The method of descriptive phenomenology consists first of all of the *epoché* where we suspend all our participation in the theoretical cognition of objective sciences and their critical position with respect to their truth or falsity⁷⁷⁶. For Ladrière, the *epoché* uncovers what precedes the distinction subject-object and even the emergence of the ego⁷⁷⁷. Through the *epoché* the philosopher describes the structure of the experience with its receptivity, passivity (in the sense of being affected⁷⁷⁸) and productivities⁷⁷⁹. This structure of the human experience is the fundamental condition of our apprehensions of the world as manifested. As Ladrière himself says:

*"[...] this multiform reality that affects us in different modalities of the 'givenness', is seen from the point of view of its origin [not in the sense of chronological beginning], in its occurrence, in its genesis, in its display, by which it [this multiform reality] becomes a phenomenon, by which it enters in the field of what is experienced."*⁷⁸⁰

Following the method of *epoché*, phenomenology describes the process of experience. We are interested in facts, and perhaps facts that are also corroborated by science. Rooted in this *epoché*, the phenomenologist describes what he experiences⁷⁸¹. There are not theoretical explanatory sketches but the description of a particular experience by means of concepts and discourses. Sometimes the philosopher elaborates his descriptions by reinterpreting some concepts, i.e., by means of the process of semantic transgression. What is the verification process here? The verification process is grounded in what Husserl calls the "evidence". The evidence is the moment when the thing "gives" (manifests) itself to the human consciousness⁷⁸². According to Lyotard, there can be an error due to the possibility of describing an illusion instead of describing the reality of an experience or a flow of experiences⁷⁸³. In order to verify a description we must return back to the "fundamental immediate experience" that is "*grounded in the life-*

⁷⁷⁵ In the next section we will study Zubiri's position and uses of the *epoché* to uncover the *a priori* structure and foundation of all human experiences and intellections. Even revelation as a fundamental theological experience is possible due to our structure that apprehends reality.

⁷⁷⁶ E. HUSSERL, *Crisis of the European Science*, p. 135.

⁷⁷⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 269.

⁷⁷⁸ For Heidegger the affection is the radical openness of the *Dasein*. This affection is the source of meaning and *logos*. V.-M. TIRADO-SAN JUAN, *Fenomenología del logos. Zubiri y Heidegger*, p. 265.

⁷⁷⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 269 and 271.

⁷⁸⁰ "[...] cette réalité multiforme qui nous affecte dans ces différentes modalités de la donation, est vue, du point de vue de l'originnaire, dans sa survenance, dans sa genèse, dans son déploiement, dans le processus par lequel elle devient phénomène, par lequel elle entre dans le champ de l'expérience." J. LADRIÈRE, *L'articulation du sens III*, p. 295.

⁷⁸¹ We can consider as an example Merleau Ponty's "*L'OEil et l'Esprit*" where he describes and analyses the experience of looking at a painting.

⁷⁸² J.-F., LYOTARD, *La Phénoménologie*, p. 39.

⁷⁸³ J.-F., LYOTARD, *La Phénoménologie*, p. 40.

world, in the original self-evidences belonging to it.”⁷⁸⁴ This process of returning back to the “fundamental immediate experience” grounds the verification process because it possesses the self-evidence of the life-world⁷⁸⁵.

B. Theoretical philosophy

We call this speculative philosophy “theoretical philosophy” because it seeks to go beyond description. Its objective is to provide a theoretical explanation to our experience of things or events in the order of manifestation and self-constitution. This explanation is grounded, at least in principles, in what we experience. The object of theoretical philosophy is the domain of the origin from which everything unfolds⁷⁸⁶. That domain of origins is the ultimate principles of the self-constitution of our human existence immersed in the self-constitution of the cosmos.

For Ladrière, this theoretical philosophy is a critical knowledge of the ultimate principles and foundations of the cosmic and human reality and their processes of unfolding (self-constitution)⁷⁸⁷. It seeks the definitive ground of reality as a whole⁷⁸⁸. At the same time, philosophy seeks to understand the foundation that enables the manifestation of this process of self-constitution. In philosophy this has the form of the question about the ultimate foundation of all things⁷⁸⁹. Kant reflects about the domain of principles as transcendental domain, which is not a domain of reality. For Kant the transcendental field was the *a priori* structure and conditions of the possibilities of our intelligibility. This transcendental domain, which enables the apprehension of things, is not itself given as a phenomenon⁷⁹⁰. Husserl opens another way of reflection and understanding of the transcendental domain with his phenomenological analysis as self-understanding of the fundamental experience that precedes the opposition subject-object. For Husserl the transcendental field was nothing else than the “egological” *a priori* function of pure consciousness. These two transcendental philosophies are theories that propose a transcendental ego, which is not given as a fact uncovered through a phenomenological analysis, to explain the experience.

⁷⁸⁴ J.-F., LYOTARD, *La Phénoménologie*, p. 41.

⁷⁸⁵ E. HUSSERL, *Crisis of the European Science*, p. 130 and 140.

⁷⁸⁶ J. LADRIÈRE, *L’articulation du sens III*, p. 271-272.

⁷⁸⁷ J. LADRIÈRE, *L’articulation du sens III*, p. 291.

⁷⁸⁸ Ladrière distinguishes “reality as perceived” from “reality as a whole” (*réalité tout entière*). The first is studied by sciences and the second by philosophy. See J. LADRIÈRE, *Concept scientifique et idées philosophiques*, p. 125-126, 141 and 144-145. J. LADRIÈRE, *L’articulation du sens III*, p. 275.

⁷⁸⁹ J. LADRIÈRE, *L’articulation du sens III*, p. 291-292.

⁷⁹⁰ J. LADRIÈRE, *L’articulation du sens III*, p. 293.

This type of philosophy has taken different forms or figures in the history of philosophy. There is philosophy (i) as epistemology, i.e., as an authentic knowledge based on principles, (ii) as a hermeneutics of nature (or metaphysics), (iii) as a hermeneutics of the human existence and (iv) as an ethics⁷⁹¹. All of them are united by their commitment to comprehend (i) knowledge, (ii) reality's self-constitution, (iii) the meaning of the human existence and (iv) the meaning of human action. Let's consider these figures of theoretical philosophy.

(i) Philosophy as a critical knowledge: the transcendental field of principles and conditions of the human being's experience of the world's manifestation.

This theoretical philosophy is close to descriptive philosophy. However, this epistemology seeks to understand the transcendental field of principles and conditions that grounds all rational knowledge as authentic knowledge⁷⁹². It includes the knowledge of the world, all variety of phenomena and the human existence⁷⁹³. It is an understanding of an authentic knowledge that is developed according to principles⁷⁹⁴. These principles are conditions of the possibility of all rational knowledge but are not phenomena in themselves.

This theoretical philosophy is an effort to uncover and grasp the realm of the "formal" transcendental field by going beyond the limits of the visible content of the human experience. It seeks to understand and not merely describe the process of experience⁷⁹⁵. This transcendental field is the original place from which the manifestation and the self-constitution of the world unfold⁷⁹⁶. It is the foundational place not given in the experience that grounds all phenomena⁷⁹⁷.

We believe that what Ladrière has in mind here is an epistemology such as Kant's or Husserl's that explains the *a priori* structure of an authentic critical knowledge through a philosophy of the transcendental subject or the pure ego⁷⁹⁸.

⁷⁹¹ This is our understanding of Ladrière's characterization of philosophy as a "*savoir authentique*" (epistemology), "*vision du monde*" (philosophy of nature or metaphysics), "*saggese*" (hermeneutics of human existence) and "*éthique*" (ethics). J. LADRIÈRE, *L'articulation du sens III*, p. 272.

⁷⁹² J. LADRIÈRE, *L'articulation du sens III*, p. 271.

⁷⁹³ J. LADRIÈRE, *L'articulation du sens III*, p. 266.

⁷⁹⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 267.

⁷⁹⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 269.

⁷⁹⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 266.

⁷⁹⁷ Ladrière uses many other names: region of principles (III, p. 266); place of origin (III, p. 266); transcendental point of view (III, p. 267 and 268) and transcendental field (III, p. 269).

⁷⁹⁸ Ladrière seems to imply that a descriptive phenomenology that uncovers and describes the "fundamental experience" is a more radical point of departure. "*La dimension transcendantale a été comprise initialement comme structure a priori de la raison, entendue comme subjectivité, et a été décrite comme vie transcendantale, attribuée à une fonction égologique, pôle subjectif des relations intentionnelles dans lesquelles est engagée la conscience-de-soi. Ce point de vue a été radicalisé. Il est apparu que ce qui était visé est ainsi est plutôt un champ neutre, qui précède, de point de vue de la constitution, la distinction entre sujet et objet et l'émergence de la fonction égologique elle-même. Ce dont il faut rendre compte c'est ce par quoi il y a, pour l'être humain, un monde, des significations, une conscience, des relations intersubjectives, une culture, des possibilités d'action, des déterminations normatives, et en définitive une existence, capable de s'affecter d'un sens et par là ouverture à une destinée. Bref, c'est ce qu'on*

The method consists of the system of reference which is the field of experiences. It consists also of the elaboration of theories that explain the authentic knowledge. The experience as testing consist of verifying the theories with respect to their capacities of explaining the multiplicity of rationalities, including natural sciences⁷⁹⁹.

(ii) *Philosophy as a hermeneutics of nature: the transcendental field of the foundation and conditions of reality's process of self-constitution.*

The objective of this speculative philosophy is not to develop a cosmic vision in the sense of a scientific theory⁸⁰⁰, but to understand the ultimate foundation of reality's self-constitution. It is the effort to go beyond the phenomenal realm to arrive at the primordial foundation from where everything emerges⁸⁰¹. The method of this philosophy is grounded in the transgressive capacity of the speculative language that goes beyond the manifestation (appearance) to the transcendental place of origin⁸⁰². This speculative or metaphysical language goes beyond the phenomenal realm by means of the semantic transgression.

How does Ladrière apply the semantic transgression to interpret nature? Nature is the domain of visible things⁸⁰³. We can contemplate nature from the viewpoint (horizon) that we can call *phusis*⁸⁰⁴. This horizon is composed of visible things (nature), well-established credible facts discovered by science⁸⁰⁵ and the image of the world produced by scientific research. The semantic transgression is the movement from the horizon of *phusis* to another horizon that we can call *theôria*⁸⁰⁶. According to Ladrière, there are several foundations that make possible this semantic transformation from *phusis* to *theôria*. One of them is linguistic in nature. In order to explain the meaning of scientific models or concepts scientists use commentaries, even analogies

pourrait appeler, au sens le plus général du terme, l'expérience, avec ce qu'elle comporte de réceptivité et de capacité d'initiative, de passivité et de productivité. " The underlined emphasis is ours. J. LADRIÈRE, *L'articulation du sens III*, p. 267 and 269.

⁷⁹⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 267-268.

⁸⁰⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 267.

⁸⁰¹ J. LADRIÈRE, *L'articulation du sens III*, p. 266.

⁸⁰² J. LADRIÈRE, *L'articulation du sens III*, p. 267.

⁸⁰³ J. LADRIÈRE, *L'articulation du sens II*, p. 289.

⁸⁰⁴ We applied the term "horizon" to *phusis*. Ladrière refers to the *phusis* sometimes in the second volume of the "*L'articulation du sens*". He refers to the *phusis* explicitly in the third volume (III, 243). This horizon of meaning is the horizon of the cosmic visible manifestation. It is the system of reference of the scientific rationality as it is explained in the second volume (II, 273-277). See also J. LADRIÈRE, *L'articulation du sens II*, p. 273-277. J. LADRIÈRE, *L'articulation du sens III*, p. 243.

⁸⁰⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 290.

⁸⁰⁶ The horizon of *theôria* is about the structure of existence (III, 242) and the experience of wonder that the human person has when he contemplates the cosmos. It is the domain of the speculative philosophical rationality (III, p. 95-97). Although it is not explicit in Ladrière's reflection we distinguish between *phusis* and *theôria*. Once in the third volume of "*L'articulation du sens*" Ladrière refers to *theôria* as the viewpoint from which speculative categories are developed in order to understand the cosmic manifestation and self-constitution (III, 96-98). Referring in that text to some philosophers, e.g., Plato, we interpret that he refers to philosophical speculative categories and not to scientific representations. J. LADRIÈRE, *L'articulation du sens III*, p. 95-98 and 242.

and metaphors, with the help of ordinary language⁸⁰⁷. These commentaries, analogies and metaphors help to develop an image of the world. This image, or rather images, of the world convey multiple and complex meanings of the cosmos that belongs to the horizon of *theôria*. There are even works, whose objective is to popularize science, that go beyond scientific language and rigor by explaining abstract representations. These works enter into the horizon of *theôria*.

Another foundation of this semantic transgression is the fact that the scientist will always be a person who seeks meaning, even when he denies the existence of such meaning or the possibility of grasping it. When a scientist contemplates the cosmic milieu from whence he comes, he experiences a sense of wonder. Based on this sense of wonder, some scientists make comments about a scientific representation. At this moment they already begin to interpret them. A philosophical rigorous reflection called the “hermeneutics of nature” or philosophy of nature is the effort to constitute meaning from experimental data, scientific representations (mathematical models, scientific concepts and historical narratives) and conclusions⁸⁰⁸. We constitute a metaphysical meaning by interpreting scientific facts from a philosophical (metaphysical) framework⁸⁰⁹. Hermeneutics of nature is a speculative discourse about the meaning of the self-organization of the cosmos and its relation to the meaning of human life⁸¹⁰. The main difference between natural sciences and the hermeneutics of nature is the fact that sciences are developed following the empirical experience (what is perceived) while philosophy seeks to explain the real as a whole (*réalité tout entière*)⁸¹¹. Philosophy of nature assumes scientific facts but to explain the reality as a whole.

Through the process of semantic transgression and speculative concepts the philosopher develops sketches as speculative or metaphysical discourses expressed by means of philosophical systems. Here experience as testing is the constant revision of metaphysical discourses. We must constantly test our sketches to see if they are grounded in well-established scientific facts and accepted scientific worldviews. In terms of the verification process, the criteria of truth are the following. Does the philosophical discourse correspond, at least partially, with scientific facts? As happens in sciences, the elaboration of sketches is a partial adequation because concepts, categories, and discourses only partially grasp reality. In terms of the criterion of coherence, does

⁸⁰⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 297.

⁸⁰⁸ D. LAMBERT, *Une articulation des sciences et de la théologie est-elle légitime*, p. 521.

⁸⁰⁹ D. LAMBERT, *Une articulation des sciences et de la théologie est-elle légitime*, p. 525.

⁸¹⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 295, 300-301 and 305.

⁸¹¹ J. LADRIÈRE, *Concept scientifique et idées philosophiques*, p. 151. See also J. LADRIÈRE, *L'articulation du sens III*, p. 275.

the philosophical discourse possess an internal coherence? Is it coherent with the current scientific worldviews, facts and conclusions? In terms of the pragmatic criterion, is it useful to interpret the meaning of cosmic and human existence?

(iii) *Philosophy as hermeneutics of the meaning of the human existence.*

The existential dimension of the human being is that dimension where the human reality is a question for the human being with respect to its meaning and future⁸¹². Speculative philosophy as hermeneutics of the human existence is an interpretation of the human life. The objects are the structures that constitute the human existence⁸¹³ and the conditions that render possible the existence's self-constitution toward its achievement⁸¹⁴. This is the idea of philosophy as a way of life according to reason⁸¹⁵, as a self-understanding of life in a conceptual system⁸¹⁶. It starts by opening the radical questions about the meaning of human existence and its ultimate foundation⁸¹⁷. The search for meaning in this horizon is prompted by a series of questions⁸¹⁸: Who am I? Where do I come from? Where am I going? Is there any sense in life, in the cosmos and in our society? Philosophy tries to find the foundation to an authentic life project that brings sense to human existence.

Although the point of departure is the *Lebenswelt*, the method is an abstraction of the concrete contents of the human experience, decisions and relations in order to arrive at the realm of the transcendental⁸¹⁹. It is not about fundamental anthropological structures like temporality, the corporeal dimension, etc. The transcendental domain in this hermeneutics of the existence is about the formal *a priori* aspects that ground the self-constitution of the human being: the capacity of the human person to decide his own Being⁸²⁰. This decision is about the "how" of its achievement. We are capable to orient our lives because our existence is open to be meaningful in correlation to reality as a whole; open to possible achievements by means of decisions; capable of taking initiatives in order to be unfolded; responsible with respect to our decisions; and capable of developing a human project implemented by means of actions.

⁸¹² J. LADRIÈRE, *L'articulation du sens III*, p. 303.

⁸¹³ J. LADRIÈRE, *L'articulation du sens III*, p. 273

⁸¹⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 278-279.

⁸¹⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 24.

⁸¹⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 57. J. LADRIÈRE, *Vie sociale et destinée*, p. 21.

⁸¹⁷ In that sense, everybody who searches for meaning has at least an implicit philosophy.

⁸¹⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 115 and 120.

⁸¹⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 273

⁸²⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 274.

Human life can be authentic or inauthentic (as there is authentic or inauthentic knowledge). An authentic existence understands the importance of making a decision that assumes and orients our existence in a responsible manner. The decision that orients the human life project should be according to the ultimate foundation and meaning of the whole reality⁸²¹ as interpreted by the hermeneutics of nature. For the hermeneutics of human existence our human project should be coherent with the whole of reality⁸²².

In this speculative philosophy, experience as testing consists in examining our sketch of the *a priori* structures of the human existence and its self-constitution. Following Zubiri's categories of experience, the experience here is *conformation* where I experience myself as an insertion, in my own reality, of the existential sketch. Does our sketch really interpret what I experience in my own reality? There is the criterion of truth in terms of the partial adequation with our own human existence, actions and human projects. Another criterion is coherence with the whole of reality, its foundation and meaning as elaborated by the hermeneutics of nature. Finally, the pragmatic criterion points to the utility of our sketch to elaborate a personal project that in freedom orients our existence.

(iv) *Practical speculative philosophy: ethics.*

If human life must chose its own orientation by means of actions and projects, what are the principles that should guide these actions and projects? The ethical dimension is the philosophical rationality that reflects upon these principles⁸²³. The project of philosophy as ethics is the establishment of the human being's responsibility with respect to his achievement⁸²⁴.

Ethics is inscribed in the structure of human existence⁸²⁵. Ethics is related to the intention of accomplishing life⁸²⁶ as the result of a personal reasonable decision and an engagement⁸²⁷. The objects of ethical analysis and discourse are the conditions and ultimate orientation of reasonable actions grounded in the interpretation of human existence⁸²⁸ and the calling to its fulfillment.

⁸²¹ J. LADRIÈRE, *L'articulation du sens III*, p. 275.

⁸²² JOHN PAUL II, *Fides et Ratio*, No. 1. "within the horizon of personal self-consciousness: the more human beings know reality and the world, the more they know themselves in their uniqueness, with the question of the meaning of things and of their very existence".

⁸²³ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 29.

⁸²⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 200-202.

⁸²⁵ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 13-14 and 24.

⁸²⁶ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 23.

⁸²⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 178.

⁸²⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 32.

Ethics is related to judgments, rules and norms and also is related to the path that the human person should follow in order to fulfill himself⁸²⁹.

The objective of ethics is the construction of a world authentically human and reasonable⁸³⁰. Ethics seeks to achieve human existence in concrete situations with norms that have a universal pretention. In terms of experience as testing, it is not the test of the quality of “truth” of a sketch. What is aimed here is the quality of “goodness” of an action in concrete situations⁸³¹. Consequently, the criteria of ethics are not the same as the criteria of an authentic knowledge: correspondence, coherence and pragmatism. What is relevant here is not the validity of a proposition, but the legitimacy of a norm in its claim and possibility of universality.

II.5 Rationality revisited by means of common elements shared by all forms of rationalities

II.5.1 Formal definition of rationality

For Ladrière there is no *a priori* definition of rationality. The idea of rationality is born from different practices or forms of rationalities in history. After analyzing these forms of rationalities (formal, natural sciences, hermeneutical disciplines, philosophical-analytical and philosophical-speculative), Ladrière arrives at the following formal definition of rationality.

Rationality is ***a form of knowledge and a mode of acting that seeks the critical control of its operations and seeks to go beyond all types of particularities***⁸³².

This definition refers to knowledge, actions, control of operations and the effort to apprehend, comprehend and formulate the universal. Reason is at the same time comprehension of itself and the research to understand and interpret reality as a whole⁸³³. This rational effort in all its dimensions, aspects and forms is achieved in a historical process where theoretical and practical reason constitute themselves.

II.5.2 Historical and dynamic rationality

The instauration of reason is a historical process where reason constitutes itself⁸³⁴. Reason revises previous steps of thematization and gives them a more global meaning. This is a process of becoming more and more thematized and meaningful. At each historical moment, reason

⁸²⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 53.

⁸³⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 179.

⁸³¹ J. LADRIÈRE, *Rationalité*, p. 933. J. LADRIÈRE, *L'articulation du sens II*, p. 235.

⁸³² “[La rationalité] c’est la forme d’un savoir et corrélativement d’un mode d’action qui vise à la fois le contrôle critique de leurs opérations et le dépassement de toute particularité.” J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 101.

⁸³³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 101-102.

⁸³⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 60 and 173.

assumes what was anticipated in the past and opens the possibilities to posterior avenues of reflection⁸³⁵. This is not a linear or smooth process. Reason operates as trial and error in progressive and partial forms⁸³⁶.

The historicity of reason is grounded in the exigency of totalization that characterizes it. There is always an exigency of going beyond the current limits⁸³⁷. Each step and moment prepares the whole process⁸³⁸ in its openness to the future.

II.5.3 The limits of reason and the problem of evil

Reason in all its dimensions is limited. For Ladrière, to accept the limitations of reason is to go beyond the concept of hyperrationalism as synonym of calculations, operations and effectiveness⁸³⁹. A limit is a fact that imposes certain conditions on an action; it determines what is feasible and what is not in given circumstances⁸⁴⁰. However, there is a type of limitation that is of the order of opposition. Reason is limited by different forms of irrationality, e.g., violence and evil. Any reflection on reason must take into consideration the problem of concrete irrational elements in history⁸⁴¹. Our collective life is a place of repeated tragedies that human action has generated, which are opposed to the project of rationality. They could arrive unexpectedly and even could be the indirect products of our actions, such as the ecological crisis⁸⁴². According to Ladrière the 20th century makes us conscious that even some rational institutions can become irrational, e.g., science and technology can serve to destruction, the state can become totalitarian, our global economic system can make inhabitable the planet⁸⁴³.

Moreover, there are also human actions that are directly and deliberately outside the domain of rationality. These are actions against the human dignity and integrity that are originated by human passions, selfish interests and the delirium for power, which sometimes were more decisive than the project of reason⁸⁴⁴. According to Ladrière, we are obligated to accept that there is a principle of evil that operates in history that cannot be explained by reason.

II.5.4 Reason's destiny: the eschatological movement of rationality

⁸³⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 62.

⁸³⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 66-67.

⁸³⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 69.

⁸³⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 71.

⁸³⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 183.

⁸⁴⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 24.

⁸⁴¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 14.

⁸⁴² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 24.

⁸⁴³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 173.

⁸⁴⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 68.

Reason develops its own destiny by seeking the universal⁸⁴⁵. Reason is not a human capacity or power given once for all in history. It is a vocation that seeks the universal truth, meaning and morality⁸⁴⁶. Theoretical reason is a quest for the unconditioned truth that conditions the rest⁸⁴⁷. However, reason cannot achieve this unconditional truth of the whole in a concrete moment of history, because rationality is finite. There is an infinite abyss between the objective of theoretical reason and its finitude⁸⁴⁸. The project of achieving through reason the definitive absolute foundation of all reality in a concrete historical moment of history is an illusion. The failure of the project to ground the axiomatic systems in formal systems has shown it. Something similar happens in practical reason. Freedom and justice are progressive historical processes. Concrete historical political projects that tried to implement an ultimate project of total justice and total freedom have arrived at totalitarianism⁸⁴⁹.

Truth, meaning, a good life, freedom and justice are something searched and hoped for. They are figures that inspire our present. Hope is neither a fact nor an illusion. For Ladrière, hope in a philosophical sense⁸⁵⁰ is that resolution that welcomes the present as a witness of that which is expected and anticipated even through shadows⁸⁵¹. That does not mean that truth, meaning, freedom, justice and the good life are an illusion. It means that the idea of an ultimate project is not a historical figure to achieve, but an infinite task that is never finished.

The exigency of going beyond the current limits is born of the quest of the total and the unconditional. It is a totality and an unconditional that can only be fully achieved at the end but which is already acting as a calling located in an undetermined horizon. This undetermined horizon is the future that already acts but is still to come⁸⁵². This is the sense of the word “eschaton”. The term eschaton here is an analogue of the theological term⁸⁵³. This eschaton is not about an intervention of eternity in history. It is an ultimate event, discontinuous with the present time but present in each partial moment of instauration, which gives meaning to the whole process⁸⁵⁴. The eschaton of theoretical reason is the figure of a fulfilled truth and not the quality of a particular theory in terms of its adequation with reality⁸⁵⁵. The eschaton of practical reason is

⁸⁴⁵ J. LADRIÈRE, *Vie sociale et destinée*, p. 8

⁸⁴⁶ J. LADRIÈRE, *Vie sociale et destinée*, p. 33.

⁸⁴⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 64.

⁸⁴⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 66.

⁸⁴⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 67.

⁸⁵⁰ This is a good example of a “semantic transgression”. The concept “hope” is taken from a theological horizon and it is transformed to be used in a philosophical horizon.

⁸⁵¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 33.

⁸⁵² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 31.

⁸⁵³ This is another example of a semantic transgression, a concept born in a theological horizon used in philosophy.

⁸⁵⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 72.

⁸⁵⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 72.

the figure of a perfect society where each citizen considers the others as an end and never as a mean⁸⁵⁶. It is the place of an achieved authentic freedom and justice and not a concrete institution or state⁸⁵⁷.

This eschaton of reason must be a recapitulation of all provisional and concrete figures of the universal. Consequently, it must be a concrete universal that does not belong to the realm of history. It is neither phenomenal nor noumenal but transcendental. It is in the realm of the conditions of the possibilities of the life according to reason⁸⁵⁸. As a condition of the possibility, it is not located in a particular historical fact or situation but it operates in all moments of history. The eschaton of reason calls us to go beyond the present moment with its limits and the problem of evil⁸⁵⁹. It impels us to search the truth-meaning and the freedom-justice. This eschaton of reason is what holds and sustains the efforts and constructions of science, the creation of technology, the process of political liberation and the development of the economy⁸⁶⁰.

III. The notions of intelligence and philosophy in Xavier Zubiri

In this section we present Zubiri's notions of the act of intellection, reality and philosophy. The objective is not to systematize the philosophy of Zubiri as a whole, which is out of the scope of our present work.

III.1 Introduction: the structure of the human experience

In the previous section we discussed Ladrière's notion of speculative philosophy. This philosophy seeks to uncover what precedes the distinction subject-object⁸⁶¹. This is the structure that renders possible the human experience with its receptivity, passivity (in the sense of being affected) and productivity⁸⁶². In this section we will present Zubiri's analysis of the act of intelligence. Similar to Ladrière he was influenced by Husserl's phenomenology.

III.1.1. Zubiri's critique to Husserl's philosophy

⁸⁵⁶ J.-F. MALHERBE, *Jean Ladrière. Des limitations internes aux espérances de la raison*, p. 417.

⁸⁵⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 72.

⁸⁵⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 73.

⁸⁵⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 74.

⁸⁶⁰ To deepen this topic see PERRON Louis, *L'eschatologie de la raison selon Jean Ladrière. Pour une interprétation du devenir de la raison*, Sainte-Foy, 2005.

⁸⁶¹ J. LADRIÈRE, *L'articulation de sens III*, p. 269.

⁸⁶² J. LADRIÈRE, *L'articulation de sens III*, p. 269.

According to Husserl, the fundamental question is: what is the ground (“*Boden*”) of our understanding? Husserl’s objective was to uncover the original experience⁸⁶³ that grounds all possible knowledge. The fundamental thesis of Husserl is that the *Lebenswelt* is the ground of all possible knowledge, including scientific knowledge⁸⁶⁴. The life-world is the sensed world of the pre-given, which is original⁸⁶⁵. According to Husserl, the ego is attentive to what affects him and projects on it a group of *a priori* expectations to enrich the initial affection. The *a priori* structure of human experience is the domain of the pure ego, also called the pure consciousness⁸⁶⁶.

For Zubiri, phenomenology is the effort to appropriate the most basic evidences⁸⁶⁷. It is a philosophy that seeks to apprehend the content of things⁸⁶⁸. Husserl’s original objective was to develop a philosophy grounded in evident facts. However, he developed a metaphysical theory of consciousness as a super faculty of our intelligence. For Zubiri this is not an evident fact that resulted from a phenomenological analysis and description, but only a metaphysical theory that does not conform to facts⁸⁶⁹. Consequently, Zubiri considers that Husserl did not follow the phenomenological reduction that removes from the phenomenon what is a pseudo-phenomenon⁸⁷⁰. Against Husserl, Zubiri does not find that the ground of our understanding is the pure consciousness or ego, but the sentient intellect in which things are present and are not the result of the consciousness’ intention. For that reason Zubiri criticizes the subjectivist turn of modernity (the so called philosophies of consciousness) that seek to ground in the human consciousness our access to reality⁸⁷¹.

III.1.2 Zubiri’s philosophy: “*noologia*” and first philosophy

Zubiri, who was initially influenced by Husserl, abandons the idea of pure consciousness for the idea of sentient intelligence. As we will see, for Zubiri the ground of intelligence is not consciousness, but the mere actualization of the real in the sentient intelligence. Zubiri in his last work, the three volumes called “*Inteligencia Sentiente*” (Sentient Intelligence) published between 1980 and 1983⁸⁷², studies the formal structure of the act of apprehension of the human

⁸⁶³ V.-M. TIRADO-SAN JUAN, *Intencionalidad, actualidad y esencia: Husserl y Zubiri*, p. 131.

⁸⁶⁴ V.-M. TIRADO-SAN JUAN, *Intencionalidad, actualidad y esencia: Husserl y Zubiri*, p. 138.

⁸⁶⁵ V.-M. TIRADO-SAN JUAN, *Intencionalidad, actualidad y esencia: Husserl y Zubiri*, p. 139.

⁸⁶⁶ V.-M. TIRADO-SAN JUAN, *Intencionalidad, actualidad y esencia: Husserl y Zubiri*, p. 142.

⁸⁶⁷ A. PINTOR-RAMOS, *Génesis y formación de la filosofía de Zubiri*, p. 88.

⁸⁶⁸ V.-M. TIRADO SAN JUAN, *Zubiri y Husserl*, p. 151.

⁸⁶⁹ X. ZUBIRI, *Inteligencia y Realidad*, p. 21.

⁸⁷⁰ V.-M. TIRADO SAN JUAN, *Zubiri y Husserl*, p. 151.

⁸⁷¹ V.-M. TIRADO SAN JUAN, *Zubiri y Husserl*, p. 158. J. Conill, *El sentido de la noología*, p. 279. J.-A. NICOLÁS, *La teoría zubiriana de la verdad*, p. 295 and 301.

⁸⁷² ZUBIRI Xavier, *Inteligencia Sentiente. Inteligencia y Realidad*, Madrid, Alianza Editorial, 1980. ZUBIRI Xavier, *Inteligencia y*

intelligence⁸⁷³. He does not seek metaphysical explanations of the human intelligence. Zubiri's method is a phenomenological analysis and description of the facts of our intelligent apprehension⁸⁷⁴. Zubiri uses the word “*noologia*” to describe its project⁸⁷⁵. This word means etymologically the study of intelligence⁸⁷⁶. It is a study that does not want to be explicative in the sense of developing a metaphysical theory of the intelligence but descriptive of the facts⁸⁷⁷. In terms of Ladrière's categories of philosophical rationality, Zubiri's “*noologia*” is a pure descriptive phenomenology whose objective render explicit the act of human intelligence. Evidently this descriptive phenomenology is far away from Husserl's philosophy of consciousness⁸⁷⁸, although it follows the *epoché*. This *epoché* is neither an explanation nor an interpretation of the intelligent act. It is a description that is prior to any interpretation⁸⁷⁹.

Another concept that can help us understand Zubiri's project in Sentient Intelligent is “first philosophy”. First philosophy is the analysis of “reality” as apprehended by the act of the intellection⁸⁸⁰. Meanwhile, Zubiri reserves the term “metaphysics” to the study of “reality” as it is beyond our apprehension⁸⁸¹. For Zubiri the object of his analysis is the formal structure of the act of apprehension (*noology*) and the study of reality as apprehended (first philosophy). Does this imply that there are two objects in Zubiri's project? As we will see, there is only one object that consists in the union of the formal structure of the act of apprehension of reality and reality as apprehended. The relationship between the first philosophy and metaphysics will be discussed below. Before we need to clarify the inherent relationship between Zubiri's *noology* and *first philosophy*.

Logos, Madrid, Alianza Editorial, 1982. ZUBIRI Xavier, *Inteligencia y Razón*, Madrid, Alianza Editorial, 1983. We follow these three volumes in Spanish. Most of the times we use Thomas B. Fowler's English translation *Sentient Intelligence* that preserves the original page numbers of the original Spanish versions. We will indicate when we use our own translations.

⁸⁷³ X. ZUBIRI, *Inteligencia y Realidad*, p. 11.

⁸⁷⁴ X. ZUBIRI, *Inteligencia y Realidad*, p. 20.

⁸⁷⁵ “Hence every epistemology presupposes an investigation of what, structurally and formally, the intelligence, the *Nous*, is; i.e., it presupposes a study of ‘noology’. The vague idea of ‘knowing’ is not made concrete first in the sense of knowledge, but in intellection as such. This does not refer to a logic or psychology of intelligence, but to the formal structure of understanding.” X. ZUBIRI, *Inteligencia y Realidad*, p. 11.

⁸⁷⁶ Ortega y Gasset used this term to describe the first and most fundamental science that study “thought” in its most pure and primary form. J. Conill, *El sentido de la noología*, p. 280.

⁸⁷⁷ Zubiri considers that Aristotelian realism, Kantian idealism and even the so called critical realism are metaphysical theories that seek to explain human intelligence and understanding. Zubiri point of departure are not the theories but the fundamental facts of the intelligence act. In his own words: “I am not going to enter into any type of dialectical discussion of concepts, but rather limit myself to the basic facts. They are what will lead us in our treatment of the question.” X. ZUBIRI, *Inteligencia y Realidad*, p. 25. D. GRACIA, *Voluntad de Verdad*, p. 111.

⁸⁷⁸ V.-M. TIRADO-SAN JUAN, *Fenomenología del logos. Zubiri y Heidegger*, p. 252.

⁸⁷⁹ V.-M. TIRADO-SAN JUAN, *Fenomenología del logos. Zubiri y Heidegger*, p. 256.

⁸⁸⁰ D. GRACIA, *Voluntad de Verdad*, p. 112.

⁸⁸¹ “We need not directly treat of the real *qua* real; that is a metaphysical problem. We are asking about [in ‘noology’] the real in and by itself, but only insofar as it is apprehended in primordial apprehension of reality.” X. ZUBIRI, *Inteligencia y Logos*, p. 348.

III.1.3 Methodological differences in the analysis performed by Zubiri and Ladrière

Jean Ladrière's objective is to understand what rationality is in its plurality of forms, as they exist in history. He seeks a general, in the sense of universal, concept of rationality. For that reason he applies an inductive method: a survey of various type of rationalities: formal, empirical-formal, hermeneutical, theological, ethical, etc. Zubiri recognizes that this is a legitimate way: "*One path consists of making a survey of the various types of intellection, trying to obtain by comparison what these types of intellection are in and through themselves.*"⁸⁸² Nevertheless, Zubiri does not follow this path of induction because he thinks it is not relevant to his objective. According to Zubiri this inductive procedure would give only a "*general concept of intellection.*"⁸⁸³

Moreover, Zubiri's quest is to uncover the formal structure of the act of human intellection. For that reason he applies the phenomenological analysis, the *epoché*, to the human intellectual act. He "suspends" all concrete contents in order to uncover and describe the *a priori* structure that grounds all intellectual acts. In the following section we expose his analysis, description and discovery.

III.2 The primordial apprehension of reality as the fundamental experience of reality

There is an idea that run through the first volume of Sentient Intelligence: intellection is an act of apprehension⁸⁸⁴.

*"Apprehension is not a theory but a fact: the fact that I am now aware of something which is present to me. Apprehension is, insofar as it refers to the moment of the 'being here-and-now present', an act of grasping the present, a grasping in which I am aware of what is grasped. It is an act in which what is present to me has been apprehended precisely and formally because it is present to me. Apprehension is the conscious and 'presenting' act. And this 'and' is precisely the unitary and physical essence itself of apprehension."*⁸⁸⁵

Apprehension is the act of being aware that "something" is "being here-and-now physically present"⁸⁸⁶. However for Zubiri there are two modes of apprehension: sensible apprehension and intellectual apprehension.

⁸⁸² X. ZUBIRI, *Inteligencia y Realidad*, p. 23.

⁸⁸³ X. ZUBIRI, *Inteligencia y Realidad*, p. 23.

⁸⁸⁴ X. ZUBIRI, *Inteligencia y Realidad*, p. 25.

⁸⁸⁵ X. ZUBIRI, *Inteligencia y Realidad*, p. 23.

⁸⁸⁶ When Zubiri uses the term "physical presence" he refers to a real presence that is not merely conceptual or an effect of an intention of our consciousness. Following contemporary studies in neurosciences, which is a scientific explanation and not the

III.2.1 Sensible apprehension in the animal: the apprehension of a stimulus

Zubiri describes the sensible apprehension in the animal in order to show the distinct features of the intellectual apprehension in the human being⁸⁸⁷. Sensible apprehension is an impressive apprehension that constitutes the act of sensing. This impression consists of three constitutive moments: affection, otherness and force of imposition⁸⁸⁸. Impression is an affection produced by what is sensed. What is sensed (colors, sounds, tastes, internal temperature, etc.) affects the sentient being. This affection renders present to us that which “impresses”. This is the moment of *otherness*. This “other” is what Zubiri calls the “note”, that which is noticed, as supposed to that which is unnoticed. A note is that which is simply noted. The *force of imposition* is that by which the note imposes itself upon the sentient being. The unity of these three moments is what constitutes the impression.

Zubiri continues the descriptive analysis getting deeper in the moment of otherness. In the moment of otherness, the content, which is a note, is present as other. It is the aspect of independence that the content has with respect to the sentient being. Independence here does not signify apart or beyond my impression. It “*is the content itself presents in the apprehension as something “autonomous” with respect to the sentient being. A color, a sound, has an autonomy proper to the visual and auditory affections, respectively.*”⁸⁸⁹

In additions to a proper content, the note present in impression has a proper form of autonomy. This mode of otherness with its proper form of autonomy is what Zubiri calls **formality**, which does not refer to any ancient or Middle Ages’ metaphysical concept. Formalization is the mode that a note (a content) “remains” in the apprehensor⁸⁹⁰. To remain is to be present as autonomous. Zubiri formulates it as follows:

*“Formalization is, I repeat, at once autonomization of content and autonomization of what is perceived with respect to the animal which is apprehending”.*⁸⁹¹

mere description of facts following the *epoché*, we will say that this presence is physical in the sense that it triggers physical-chemical processes at the levels of neurons in our body. X. ZUBIRI, *Inteligencia y Realidad*, p. 22.

⁸⁸⁷ Many followers, such as Diego Gracia, clearly argument that this is beyond the mode of description, given the fact that we do not have the experience of the animal’s sensible apprehension. It is only used with pedagogical purposes to contrast with the human sentient intelligence. D. GRACIA, *Voluntad de Verdad*, p. 129-130.

⁸⁸⁸ See that Ladrière arrives in his analysis to the moment of affection. The other two are absent. See LADRIÈRE, J., *L’articulation de sens III*, p. 269, 271 and 295. X. ZUBIRI, *Inteligencia y Realidad*, p. 32-33.

⁸⁸⁹ X. ZUBIRI, *Inteligencia y Realidad*, p. 35.

⁸⁹⁰ The translator translates the Spanish word used by Zubiri, “quedar” to “being situated”. We prefer to use “to remain”, which we think is more appropriate to the context.

⁸⁹¹ X. ZUBIRI, *Inteligencia y Realidad*, p. 45.

There are two mode of sensible apprehension and they correspond to two modes of formalization. In the animal there is a mode of formalization: the mode of apprehension as pure stimulation⁸⁹². This formalization of otherness consists in the fact that when an animal “notes” something as “other” this apprehended “other” arouses a response. In other words, this mode of formalization consists in a simple stimulus that arouses a response⁸⁹³. This could be illustrated by the following example. If a deer in a forest is affected by an stimulus in the form of a sound of a predator that is near, this sound is not only an affection, it is “other” in the sense of being autonomous. The content of this sound “remains” in the apprehensor even when the deer does not hear any more the predator, which could be in silence waiting for the best moment to attack. This content, the sound of the predator, remains in the deer as a stimulus that will provoke a response that we can formulate in the following anthropomorphic form: “go far away as fast as you can”.

However, as we will see this formality of the moment of otherness is different in the human being. It will not be the apprehension of a stimulus, but the apprehension of reality.

III.2.2 Intellective apprehension in the human being: the apprehension of reality

An animal apprehends the heat as stimulous. Nevertheless, a human being apprehends the heat not as an “other” reduced to a pure stimulus that arouses a response. It is an autonomous other that remains as “*de suyo*”, which is synonym of “in its own right”⁸⁹⁴. In Zubiri’s words:

*“The characteristics of heat are apprehended impressively as being “its own” [suyos], i.e. of the heat itself and insofar as they are “its own” [suyos]. As opposed to the pure animal sensing which apprehends the notes stimulatively, and only stimulatively, these same characteristics are apprehended in human sensing, but as characteristics of the heat de suyo: the heat is apprehended really. [...] Reality is formally the de suyo of what is sensed: it is the formality of reality, or if one wishes, reality as formality.”*⁸⁹⁵

To understand this concept of “formality *de suyo*”, let’s consider the following example. Once we “experience” a toothache we cannot turn off at will this experience. It remains present

⁸⁹² X. ZUBIRI, *Inteligencia y Realidad*, p. 47.

⁸⁹³ X. ZUBIRI, *Inteligencia y Realidad*, p. 51.

⁸⁹⁴ The term “in its own right” is a translation of “*en propio*”. “En propio” could be translated as “in itself”, however this could evoke Kant concept of “the thing in itself” and this is not what Zubiri is saying here. That is why we agree with Fowler’s translation. “*De suyo*” is Zubiri’s famous technical term. Its literal meaning is “in its own right”. We present the translator’s note about the term “*de suyo*”: “The Spanish *de suyo* is an extremely important technical term in Zubiri’s writings. It traces to the Latin *ex se*, and denotes that the impression of reality “comes from” and “out of” the reality of the encountered other. It therefore connotes a certain independence and self-sufficiency. The English ‘from itself,’ a literal translation, does not capture the range of meaning Zubiri intends; therefore the original Spanish expression is left throughout the text.” Note on the author’s preface in the English version of *Sentient Intelligence*, p. 3.

⁸⁹⁵ X. ZUBIRI, *Inteligencia y Realidad*, p. 57.

and we experience it as autonomous: we did not initiate it or construct it. It changes its acuteness autonomously. We cannot stop it at will unless we act upon it by means of anesthesia, which confirms the character of *de suyo* (its autonomy). In the human being this apprehension does not call an immediate response, as is the case of an animal. We can consider a list of possible actions, including doing nothing about it or developing a strategy to stop it. This autonomy is manifested by the fact that even after the physical impression of reality disappears (e.g., the toothache can disappear after we take a pain killer) we can think about it, describe it and try to explain its causes and consequences.

It is important to realize that for Zubiri reality is not something beyond my apprehension, as something that exists by itself and independent of me. That is the position of naïve realism. Reality is not the reality of things in the world independent of my apprehension; it is the formality of things as apprehended with the autonomy of “*de suyo*”. In a long commentary Zubiri contrasts reality as apprehended in the formality “*de suyo*” (that he calls *reality* “in” *an impression*) and reality beyond the impression. Let’s consider Zubiri’s own words:

*“This reality, I affirm, is formality. Consequently, reality is not a special “zone” of things, so to speak. That is, we are not referring to a zone of real things which is “beyond” the zone of our impressions. Reality is not to be there “beyond” an impression, but rather, reality is just formality. In virtue of this it is necessary to distinguish not reality and our impressions, but rather what is real “in” an impression and what is real “beyond” the impression. Thus we are not contrasting realities with my impressions, but two ways of being real, or if one wishes, two zones which both possess the formality of reality. What is real “in” an impression may not be real other than in the impression, but this does not mean that it is not real there. Today we know that if all animals with sight were to disappear, real colors would also disappear; so not just some impressive affections, but realities as well, would disappear. What happens is that these realities are not real other than “in” the impression. But the real “beyond” the impression would continue unperturbed. [...] Beyond is nothing but a mode of reality. Reality, I repeat, is the formality of the *de suyo* whether “in” an impression or “beyond” it.”*⁸⁹⁶

The union of these three moments (affection, otherness and the force of imposition) is what Zubiri calls the ***primordial apprehension of reality***. As we will see in detail, the apprehension of reality has three modes: the primordial apprehension (or what we called in previous sections fundamental immediate experience), the *logos* and reason. The primordial apprehension of reality is the ultimate ground of all the other modes of apprehension in the human being⁸⁹⁷.

⁸⁹⁶ The underlined emphasis is ours. X. ZUBIRI, *Inteligencia y Realidad*, p. 152.

⁸⁹⁷ The other two modes of apprehension of reality that depend on the primordial apprehension of reality, are the *logos* and reason, as we will see.

In our own words *this primordial apprehension of reality is a “fundamental experience”⁸⁹⁸ that grounds all human intellectual acts*. Experience here does not mean experience in the sense of experiments or testing as trials and errors. Experience here means precisely that receptivity, apprehension, affection, and impression where we are aware, willing it or not, of “something”. It is fundamental because it grounds all our knowledge. When we affirm that the primordial apprehension of reality is a fundamental experience we want to state that it is the most radical experience that is the condition that renders possible that “things” manifest to us. Without this fundamental experience there will not be an order of manifestation as described by Ladrière⁸⁹⁹. We will see also in the following chapter, where we will discuss the order of revelation, that this is also a key issue to understand God’s revelation to the human being and the human reception of it.

III.2.3 Intellective sensing and sentient intellection: Zubiri’s criticism to the dualism sensing – intellection

The history of philosophy has presupposed that through the senses we are open to the exterior world. This sensibility produces some “data” that is subject to some operations of the faculty of the intelligence. These operations are: conceive, judge and reason⁹⁰⁰. For Zubiri this dissociation between the senses and the intellect is not a fact but something that has been presupposed. Ancient and modern philosophies have not analyzed the act of sensing, the intellectual act and their relationship.

Sensing and intellection are not two separated acts; they are two structural moments united in one act: the apprehension of reality. They are structural moments and not chronological moments where one follows in time the other. Consequently, Zubiri criticizes the dualism that exists in western philosophy that separates both moments of sensing and intellect as two acts or faculties, each complete and sufficient in its order⁹⁰¹. This dualism is a theoretical construction that does not correspond to the analysis of facts. When we analyze the apprehension of reality

⁸⁹⁸ Ferraz-Fayos calls it “radical experience”. We fully agree with Ortega-Cantabria that the term “experience” (*experiencia*) is a polysemic term in Zubiri. Sometimes it means the physical test of the sketch, other times means trials in the sense of trials and errors. It could mean the primordial apprehension. Finally, it could mean the unity of the act of comprehension. A. FERRAZ-FAYOS, *Zubiri: El realismo radical*, p. 201. J.-L. CABRIA-ORTEGA, *Relación teología-filosofía en el pensamiento de Xavier Zubiri*, p. 463.

⁸⁹⁹ This is found in chapter 2.

⁹⁰⁰ A. FERRAZ-FAYOS, *Zubiri: El realismo radical*, p. 25.

⁹⁰¹ “From Parmenides through Plato and Aristotle, philosophy was based on the dualism according to which a thing is something “sensed”, and which at the same time “is”. In the midst of all of the discussions about the dualism or non-dualism of things, the duality of the two acts has been left intact: the act of sensing and the act of intellective knowing. But, I believe that in man, sensing and intellective knowing are not two acts, each complete in its order; rather, they are two moments of a single act, of one unique impression, of the impression of reality.” X. ZUBIRI, *Inteligencia y Realidad*, p. 80-81.

from the perspective of the impression we find that it is an *intellective sensing*. When we analyze it from the perspective of reality we find that it is a *sentient intellection*. Both formulas are equivalent⁹⁰².

Zubiri's phenomenological analysis shows that the contraposition or dissociation between sensing and intellecting something is not grounded on facts⁹⁰³. There is no a receptive sensibility that provides the raw material to the faculty of understanding to be subject of intellectual operations, as Kant thought⁹⁰⁴. For Zubiri there is a unity sense-intellect in one fundamental experience⁹⁰⁵.

We believe that Zubiri's analysis of the unity sense-intellect in one's *fundamental experience* is not a matter of meager empty academic exercise. We consider that the dissociation of sensing and intellecting is a matter of grave concerns with many serious consequences that emerge from it. It has produced concepts, discourses and theories (e.g., metaphysical systems) dissociated from reality. It has produced "meaning" or interpretations of it without any ground. It has produced the dissociation between body and soul, matter and spirit and human and the cosmos. In some cases it has produced the blindness of ideologies and all its consequences. The unity of sense and intellect in the fundamental experience (primordial apprehension of reality) has consequences for the way we do science, philosophy and theology. We will see this below.

III.2.4 Actuality of reality as the formal essence of sentient intelligence: the criticism to the disassociation reality - intellection

III.2.4.1 Definition of actuality

We have discussed already the intrinsic structure of sentient intelligence, which is the

⁹⁰² X. ZUBIRI, *Inteligencia y Realidad*, p. 82-83.

⁹⁰³ "The senses do not give what is sensed "to" the intelligence, but rather are actually sensing intellectually. There is no object given "to" the intelligence, but rather an object given "in" the intelligence itself. Sensing is in itself a mode of intellective knowing, and intellective knowing is in itself a mode of sensing. Reality is apprehended, then, in the impression of reality. This is sentient intelligence. That which we call 'intellective knowing' and 'sensing', I repeat, are but two moments of the single act of sentiently apprehending the real." X. ZUBIRI, *Inteligencia y Realidad*, p. 84.

Sensibility "is not a type of residual "hyletic" of consciousness, as Husserl says, nor a *factum brutum* as Heidegger and Sartre call it, but rather is an intrinsic and formal moment of intellection itself." X. ZUBIRI, *Inteligencia y Realidad*, p. 85.

⁹⁰⁴ A. FERRAZ-FAYOS, *Zubiri: El realismo radical*, p. 31.

⁹⁰⁵ For Zubiri there is a diversity of senses. For him there are eleven: vision, hearing, smell, taste, equilibrium, contact-pressure, heat and cold, pain, kinesthesia (including muscular, tendon, and articular sense), and visceral sensibility. These eleven senses are different not only with respect to the content but also with respect to their formality. There senses are the different forms of apprehending reality. As a summary sight apprehends a real thing as something which is "in front of me"; hearing apprehends reality as a *notifying presentation*; smelling apprehends it as a scent; taste presents it as enjoyable; equilibrium apprehends reality as something *positioned* and *centered*; touch apprehends as the *naked presentation* of reality; heat and cold presents reality as *temperant*; pain apprehends reality as affectant; kinesthesia apprehends reality as something "towards" (this is not a "towards" reality, but reality itself as a "towards"); and the visceral sensibility or coenesthesia apprehends our own reality (thanks to this sensing, man is in himself). See X. ZUBIRI, *Inteligencia y Realidad*, p. 100.

primordial apprehension of reality. Now, we will discuss the sentient intelligence from the perspective of its formal essence, the actuality of reality⁹⁰⁶. The intellective apprehension has something present. However, what is the character of this presence? This notion of presence is important in order to understand the relationship between reality and intellection. For Kant, presence is understood as “being put before” intelligence in order to be known intellectually⁹⁰⁷. It is intelligence itself that “put before” what is present to be known⁹⁰⁸.

Zubiri rejects this conception of being present. For Zubiri the essence of actuality is “being here-and-now physically present from within itself”. The expression “from within itself” means that it is not as an act originated and executed by the intellect. It is a physical presence, to be present⁹⁰⁹. Moreover, it is not a representation but the physical presentation of the real⁹¹⁰.

III.2.4.2. The apprehension of reality as actuality

The actuality of reality is related to the formality of reality: “being here-and-now physically present” as *de suyo*. It is not something produced by a pure consciousness or pure ego but a physical manifestation that we do not construct but receive as given. Actuality is not a relationship between the apprehended thing and us. Actuality is prior and foundational of this relationship. This prior, also called “*prius*” by Zubiri, should not be understood in a chronological sense, but in a foundational sense. Actuality as a “*prius*” grounds the relationship subject-object⁹¹¹.

III.2.4.3. The co-actualization of the intellectual act and the real thing

The real thing is actualized in the intellect. At the same time the apprehension of reality is actuality. Moreover, there is only one actuality: the unity of the actuality of intellectual act and the actuality of the real thing in the apprehension⁹¹². For Zubiri, this co-actualization of the intellectual act and the actuality of the real means that ***knowing and reality are not two different***

⁹⁰⁶ X. ZUBIRI, *Inteligencia y Realidad*, p. 133.

⁹⁰⁷ The formula “being put before” is equivalent to “being put in front of”.

⁹⁰⁸ X. ZUBIRI, *Inteligencia y Realidad*, p. 135.

⁹⁰⁹ J. CONILL, *El sentido de la noología*, p. 281.

⁹¹⁰ J.-A. NICOLÁS, *La teoría zubiriana de la verdad*, p. 298.

⁹¹¹ “Subject and object are grounded in the common actuality of sentient intellection, and not the other way around.” X. ZUBIRI, *Inteligencia y Realidad*, p. 165.

⁹¹² “One might think that we are dealing with two actualities, so to speak equal; i.e., of the character of actuality in two points of application: in the thing and in the intellection. But this is not true. We are not dealing with two equal actualities, but a single common actuality of the intellectually known thing and the intellection.” “Now, this aspect reflects, so to speak, on the intellective character of the actuality: when a real thing is intellectually known in sentient fashion, sentient intellection itself is sentiently “co-intellectively” known—not, to be sure, like one more thing, but in that form which is expressed by the gerund ‘I am here-and-now sensing’.” X. ZUBIRI, *Inteligencia y Realidad*, p. 155-156 and 161.

*things. There is an intrinsic unity between reality and intellection*⁹¹³.

This is not a theoretical statement but the result of an analysis of facts in the act of intelligence. Again, this is not a simple academic exercise. On the contrary, it has a series of fundamental consequences. Let's consider some of these consequences.

A. Epistemological consequence

The first consequence is the lack of foundations of naïve realism and idealism. The position of naïve realism is fundamentally mistaken. For naïve realism what we understand corresponds to what is beyond my apprehension. There is also a fundamental mistake in idealism. It considers that our knowledge of things is a construction of an active understanding of the object based on the raw material provided by the pure receptive sensibility. According to Zubiri, these two positions are insufficient. Naïve realism is insufficient because we cannot apprehend what is beyond the impression. The presence is a presence “in” the primordial apprehension; it is not a presence that shows us the notes as they exist beyond the act of apprehension. Idealism is insufficient because there is an intrinsic unity of reality and intellection (as there is of senses and intellect): the “being here-and-now physically present” of real thing is not due to an act of the subject that produces its object and knowledge from sensed data. This “reality” as *de suyo* is prior (in the sense of being foundational) to the relationship subject-object. This reality is present from within itself and it is not “put before” by our intelligence or constituted by a pure consciousness. According to Zubiri, idealism (Kantian or Husserlian) does not have a foundation at all⁹¹⁴. The intrinsic unity of reality and the intellect is due to the fact that the “**human intellection is formally the mere actualization of the real in the sentient intelligence**”⁹¹⁵.

B. Anthropological consequence

If there is a unity between knowing and reality, then the human being does not encounter reality as something exterior to himself. At the same time, the human being does not constitute reality from raw materials. We are totally immersed in that reality to which we belong. To

⁹¹³ We should remember that Ladrière affirms that one of the fundamental problems of philosophy is to determine more precisely what does “reality” means and its relation with the experience. Experience and reality are correlative. In Ladrière’s own words: “*Les deux points de vue, celui de l’expérience humaine et celui du réel, se recouvrent d’ailleurs. Car comprendre le réel, c’est nécessairement savoir, entre autres, comment nous l’approchons, comme nous l’éprouvons ; c’est donc comprendre l’expérience. Mais d’autre part, comprendre l’expérience de façon radicale, c’est nécessairement aussi comprendre la réalité à laquelle cette expérience est ordonnée.*” J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 97. J. LADRIÈRE, *L’articulation du sens III*, p. 302.

⁹¹⁴ V.-M. TIRADO SAN JUAN, *Zubiri y Husserl*, p. 162 and 164.

⁹¹⁵ X. ZUBIRI, *Inteligencia y Realidad*, p. 13.

apprehend something is to be affected by it, which means that there is no pure objectivism. At the same time there is no pure subjectivism due to the “otherness” where the apprehended reality remains autonomous.

C. Theological consequence

The fact of the unity of reality and our apprehension of it has also theological consequences. A revealed truth is not a theoretical truth extrinsic to the human person. When the human being apprehends a revealed truth he is co-actualized as well. This means that revelation transforms the human person, it is already a salvific act. This will be clearer in chapter 5 where we will discuss the meaning of revelation.

III.2.5 Real truth

Many consider that truth is a quality of judgment and that it is the fundamental mode of intellection or perhaps the only one. However, intellection is neither exclusively nor primarily judgment. The fundamental mode of intellection is the primordial apprehension of reality. Correspondingly, there is a radical truth that is more fundamental than the truth that emerges from a judgment or from a theory. This radical truth corresponds to the primordial apprehension⁹¹⁶. In the primordial apprehension, truth is not a quality that adds something to reality in terms of notes or content. The radical truth of the primordial apprehension only adds a kind of **ratification**⁹¹⁷. This ratification is the radical truth that Zubiri calls **real truth**⁹¹⁸.

Truth as ratification means that the real is present “in the intellection” and is apprehended as *de suyo*. This is the reason why reality grounds truth⁹¹⁹. Ratification does not admit a duality *truth - error* that considers them as two equal value poles. There is no “real error”. The primordial apprehension of the real does not admit the possibility of error⁹²⁰. There is no possibility of error when the real is present “in” the intellection. Error is only possible when we leave the primordial apprehension and go beyond it, i.e., when we confront a real thing beyond

⁹¹⁶ X. ZUBIRI, *Inteligencia y Realidad*, p. 230.

⁹¹⁷ There are other senses of truth in other modes of apprehension (*logos* and reason). As we will see, in the *logos*, the truth is truth as *coincidence*. In reason, truth is truth as *verifying*. These other modes of apprehension and these other senses of truth will be discussed below.

⁹¹⁸ “Thus the primary and radical truth of sentient intellection is not identified with reality; nor does it add to the real anything different from its own reality. What it does add is a kind of ratification by which what is apprehended as real is present in its apprehension; and this is just ratification of the *de suyo*, ratification of the reality proper. Ratification is the primary and radical form of the truth of sentient intellection; it is what I call real truth.” X. ZUBIRI, *Inteligencia y Realidad*, p. 233.

⁹¹⁹ X. ZUBIRI, *Inteligencia y Realidad*, p. 234.

⁹²⁰ X. ZUBIRI, *Inteligencia y Realidad*, p. 236.

apprehension to what is conceived, affirmed or sketched about it. That is not the case with ratification because we are not beyond apprehension; we are “in” the intellect. The primordial apprehension is not about conceiving, judging, sketching or understanding⁹²¹. In the primordial apprehension we are simply apprehending.

III.2.6 Transcendental as the dynamic openness of reality

For Zubiri, Transcendental is not something related to reality beyond apprehension or beyond the physical⁹²². Transcendental is neither something *a priori* nor a characteristic or group of properties fixed once for all. Transcendental is the openness of the formality of reality⁹²³. It is the openness to the reality of other things. Things are real in and through themselves, they are real with *respect* to other real things and they are real with respect to the world. This is the root of different modes of apprehension of reality. There is the mode of the primordial apprehension of reality discussed in this section where something is apprehended in and by itself⁹²⁴. However, this apprehension is insufficient. It does not apprehend totally a “real thing” due to the openness of the fundamental experience. What a thing is “in reality” is related to what a thing is with respect to other things.

“Now, the intellection of one real thing respective [with respect to] to others constitutes the intellection of what that real thing is ‘in reality’. What is apprehended in and by itself is always real; but how it is apprehended with respect to other real things determines the question of what that real thing is ‘in reality’.”

What a thing is “in reality” with respect to other things is a mode of apprehension that Zubiri calls the “*logos*”⁹²⁵. The *logos* does not amplify reality, but enriches its content⁹²⁶. Another mode of apprehension also grounded in the primordial apprehension of reality is reason. Reason is the progression from reality among other realities to the world as reality. In other words, it is an apprehension of a reality with respect to the whole world. These two modes of intellection, *logos* and reason, are grounded in the primordial apprehension of reality. According to Zubiri, “we are not dealing with another actualization but a re-actualization of what the real is in and by itself. The intellection of the real in this aspect is, then, constitutively “re-actuality”. The next two sections will discuss the *logos* and reason and will clarify more the meaning of

⁹²¹ These are acts that belong to other modes of apprehension (*logos* and reason).

⁹²² X. ZUBIRI, *Inteligencia y Realidad*, p. 128.

⁹²³ X. ZUBIRI, *Inteligencia y Realidad*, p. 130 and 195-196.

⁹²⁴ X. ZUBIRI, *Inteligencia y Realidad*, p. 258.

⁹²⁵ X. ZUBIRI, *Inteligencia y Realidad*, p. 275.

⁹²⁶ X. ZUBIRI, *Inteligencia y Realidad*, p. 277.

transcendental openness.

III.3 The *logos* as a dual apprehension of reality

III.3.1 The field of reality

Reality is characterized by transcendental openness. This means that every real thing is not only apprehended in itself but also with respect to other things. This apprehension “with respect to” other things is what Zubiri calls the **field of reality**. In Zubiri’s words:

“When a real thing is actualized respectively to other real things in the direction of openness, we say that the thing is found in a field of reality. To intellectually know what a real thing is in reality is now to intellectually know it as a moment of the field of reality, as being respective to other things of the field.”⁹²⁷

To describe the field of reality and its general structure, Zubiri uses terms taken from the visual apprehension. There are many components or dimensions in the field⁹²⁸. We are going to discuss only the horizon. The **horizon** is a line that encompasses the field. This horizon is an intrinsic moment of the field in the sense that it circumscribes the totality of the field. We can apprehend the whole field and how things are arranged on it in a panoramic apprehension. The horizon is not static. It changes as new things are introduced in the field or old ones can be removed⁹²⁹. Consequently, the horizon can be expanded or contracted⁹³⁰. The horizon delimits the things and also our vision of them.

III.3.2 The *logos* as a field apprehension that give us “what a thing is in reality”

The *logos* is an enrichment of the content of primordial apprehension⁹³¹. The *logos* is a re-actualization that apprehends what a thing “is in reality” (*this thing is...*) in comparison to other things in the field. In the primordial apprehension we apprehend a real thing without the need to name or identify it. The primordial apprehension is pre-linguistic, pre-logical and pre-conceptual

⁹²⁷ X. ZUBIRI, *Inteligencia y Realidad*, p. 269.

⁹²⁸ First of all, there is the **first level** of the field, which consists of things that are directly apprehended. If there is only one thing directly apprehended, this first level becomes the center of the field. Then there is the domain of the **rest**, which is constituted by other things that are not the first level. Among the domain of the rest, we encounter the **background** against which the things of the first level are apprehended. In the second place, as part of the rest, we find the **periphery** of the field, which is a variable zone of things that are in proximity or at a distance. “*As one extends the things of the periphery, they recede further and further until they are lost. For this reason the periphery is the zone of the indefinite*”. The first level, the background and the periphery are the three zones or dimensions of the field of reality. These zones are not static or fixed. They can vary as we change our focus of attention. X. ZUBIRI, *Inteligencia y Logos*, p. 22-24.

⁹²⁹ X. ZUBIRI, *Inteligencia y Logos*, p. 24.

⁹³⁰ X. ZUBIRI, *Inteligencia y Logos*, p. 27.

⁹³¹ X. ZUBIRI, *Inteligencia y Realidad*, p. 275.

in the sense that it is fundamentally a physical apprehension that grounds consciousness, language and concepts⁹³². We can even apprehend something without being able to identify it⁹³³. If we are in a forest during a night we can apprehend that “something” moves but the lack of light could prevent us to identify it. In the mode of the *logos*, we apprehend a real thing as similar or different to other things. We can identify, name, describe and judge a thing only through things already apprehended in the field of reality.

There are three structural aspects of the *logos*: dual, medium and dynamic. The *logos* is dual because it seeks if the real thing is equal, similar or different to things already apprehended. These things previously apprehended operate as principles of intelligibility of the real thing being apprehended in the field. For example, we can be in front of something with a constellation of notes that are “*de suyo*”. We apprehend the following notes: colors (multiple green and brown notes), the sense (humid, rough) and the smell (fresh). Then recurring to other objects previously apprehended, I affirm that what I am apprehending is a “tree”. This is the *logos*’ apprehension within a field of reality.

The primordial apprehension is immediate while the field apprehension is a mediated apprehension: we apprehend what the thing is in reality by means of others already apprehended. “*The intellection of each thing thus takes place in the field as a medium in which each one of the things is intellectually known as a function of the rest*”⁹³⁴.

III.3.3 The dynamism of the *logos*: the movement from the primordial apprehension of the “real thing” to field apprehension of what a thing is “in reality”

The dynamism of the *logos* is a movement from the primordial apprehension, which is the immediate apprehension, to the apprehension of what is a thing in reality. According to Zubiri, this movement has a structure that consists of two phases.

III.3.3.1 The initial phase: the simple apprehension as a movement of stepping back

This phase consists in a movement from the individual real thing in the primordial apprehension to the field of reality, which is an apprehension of a thing among other things. In order to know what a thing is with respect to other things we need to step back from the thing

⁹³² J. CONILL, *El sentido de la noología*, p. 280.

⁹³³ A. FERRAZ-FAYOS, *Zubiri: El realismo radical*, p. 56.

⁹³⁴ X. ZUBIRI, *Inteligencia y Logos*, p. 260.

itself⁹³⁵. We step back from the concrete content of the individual real thing in order to postulate what it “might be” in reality⁹³⁶. This is what Zubiri calls **simple apprehension** (or apprehension in the movement of stepping back)⁹³⁷.

This movement takes some distance from the immediate apprehension but without abandons it. The simple apprehension is an apprehension of what the thing “might be” “in reality”. The things that are already apprehended are reduced to principles of reality that enable us to postulate what a thing might be.

In order to identify it we need to take into consideration previously apprehended things, such as leaves, trunks, and other trees. These

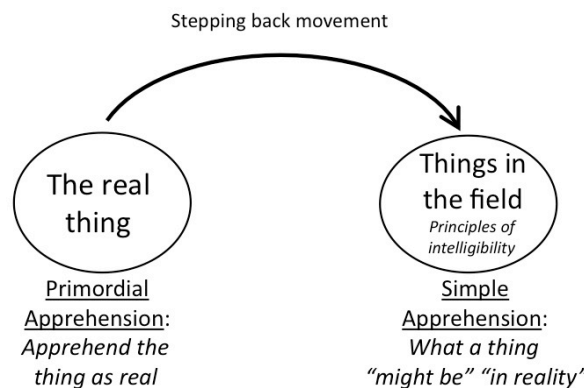


Figure 4.1 The simple apprehension as a movement of stepping back.

previously apprehended things become “principles on intelligibility” that enables us to ask if this thing “might be” a tree and finally to affirm it (or deny it). In order to have “principles of intelligibility” we “suspend” the concrete content (notes and properties) of a real thing in order to postulate what it “might be”. This is a creative and free act, i.e., it is not predetermined.

Let’s consider one mode of simple apprehension, the creation of concepts⁹³⁸. In the concept we “suspend” the content of an apprehension and its structure in order to “conceive” “what” a thing “might be” “in reality”⁹³⁹. The concept as a mode of simple apprehension is characterized for being creative, abstract and constructed by the sentient intelligence⁹⁴⁰. Scientific, philosophical and theological concepts are good examples of these three characteristics: they are creative, abstract and constructed⁹⁴¹.

To summarize, the first phase is a distance, a stepping back in order to postulate what a thing “might” be. There we construct the “might be” of the real thing by means simple

⁹³⁵ X. ZUBIRI, *Inteligencia y Logos*, p. 80.

⁹³⁶ X. ZUBIRI, *Inteligencia y Logos*, p. 86.

⁹³⁷ The “*simple apprehension is not the first proper act of every intellection; rather, each simple apprehension is but a simple apprehension by “retraction”. It is an apprehension “retracted” from a primordial apprehension.*” X. ZUBIRI, *Inteligencia y Logos*, p. 87.

⁹³⁸ In Zubiri we find two other modes of simple apprehension, the percept and the *fictum*. We will only discuss the concept. For the percept and the fictum see X. ZUBIRI, *Inteligencia y Logos*, p. 96-101.

⁹³⁹ X. ZUBIRI, *Inteligencia y Logos*, p. 101.

⁹⁴⁰ X. ZUBIRI, *Inteligencia y Logos*, p. 102-104.

⁹⁴¹ According to Zubiri, mathematics is a reality constructed by postulations by means of concepts, as we already explained in the section about formal systems. A circle is a concept, which is a reduction of a thing apprehended in reality, e.g, a wheel, into an abstraction: “the set of points equidistant to the center”. These realities are also “de suyo”, as we already discussed.

apprehensions, e.g., concepts⁹⁴². The second phase is not about creation, but a movement that returns to the apprehended thing in order to affirm what it is “in reality” taking into consideration our constructed “might be”.

III.3.3.2 The second phase: the affirmation of what a thing is in reality by means of simple apprehensions

After the movement of stepping back, the intelligence returns to the thing in order to affirm not what it “might be” but what it is in reality. This is the second phase of the dual apprehension of the *logos*. Here intellection becomes a discernment, a judgment.

*“This intellection is then a discernment, a krinein, a judging. Dual apprehension has lead us to intellectually know what a real thing is in reality in a movement of retraction toward what this thing ‘might be’ in reality, and in a reverse movement which leads us by stepping back (i.e., “distanced”) and with discernment to intellectually know what the thing in fact “is” in reality, i.e., to a judgment.”*⁹⁴³

What is the act of judging? What we judge is the fulfillment of a simple apprehension in the “real thing” primordially apprehended⁹⁴⁴. Judgment is not the attribution of a concept to another concept. It is to affirm that a simple apprehension that operates as a principle of intelligibility (e.g., a concept) is realized in the real thing⁹⁴⁵. This is what enables us to identify and name things.

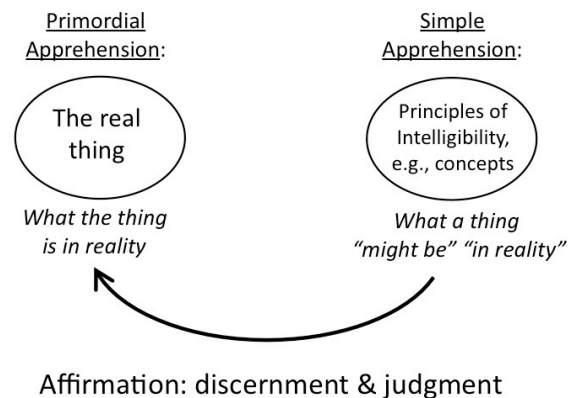


Figure 4.2 Affirmation as a movement of returning.

Moreover, this is what enables us to affirm things through the predicament judgment with the structure “A is B”⁹⁴⁶, which is a copulative affirmation.

III.3.4 Dual truth and evidence

⁹⁴² As Tirado-San Juan explains, Zubiri’s description corresponds to a mature intelligence that has already constructed or received from a cultural context a considerable quantity of simple apprehensions (e.g., concepts) that are being used continuously. V.-M. TIRADO-SAN JUAN, *Fenomenología del logos. Zubiri y Heidegger*, p. 274.

⁹⁴³ X. ZUBIRI, *Inteligencia y Logos*, p. 109-110.

⁹⁴⁴ A. Ferraz-Fayos, *Zubiri: El realismo radical*, p. 70.

⁹⁴⁵ X. ZUBIRI, *Inteligencia y Logos*, p. 149.

⁹⁴⁶ X. ZUBIRI, *Inteligencia y Logos*, p. 158.

The movement from the “might be in reality” to the “is in reality” is determined by the field. The field is not a thing that we can see, but it enables us “to see” what the thing is in reality because is the medium of intellection. This medium is the ground that allows us to discern, among the multiple possible “might be”, the particular one that “is”⁹⁴⁷.

There are different types of truth as there are modes of actualization⁹⁴⁸. The primordial apprehension grounds the “real truth”, as we have discussed already. The *logos* as an apprehension in the field grounds the **dual truth**. It is dual because we affirm what a “real thing” is in reality with respect to another “real thing” in the medium of the field. It is an intellection at a distance. Due to the movement of stepping back, the dual truth of the *logos* “*has the character of intellectual coincidence ‘between’ the realms of intelligence*” (which is at a distance of the real thing by the mediation of simple apprehension, e.g, the concepts) and ‘*the realms of reality*’ (the real thing apprehended in the primordial apprehension). “*It is the actuality of the real in coincidence*”⁹⁴⁹. In the real truth, there is no place for error, we have it or we do not have it. However, in the dual truth we arrive or we do not to the coincidence between intelligence and reality. The first one is related to truth, the second is the error.

When we apprehend a thing in a forest, it “seems to be” a tree and it “might be” a tree. When we affirm that it is a tree (which has been previously apprehended and from which we have the concept tree) in reality this judgment is true (in the sense of dual truth) if there is a coincidence between the intellect (what seems to be) and reality. It is false if there is no such coincidence.

III.4 Reason as a quest for reality beyond apprehension

III.4.1 Reason as intellection of reality “in depth”

Primordial apprehension and the *logos* are the first and the second mode of intellection. Reason is the third mode of intellection. Reason is a quest for reality, *intellectus quaerens*⁹⁵⁰. According to Zubiri the activity of reason is **thinking**, which is understood as the search for something beyond the primordial and field apprehension⁹⁵¹.

“Thinking is above all to go on intellectually knowing, according to this direction,

⁹⁴⁷ X. ZUBIRI, *Inteligencia y Logos*, p. 210.

⁹⁴⁸ D. Gracia, *Voluntad de verdad*, p. 146.

⁹⁴⁹ X. ZUBIRI, *Inteligencia y Logos*, p. 261.

⁹⁵⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 23.

⁹⁵¹ X. ZUBIRI, *Inteligencia y Razón*, p. 25.

*what is outside the things we apprehend.”*⁹⁵²

Thinking a reality beyond the things we apprehend is based on the openness of the apprehension. The real thing (in the primordial apprehension) is open to other things in the field of reality (the *logos*). However, the *logos* does not exhaust the transcendental character (openness) of apprehension. There is another intellectual movement which is not limited by the field⁹⁵³. This movement to things beyond the field of reality is a movement to discover forms and modes of reality other than those apprehended in the field.

To think is a quest of what is beyond the field. It is deepening the reality of real things already apprehended. The question that emerges here is: what is this reality beyond the field? It is a separated domain of reality different from field? According to Zubiri, this “beyond the field of reality” consists of things that are not “visible”, not apprehended by the field of reality⁹⁵⁴. It consists also of hidden aspects of things in the fields⁹⁵⁵.

Reason, the third mode of human intellection, is characterized for being intellection “in depth”, in profundity. In Zubiri’s words:

*“To go to the beyond is to get to the bottom of real things, to understand them ‘in depth’. And this ‘in depth’ or ultimate nature, intellectually known, is just my explanation of them. Only by intellectually knowing this ultimate nature will I intellectually know the real things of the field. In-depth is thus not a type of indiscernible profundity, but only the intellection of what, ultimately, real things are. Thus, an electromagnetic wave or a photon is what, ultimately, color is. Their intellection is thus intellection in profundity.”*⁹⁵⁶

Consequently, reason as a quest beyond the primordial and field apprehension is the effort to understand and explain a reality in terms of its ground (its under-stand). The reality that reason seeks is reality as ground-reality of things⁹⁵⁷, i.e., the ultimate nature of things. When Zubiri uses the expression “beyond the field” he does not mean outside the field in a separated transcendental domain of reality independent of our apprehension. He means deepening this field. Then, what is the relationship between the field and this “beyond the field”? Perhaps a three dimensional

⁹⁵² X. ZUBIRI, *Inteligencia y Razón*, p. 31.

⁹⁵³ A. Ferraz-Fayos, *Zubiri: El realismo radical*, p. 78.

⁹⁵⁴ Ladrière and Zubiri coincide on this. For Ladrière a speculative language transgresses the frontiers of the perceptive experience in order to interpret and understand beyond what is visible, beyond the possibilities of perception. This *non-immediately-manifested* is constituted by the internal structure of reality (studied by sciences) and the foundation of all realities (studied by philosophy). J. LADRIÈRE, *L’articulation du sens I*, p. 221. J. LADRIÈRE, *L’articulation du sens II*, p. 126.

⁹⁵⁵ “What is not in the field is intellectually known in order to be able to better know intellectually what is in it.” X. ZUBIRI, *Inteligencia y Razón*, p. 80.

⁹⁵⁶ X. ZUBIRI, *Inteligencia y Razón*, p. 43.

⁹⁵⁷ X. ZUBIRI, *Inteligencia y Razón*, p. 51, 87.

representation could help us understand this idea⁹⁵⁸.

We can represent the field as a two dimensional plane, limited by the horizon. In the field we apprehend what the real thing is “in reality” through other things already apprehended. However, the *logos* does not apprehend the ground of things. We can apprehend the color of this real thing in front of me, but we do not know what is the ground of this color (photons or waves). This ground is not visible in the field reality.

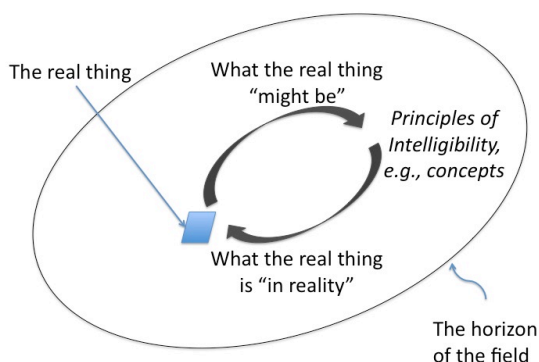


Figure 4.3 The *logos* and the field of reality.

The reality beyond the field is not a separated domain. The reality “beyond” is the reality in-depth that is not directly visible in the field. It is the reality that grounds the real thing already apprehended in the field. Reason is the intellection in profundity. It is the activity that seeks to “uncover” this ground that structures real things. Uncovering what “stands under” (the ground reality) let us “under-stands” the real thing.

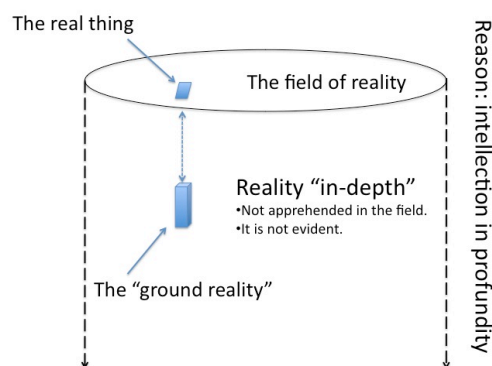


Figure 4.4 Reason and reality in-depth beyond the field.

Through reason we “discover” that the color has a photonic structure. Again, “beyond the field” means to deepen the field. The unity of this reality “in-depth” is what Zubiri calls the world⁹⁵⁹. The field is the world as sensed⁹⁶⁰.

III.4.2 Reason as a free creation of the grounding content

III.4.2.1 The different modes of rational creation

⁹⁵⁸ Ferras-Fayos suggested the representation of a field as a two dimensional plane and the “reality in-depth” as the third dimension. See A. Ferraz-Fayos, *Zubiri: El realismo radical*, p. 91-92.

⁹⁵⁹ This is what Ladrière calls *réalité tout entière*. J. LADRIÈRE, *Concept scientifique et idées philosophiques*, p. 151. See also J. LADRIÈRE, *L’articulation du sens III*, p. 275.

⁹⁶⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 20.

Reason has essentially an inquiring character⁹⁶¹. Reason is a quest for the reality in-depth imposed by the primordial apprehension of things and the dual apprehension of the *logos*. However, the field of reality does not impose the content or the structure that the ultimate nature of a real thing could have⁹⁶². Consequently, reason consists in a free creation of the grounding contents or the structures of in depth reality. This implies that the essence of reason is a creative freedom⁹⁶³.

For Zubiri there are different modes of rational creation. The first one is the **model**. In the model we take something previously apprehended and modify freely its content (notes and properties) in order to arrive to a kind of formal image. This freely created formal image enables us to explain a real thing from its in-depth reality⁹⁶⁴.

The second mode of creation is the **hypothesis**. It is not only the creation of the content (notes and properties) but also the systematization of its notes. In this mode of creation the contents of the things are systematized and structured⁹⁶⁵. Here we are not dealing with a hypothetical reality but with a hypothetical structure of the real⁹⁶⁶. These hypothetical structures are homologous to structures of things encountered in the field. Consider one example provided by Zubiri: the hypothesis of “social organism” or “organization” where society is understood as having the structure of an animal organic system. This does not mean that society is equivalent to the body of an animal, or that they have similar contents. It means that the structure of society is homologous to the system of an animal’s organic system.

⁹⁶¹ X. ZUBIRI, *Inteligencia y Razón*, p. 60-61.

⁹⁶² X. ZUBIRI, *Inteligencia y Razón*, p. 107.

⁹⁶³ “What reason pretends is that this reality has this or that determinate content, and therefore that this content, freely chosen, is a ground. We could call it grounding content. What is created is then not reality but the grounding content of in depth reality. In virtue of this, reason is not creation of reality but just the opposite: creation of the grounding content in reality.”X. ZUBIRI, *Inteligencia y Razón*, p. 110. See also X. ZUBIRI, *Inteligencia y Razón*, p. 107.

⁹⁶⁴ Consider the example of the atomic models in physical-chemistry. Dalton modeled the atom as small particles that were spheres, invisibles and changeless. Thompson constructed another model of the atom. For him, the atom has inside another small particles with negative charges. Then Rutherford constructed the model of the atom consisting of a nucleus where the positive charge is located. For him the electrons are kind of satellites that turn around the nucleus. Then Bohr modified Rutherford’s model to have defined levels of energy. The electrons only can have pre-established orbits with specific ratios that correspond to specific levels of energy.

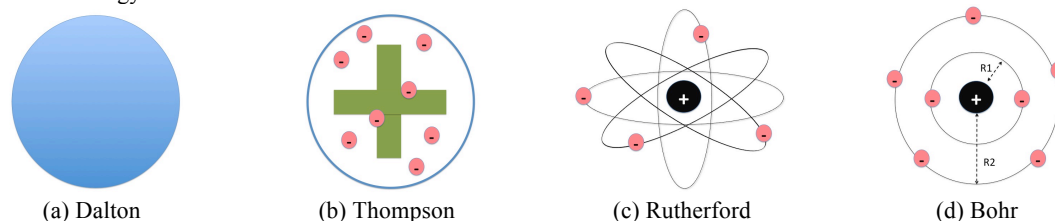


Figure 4.5 Different atomic models in physical chemistry

See X. ZUBIRI, *Inteligencia y Razón*, p. 122.

⁹⁶⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 125.

⁹⁶⁶ X. ZUBIRI, *Inteligencia y Razón*, p. 125.

There is a third mode of free creation, the **theoretical construction**. It is the rational creation that has the maximum degree of freedom. It creates the notes and the structures at the same time. These theoretical constructions are created based on concepts and even affirmations⁹⁶⁷. This case is creation for the sake of creation. Consider for example the case of theoretical postulation⁹⁶⁸, e.g., the case of geometry as a theoretical construction that grounds the spatial reality of the perceptive field. Geometry is constructed by means of concepts and affirmations. “*Geometric space is therefore an in-depth foundation of pre-geometric space.*”⁹⁶⁹ Zubiri provides also an example in theoretical physics: Galileo’s postulates that the universe has a mathematical structure. Galileo’s postulate has had successful consequences⁹⁷⁰. A theoretical construction might become a research programme⁹⁷¹.

To summarize, the three modes of rational creations are the creation of models, the creation of hypothetical systems or structures and the theoretical postulation or construction. These three modes of rational creations enable us to discover elements and dimensions of the in-depth reality that is beyond our apprehension, i.e., they are invisible aspects not apprehended in the field.

III.4.3 Knowledge as rational intellection and its formal structure

The intellection of something in its in-depth reality by means of the different modes of rational creation (models, hypothesis and theories) constitutes what we call knowledge. Rational intellection is to know what a thing is in its own ground and foundation⁹⁷². The knowledge of the color green is neither the primordial apprehension of a note nor an affirmation that “it is in reality green”. The knowledge of the color “green” is the intellection of it as an electromagnetic wave or to intellect it as a photon with a particular wavelength in the electromagnetic spectrum. **Knowledge** is the third mode of apprehension after the primordial apprehension and the dual apprehension of the *logos*. It is anchored on them and at the same time it is an elaboration on

⁹⁶⁷ X. ZUBIRI, *Inteligencia y Razón*, p. 128.

⁹⁶⁸ X. ZUBIRI, *Inteligencia y Razón*, p. 130.

⁹⁶⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 131.

⁹⁷⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 132.

⁹⁷¹ Let’s consider Darwinian evolutionary theory. It is a theoretical construction or postulation that grounds the realities we call “living organism”. It is constructed by means of the grounding concept of “natural selection”. There are other concepts as well, e.g., “territory”, “competition”, “altruism”, “population”, “phylogenesis”, “ecosystems” among others. We can think of an example in theology: Rahner’s axiom that *theology is eternally an anthropology*. This axiom grounds the interpretation of revelation in a similar manner as a research programme. Rahner’s axiom is a theoretical postulate that enables the construction of a theological system as an interpretation of revelation. “*And if God himself is man and remains so for ever, if all theology is therefore eternally an anthropology; if man is forbidden to belittle himself, because to do so would be to belittle God; and if this God remains the insoluble mystery, man is for ever the articulate mystery of God. He is a mystery which partakes for ever of the mystery on which it is founded, and must always be accepted in blissful love as the undecipherable mystery, even in the eternity where the provisional is past and done with.*” Underlined emphasis is ours. K. RAHNER, *On the theology of incarnation*, p. 116. K. RAHNER, *Foundation of Christian Faith*, p. 225.

⁹⁷² X. ZUBIRI, *Inteligencia y Razón*, p. 161.

them⁹⁷³. Human knowledge has a formal structure consisting on three moments: the object, the method and the rational truth⁹⁷⁴.

III.4.3.1 The object

Reality in-depth is not a thing to be apprehended in the primordial apprehension or the field apprehension in the *logos*. It is the “ground-reality”, the ultimate nature of a real thing. This real thing is transformed from being “in the field” to being grounded⁹⁷⁵. The real thing being grounded is what Zubiri calls **object**. A real thing becomes an object when it is considered as beyond the field, as part of the world in which the field is grounded⁹⁷⁶. In order to be an object⁹⁷⁷, the real thing must be present as a simple observable (perceptible) thing⁹⁷⁸. A simple perceptible thing could be a “fact”. The real thing is a fact if it presents itself, at least in principle, as perceptible by anyone⁹⁷⁹. All facts are objects, however, not all objects are facts. Zubiri provides an example of an object that is not a fact: “[t]his is the case with some moments of my intimate personal life. It is not just that I observe them, but that no one other than I can observe them. Thus these realities are not, properly speaking, facts.”⁹⁸⁰

If facts are a subset of objects, there is another subset of facts: scientific facts. Not all facts are scientific facts. What makes them a scientific fact? Let’s consider Zubiri’s own words:

*“In order for a fact to be a scientific fact, what is observable by anyone has to be, in a certain way, “fixed”. A scientific fact, I believe, is a fixed fact. Fixation is always and only the characteristic of a fact not just by virtue of being observable by anyone, but as a fact observed in a special form, viz. as referred to a system of previous concepts. These concepts can be either from natural science, historical documents, etc. Without this fixation, we would have a mere fact, to which the name brute fact was given at the beginning of the century, as opposed to scientific fact, which as I see it is the conceptualized and fixed fact.”*⁹⁸¹

⁹⁷³ X. ZUBIRI, *Inteligencia y Razón*, p. 164.

⁹⁷⁴ X. ZUBIRI, *Inteligencia y Razón*, p. 171-172.

⁹⁷⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 174.

⁹⁷⁶ “The “field” of the real thing is open to a “world” in which it is grounded. Then and only then does the real field thing acquire the character of real object. [...] Only in this actualization is there an “object”, i.e., in the rational intellection, in knowledge. That which is intellectually known in primordial apprehension, and that which is intellectually known affirmatively, are not, formally, objects. Only what is intellectually known rationally is an object.” X. ZUBIRI, *Inteligencia y Razón*, p. 199.

⁹⁷⁷ Zubiri prefers to use the term *positum*. In order to simplify our presentation we will use object as a synonym of observable, perceptible and apprehensible object.

⁹⁷⁸ X. ZUBIRI, *Inteligencia y Razón*, p. 180-181.

⁹⁷⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 182.

⁹⁸⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 182-183.

⁹⁸¹ X. ZUBIRI, *Inteligencia y Razón*, p. 184.

In order to transform a real thing in the field into a scientific object or scientific fact, we need to refer the real thing to a system of previous concepts that belongs to a field of knowledge, e.g., physics, biology, history, psychology, economy, agronomy, etc. Consider for example the grain of coffee. It becomes an object of agronomy if we use a series of concepts from botany and agronomy or it becomes an object of economics if we use concepts used in economics.

III.4.3.2 The rational method

Knowledge is a quest and the quest needs a method. Zubiri states that **method** is forging a way in order to deepen reality itself. It is forging the way to go from the real thing in the field to its worldly ground⁹⁸². A fundamental point in Zubiri's thought is the clarification that method cannot be equated with scientific method. The scientific method is just one type of method. According to Zubiri, in all rational methods, including scientific method, there are three essential components: (A) a system of reference, (B) a sketch and (C) an experience as testing. These three constituents are not independent or purely sequential. Each one re-covers the other. Let's consider each of these components.

A. The system of reference

The system of reference, that we have mentioned already, is nothing else than the field reality where we apprehend a real thing in relation to other apprehended realities. The system of reference is the field and the field is the world as sensed⁹⁸³.

*“The field reality is the system of reference for worldly reality insofar as that field reality is reality. And this is obvious, because field and world are not two strata numerically independent—the field, as I said, is the sensed world. Now the field, what is sensed of the world, is the system of reference for the active intellection of the world. [...] The field is not by itself the structure of the world, but merely a system of reference.”*⁹⁸⁴

This system of reference is the point of departure of the method. Reason and field apprehension are not two independent intellectual activities. On the contrary, reason depends and is based on the field apprehension. Reason does not seek the ground of things other than the real things in the field. However, there is a difference. Knowledge as rational intellection is not field intellection. In field intellection we seek what the real thing “might be” and then we seek to

⁹⁸² X. ZUBIRI, *Inteligencia y Razón*, p. 205.

⁹⁸³ X. ZUBIRI, *Inteligencia y Razón*, p. 228.

⁹⁸⁴ X. ZUBIRI, *Inteligencia y Razón*, p. 212.

affirm what a thing is “in reality”. Knowledge seeks what reality “could be” as the ground of the real thing. It is not the same that this “might be” the red color than to postulate that the red color “could be” the reflection of particular photons with particular wavelengths and the collection of them in my retina⁹⁸⁵. The second one is an explanation that “could be” the ground of what I am experiencing when I see something in the field of reality that I affirm “it is red”.

Reason thinks about the possibilities of the real. These possibilities are suggested by reality as apprehended in the field. *“In field intellection not only are things present which are intellectually known, but also in them the suggestion is present of what they could be in-depth.”*⁹⁸⁶ Consider the example of the atomic models in physical-chemistry. Scientists have constructed their atomic models following suggestions from the field of reality. In the field of reality we find small spheres, objects inside other objects (e.g., raisins embedded in pudding) and satellites that turn around planets. That suggested the construction of atomic models as small changeless spheres, as electrons embedded in the nucleus and as kind of satellites that turn around the nucleus.

The system of reference provides a point of departure that suggests a direction to discover the ground of the real thing. This process of discovering is creative because we uncover the ground by means of creating a sketch of it. Consequently, the field must be transformed into a system of reference by means of the sketch.

B. The sketch

If the system of reference is the point of departure of the rational method, the terminus is what the field thing “could be” in the world⁹⁸⁷. The sketch a free construction of what something “could possibly be” taking in consideration the suggestions of the system of reference⁹⁸⁸. What are the forms of these suggestions? Previous apprehension of waves and bodies enabled the scientists to construct models and hypothesis of light and colors as waves or as corpuscles⁹⁸⁹.

To construct sketches we follow the suggestions of the field, but at the same time we transform the field into a “setting” from which we could understand and retrieve the “possible”

⁹⁸⁵ “The “might be” is reality in retraction [the movement of steeping back]. The “could be” is reality in being grounded. The difference between the “might be” and “could be” is not a difference between two modes of possible being, but between two modes of realization. [...] As a mode, the “might be” is the unreal mode (understanding ‘unreal’ here as reality in stepping back from content, and not what is understood grammatically by ‘unreal mode’). In contrast the “could be” is a mode of making possible, a mode not of being a note, but of being a ground.” X. ZUBIRI, *Inteligencia y Razón*, p. 142.

⁹⁸⁶ X. ZUBIRI, *Inteligencia y Razón*, p. 148.

⁹⁸⁷ X. ZUBIRI, *Inteligencia y Razón*, p. 217.

⁹⁸⁸ X. ZUBIRI, *Inteligencia y Razón*, p. 219

⁹⁸⁹ In theology, the system of reference is the Scriptures and Tradition, as we will see. Theologians take into consideration what is suggested by Scriptures and Tradition in order to elaborate theological sketches.

ground. Although Zubiri does not mention it, we consider that this is clear in scientific research where laboratories are the transformation of the field of reality into a system of reference. Laboratories allow the scientists to convert the “observable real thing in the field” into a scientific object. Laboratories also enable the expert to freely construct models or hypothesis that are suggested by the laboratory settings and experiments. Moreover, scientists construct the laboratory setting, by taking into consideration previously conceived sketches. In other words, the transformation of the field into a system of references depends also on models, hypothesis and theories we have already. There is a union of theory and experiments that we cannot separate. That is why the field of reality transformed into a system of reference by means of sketches becomes a point of departure, a direction in the sense of a particular research programme.

The sketch could be in conformity with the suggestions of the system of reference⁹⁹⁰, e.g., the sketch of the system of bodies in Newtonian physics⁹⁹¹. The sketch may have the character of contrariness with respect to the system of reference, for example the hypothesis that the human persons are fatally determined even when the field suggests that people are autonomous agents⁹⁹². It may be diverse in the sense of mere difference, for example the non-Euclidean geometries with respect to the ordinary space. The sketch may be also diverse in the sense of going beyond the possibilities of the system of reference, e.g., the equations of quantum mechanics go beyond the differences between wave and corpuscle.

All of this show that the transformation of a field of reality into a system of reference does not follow a univocal and determined path⁹⁹³. As we have seen this transformation is a matter of free creation. Moreover, it depends on the **mentality** or the mental configuration of he who seeks the reality in depth. When Zubiri uses the concept “mentality” or the adjective “mental” he means different but related things. There is a structural and intrinsic mentality⁹⁹⁴, there is an extrinsic situational mentality⁹⁹⁵ and there is a mental horizon⁹⁹⁶. They are related to the transformation of

⁹⁹⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 245.

⁹⁹¹ Another example of a sketch that is in conformity with the suggestion is the case of the pulsars. In 1967 a young astronomer, Jocelyn Bell detected a signal with a regular pattern of thirty “beeps” per second. Thomas Cold developed the sketch that the signal came from a star that emits light only from a particular region and that this star rotates at a high speed. What inspired Cold to develop this sketch, today called pulsars, was a lighthouse! See H. REEVES, *Chroniques des atomes et des galaxies*, p. 110-111.

⁹⁹² Another example is Einstein’s sketch of time and space. The system of reference suggests that time and space are independent and the same for everybody. Time and space would be a kind of absolute for everybody. However, in order to explain the constant velocity of light Einstein develops a sketch contrary to the suggestion of an absolute time and an absolute space. The theory of relativity explains that an object’s time is relative to its speed. Time goes slower for an object whose speed is faster than another object. Moreover, time and space are not independent: the absolute is really the absolute space-time. H. REEVES, *Chroniques des atomes et des galaxies*, p.

⁹⁹³ “Hence, wherever one looks, the field of reality is multiform. And as this field is just the system of reference [...], it follows that by its own nature the system of reference is not univocal but constitutively plural.” X. ZUBIRI, *Inteligencia y Razón*, p. 243.

⁹⁹⁴ X. ZUBIRI, *Inteligencia y Razón*, p. 150-152.

⁹⁹⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 150-152.

⁹⁹⁶ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 197.

the field of reality into the system of reference, the constitution of an object and the elaboration of a sketch. Sometimes Zubiri does not distinguish these three different “mentalities”. A clarification and distinction between the different mentalities is fundamental for a dialogue and articulation between natural science and theology. Let’s consider them.

(i) Intrinsic structural mentality

This structural mentality is a mode of intellection or direction from the field of reality to the type of sketch⁹⁹⁷. Mentality here is the formal concrete mode of configuration of the field of reality into a system of reference whose objective is to develop a particular mode of sketch of the reality in-depth⁹⁹⁸. Here reason adopts a concrete form that Zubiri describes as a formal habitual mode of going from the field of reality to the reality in-depth⁹⁹⁹. Let’s consider two examples that correspond to two types of structural mentalities with respect to the sea. One person can “see” the sea with the mental configuration of a poet. A poet configures the field of reality in a concrete system of reference that enables him sketches poetry. There the system of reference suggests metaphors. He will configure the object (the sea) using these metaphors suggested by the system of reference. Meanwhile, a marine scientist configures the same field of reality into a different system of reference in order to sketch scientific models and hypotheses. That system of reference will suggest the creation of concepts, models, hypotheses and theories. The marine scientist configures the scientific object not with poetic metaphors but with created scientific concepts. Both of them have different habitual modes of dealing with the sea: one is doing poetry and the other is doing science. Then the formal habitual mode of configuration is a structural mentality that corresponds to different fields of knowledge or different concrete forms of reason¹⁰⁰⁰: scientific mentality, poetic mentality, political mentality, philosophical mentality, theological mentality, etc. In Zubiri’s own words:

“Mentality should be understood in the light of this vast range, which encompasses not only the content, but also the very lines of intellection. Different are the mentalities of the scientist, the poet, the politician, the theologian, the philosopher, etc. And this, I repeat, is true not just by virtue of the “content” of their reason but above all by the “line”, by the habitual mode of behavior in which reason progresses, thrust out in its search. Mentality is just the formal concrete habitual mode of behavior of rational search; it is the concreteness of the “toward” as such.”

⁹⁹⁷ X. ZUBIRI, *Inteligencia y Razón*, p. 149-150.

⁹⁹⁸ X. ZUBIRI, *Inteligencia y Razón*, p. 150.

⁹⁹⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 150-151.

¹⁰⁰⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 151-152.

Consider another example. Practical theology and psychology are two different structural mentalities with respect to personal stories or narratives. A psychologist will configure the field of reality into a concrete system of reference that will enable him interpret the conscious and the unconscious motivations of the persons acts. The psychologist will use concepts developed in psychology or newly created psychological concept to develop a sketch in the form of hypothesis that explains some aspects of the narrative. A theologian will configure the field of reality into a system of reference that will enable him interpret the personal story using theological concepts (e.g., human dignity as image an likeness of God, call to fulfillment and salvation in Christ and in communion to others, etc.).

For Zubiri, this aspect is what is properly speaking “mentality”. It is intrinsic because it is the concrete form of reason (scientific reason, philosophical reason, theological reason, etc.).

(ii) The personal situation as an extrinsic personal mentality

For Zubiri there is another type of mentality that also influences the configuration of the field of reality into the system of reference and the elaboration of sketches. Although Zubiri unites individual and social aspects¹⁰⁰¹, we will distinguish them even when we recognize that in practice they interrelate. There are two texts where Zubiri refers to this personal situation. In a text that belongs to “*Naturaleza, historia y Dios*” Zubiri mentions a personal concrete “situation” that includes the person’s relation with things¹⁰⁰², his experience of “living together” with other persons¹⁰⁰³, the influence he receives from his “times” and “location”¹⁰⁰⁴, his personal conviction about the meaning and origin of his life¹⁰⁰⁵, among others. In another text he affirms the following with respect to theologians:

“Facing this inchoateness in a perfectly concrete situation, man is enlightened by certain possibilities. Nevertheless, this situation is an integral situation, the integral religious situation of man. It does not exclude reasoning or intelligence, but there is no reason why it should be limited to them. In addition there are the many other dimensions of the religious situation, like piety, morality, etc. What defines the oneness of the situation in which man illuminates his possibilities facing the deposit of revelation is precisely the integral religious situation. Not even the most intransigent religious heretic, such as Arius and Nestorius were, would have refused to say that his situation was religious. Even the theological conclusion is not a speculation, which operates in a vacuum, but is illuminated in and from an integral

¹⁰⁰¹ X. ZUBIRI, *Inteligencia y Razón*, p. 150 and 152

¹⁰⁰² X. ZUBIRI, *Naturaleza, historia y Dios*, p. 190.

¹⁰⁰³ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 191.

¹⁰⁰⁴ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 191.

¹⁰⁰⁵ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 191.

religious situation.”¹⁰⁰⁶

In other words, there is a personal mentality that emerges from the concrete situation of the researcher whose origin belongs to the personal history, psychological state, actions, education, relations, etc. That is why the knowledge of an author’s biography helps to understand his sketches. Although two intellectuals shares the social, cultural and historical contexts they could have different “personal mentalities” than influence their elaboration of sketches. Consider the following couples that share the same discipline of knowledge, the same time period and similar cultural context but with clear different personal “mentalities” that influenced their sketches: Einstein - Bohr and their opinion with respect to quantum mechanics and chance; Karl Barth – Paul Tillich and how they envision the role of culture and philosophy in their theologies; and Heidegger and members of the Circle of Vienna with respect to the notion of philosophy and its relation to natural sciences.

Although the personal mental situation is extrinsic to the act of intelligence, this does not mean that it do not exercise an influence in the configuration of the system of reference and the elaboration of a sketch. Moreover, this personal mental situation is influenced by a social, cultural and historical situation, as we will see in the following subsection.

(iii) The cultural-historical situation and the extrinsic mental horizon.

This cultural-historical situation and mentality is not reduced to the situation and mentality of an individual. The first one includes the social, cultural and historical aspects of the researcher or scholar who elaborates the sketch. It is the situation of groups, societies, cultural contexts and periods of history that influence the personal mental situation. Zubiri provides as example the difference between the Greek and the Semite mentality.

Consider for example the historical situation of a physicist influenced by the mechanical and deterministic mentality that predominated until the beginning of the 20th Century. His sketches to explain natural phenomena are different to those elaborated by a physicist influenced by the mentality that emerges after the development of quantum mechanics. Consider also a biologist who sought to explain the relationship between species in the 17th century influenced by an essentialist mentality (i.e., the species are static essences) and a biologist influenced by the evolutionist mentality after Darwin’s concept of natural selection.

Finally, consider the difference in mentality between a catholic theologian situated in the

¹⁰⁰⁶ The underlined emphasis is ours. X. ZUBIRI, *El problema filosófico de la historia de las religiones*, p. 315.

historical context immediately after the Council of Trent and a catholic theologian situated immediately after the Second Vatican Council. Their interpretation of Scriptures and Tradition are clearly influenced by the historical-cultural context.

This socio-cultural mentality influences the personal mental situation and as such it influence the way we configures the system of reference and follow its suggestions to elaborate sketches. That is why, in addition to knowledge of an author's biography, knowledge about the historical period and situation of scholars helps to understand their sketches¹⁰⁰⁷.

Finally this type of socio-cultural mentality is what Zubiri calls **horizon** or **mental horizon**¹⁰⁰⁸. Zubiri explains this mental horizon through the idea of visual horizon.

*“Experience, then, presupposes something prior, something like the existence of a visual field within which diverse perspectives are possible. [...] Even in this dimension of man, apparently so vague and so primary, his existence is limited, as is the visual field for the eyes. This limitation is called horizon.”*¹⁰⁰⁹

This horizon limits the things in our field of reality and our vision of them. Without a horizon nothing would make sense because there would not be any meaning. This horizon “*makes possible the meaning as such and in him the things and man acquire meaning.*”¹⁰¹⁰ Our mental situation is influenced by the horizon in which we are immersed, even if we are opposed to it. If the mental situation belongs to the individual, a horizon of meaning belongs to groups, societies, cultural contexts and periods of history. The concept of horizon of meaning integrates the social, cultural and historical aspects and is originated in the interrelation between individual mentalities.

If the interrelation of individual mental situations of people in a cultural context and time period conforms the mental horizon and the horizon influences the personal mental configuration, where is the distinction? First of all, the personal mentality is influenced but is not reduced to the horizon. Sometimes a personal mentality does not share the dominant horizon, e.g., Jews in the Middle Ages did not share the dominant Christian horizon and today many Christians do not shared the dominant horizon of a post-Christian context. Another difference is found in the fact that the personal situation changes with a relative velocity while the mental horizon changes

¹⁰⁰⁷ “History must try to place our mind in the situation of the men whose epoch we are studying, not so as to lose us in diaphanous profundities, but so as to mentally repeat the experience of that epoch, to see the facts ‘from the inside.’” X. ZUBIRI, *Naturaleza, historia y Dios*, p. 192.

¹⁰⁰⁸ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 193 and 197.

¹⁰⁰⁹ The underlined emphasis is ours. X. ZUBIRI, *Naturaleza, historia y Dios*, p. 193.

¹⁰¹⁰ “El horizonte hace posible el sentido en cuanto tal, y en él adquieren sentido a un tiempo las cosas y el hombre”. X. Zubiri, *Sobre el problema de la filosofía*, quoted by Gracia in D. GRACIA, *Voluntad de Verdad*, p. 8-9.

slowly¹⁰¹¹. For that reason we are conscious of the changes in our personal situation but we are seldom conscious of the changes and mutations of the mental horizon.

Finally, these three mentalities (intrinsic structural mentality, a mental individual situation and a mental horizon) are interdependent and overlap in our configurations of the system of reference that influences our elaboration of a sketch¹⁰¹². The unity of these three mentalities is what Zubiri calls the “integral situation” of the human being¹⁰¹³. That is why sometimes Zubiri and Ladrière identify “horizon” and the “intrinsic structural mentality” (“the horizon of mathematics”, the “horizon of sciences”, the “ethical horizon”, “theoretical mentality” or “theoretical horizon”, etc.)¹⁰¹⁴ or unified the mental individual situation and the mental horizon within the expression “external factors of psychological or sociological origin” or “extra-intellectual qualities”¹⁰¹⁵.

Every sketch is elaborated within these three mentalities, although they are not explicitly stated. It is important to recognize them when we interpret somebody’s sketch. Moreover, they should be recognized when we seek to articulate different fields of knowledge, e.g., natural sciences and theology.

The sketch and the system of reference are fundamental elements of the rational method. However, the method is not completed without testing the sketch.

C. Experience as physical trials or test.

The sketch is something abstract: an outline that “could possibly be”. The third component of the method is to corroborate or to refute the sketch by returning to reality. This is what Zubiri

¹⁰¹¹ X. ZUBIRI, *Naturaleza, historia y Dios*, p.193.

¹⁰¹² Ladrière also refers to these three mentalities and how they guide the researcher’s way of thinking. For him there is a historical aspect in terms of the theory’s evolution (mental horizon), subjective conditions (personal mentality) and an intrinsic situation that belongs to the particular object and the concrete form of a rationality (intrinsic structural mentality). In Ladrière’s own words: “*La portée d’un concept dépend en effet non seulement de sa place dans l’évolution théorique d’une science, non seulement de sa situation par rapport aux conditions subjectives de l’élaboration conceptuelle, mais aussi de la situation particulière de la science dans laquelle il intervient, situation qui dépend à la fois de l’objet de cette science et de la lumière intelligible qu’elle projete sur cet objet*”. The underlined emphasis is ours. J. LADRIÈRE, *Concepts scientifiques et idées philosophiques*, p. 103-104 and 117-118.

¹⁰¹³ “*Man, in his diverse historical situations, keeps illuminating and obturating different internal possibilities for the intellection of reality. There is no doubt that, for example, the mathematical Physics of Galileo has illuminated fabulous possibilities for the intellection of reality. But, who is actually sure that the predominance of the mathematical vision of the universe has not left behind in the dark other dimensions, which nature offers to us? [...]Facing this inchoateness in a perfectly concrete situation, man is enlightened by certain possibilities. Nevertheless, this situation is an integral situation, the integral religious situation of man.*” The underlined emphasis is ours. X. ZUBIRI, *El problema filosófico de la historia de las religiones*, p. 315.

¹⁰¹⁴ Ladrière sheds some light into the relation between the field of reality and the mental horizon of meaning. As we already discuss, the system of reference is a conversion of the field of reality in order to elaborate and test our sketches. There is where we establish a reference. However, there is another aspect relative to our apprehension of a reality in the field of reality that is different to the question of reference: the question of meaning. The horizon of meaning is the point of view from which we consider the reality. The distinction and relation between the field of reality and the mental horizon of meaning is the relation and distinction between reference and meaning. J. LADRIÈRE, *L’articulation du sens III*, p. 306.

¹⁰¹⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 152-153.

calls **experience**. Here experience is first of all testing the sketch¹⁰¹⁶. As Zubiri defines it, “*experience as testing is the insertion of an outline or sketch into in-depth reality.*”¹⁰¹⁷ Zubiri even uses the adjective “physical” to characterize this testing. Here testing is physical in the sense of being different to what is called in the English speaking world “thought experiment”. The thought experiment normally is a test where we construct with the imagination a situation to prove an idea. The physical testing (vis-à-vis imaginary) is something really carried out, performed.

By means of the relation *system of reference – sketch* we have gone from the field of reality to what “could possible be” in the world. Through the experience as testing we return back from “what could possibly be” in the world to the field (which is the world as sensed). This “come back” is the test of the sketch into what is sensed in the field of reality¹⁰¹⁸.

According to Zubiri there are different modes of experience as testing. The first one is **obviousness**. A sketch is obvious if it experiences a corroboration (or rejection) in a “crystal clear” way. If that is the case we do not hesitate to accept it. There is a second mode that is not obvious but difficult. Zubiri calls it the **viability**. The experience of the viable assumes different modes in turn. These modes of the viable are: (i) an **experiment** as a physical controlled manipulation that forces the reality to show its nature¹⁰¹⁹, (ii) **compenetration** (which in Spanish means “mutual understanding” or “putting yourself in other’s shoes”) as an internal vision by “installing” myself in the interiority of the object of study (this could be the case with other human beings)¹⁰²⁰, (iii) **testing-together** (com-probación in Spanish) for the case of postulated realities (e.g., mathematics and formal axiomatic systems) where we test together the reality of A and the reality of B in the formula A “as being” B¹⁰²¹; and finally (iv) **conformation** where I experience myself as an insertion, into my own reality, of a sketch of possibilities of what I am¹⁰²². This last one could be the case of philosophy and theology.

This is the structure of the rational method: system of reference, sketch and experiences as testing. This experience or testing is the heart of the verification process.

¹⁰¹⁶ As we already mention, Zubiri sometimes uses the term “experience” to refer to the moment primordial apprehension. When we use “experience” in that sense we prefer the term “fundamental experience”. When we refer to experience as a methodological confirmation of a sketch we prefer the term “experience as testing”.

¹⁰¹⁷ X. ZUBIRI, *Inteligencia y Razón*, p. 227.

¹⁰¹⁸ X. ZUBIRI, *Inteligencia y Razón*, p. 228.

¹⁰¹⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 247-248.

¹⁰²⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 249-250.

¹⁰²¹ X. ZUBIRI, *Inteligencia y Razón*, p. 254.

¹⁰²² X. ZUBIRI, *Inteligencia y Razón*, p. 256.

III.4.3.3 The rational truth

Through experiences as physical trials, reason confirms if reality coincides or not with the sketch of possibilities. As we have already discussed, truth in the primordial apprehension is real truth, which consists in ratification. In the *logos* we found another mode of truth: the dual truth that consists in the coincidence. Now, in reason we have the **rational truth** that is the encounter, that takes place in experience as testing, between the sketch of the reality in-depth (reality beyond apprehension and found in the world) and the field reality¹⁰²³. To verify is to bring the sketch of the world to the field reality. This encounter consists in **verification**. Verification is the fulfillment of the sketch¹⁰²⁴. Verification is essentially a dynamic quality¹⁰²⁵; it is always *to go verifying*. It is also a progressive adequacy always unfinished where different rival sketches are tested¹⁰²⁶, e.g., waves' theory vis-à-vis photon theory to explain light, the hermeneutics of continuity vis-à-vis the hermeneutics of rupture to interpret the Second Vatican Council.

Zubiri calls "adequate verification" the verification that in a certain way is *total*. It is a complete fulfillment between the real and what has been sketched out¹⁰²⁷. However, the critical experiment that verifies completely and absolutely a sketch, the *experimentum crucis*, in practice seldom exists¹⁰²⁸. Zubiri affirms that verification always admits degrees. When the adequacy is not perfect, we have a partial verification. "*Experience is only the fulfillment of some aspects or moments of what has been sketched out. [...] What has been sketched is more or less firm in the physical testing of the real.*" In this case the total adequacy between the sketch and reality is only a remote goal of a never-ending intellectual dynamism. Consequently, all partially verified sketches are structural approximations to what should be a truth completely adequate to reality. Approximation here does not mean inaccuracy, falsehood or deficiency. It means gradual approximation to reality. Besides, Zubiri expresses that there are some sketches that are not verifiable in a positive sense. Some of them are verifiable in the negative sense of refutation or falsification. It is a negative experience¹⁰²⁹. Moreover, there are others that are neither verifiable nor refutable¹⁰³⁰. It is the case of suspended experience¹⁰³¹.

¹⁰²³ X. ZUBIRI, *Inteligencia y Razón*, p. 258 and 262.

¹⁰²⁴ X. ZUBIRI, *Inteligencia y Razón*, p. 263.

¹⁰²⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 269.

¹⁰²⁶ X. ZUBIRI, *Inteligencia y Razón*, p. 273.

¹⁰²⁷ X. ZUBIRI, *Inteligencia y Razón*, p. 274.

¹⁰²⁸ X. ZUBIRI, *Inteligencia y Razón*, p. 274.

¹⁰²⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 276.

¹⁰³⁰ Consider for example the sketch about the existence of multiverse, i.e., parallel universes, or the existence of another universe before the Big Bang. At least for the moment, these sketches are neither verifiable nor refutable.

¹⁰³¹ X. ZUBIRI, *Inteligencia y Razón*, p. 275-276.

Here Zubiri distinguishes between a **rational truth** and a **reasonable truth**. A rational truth happens when a sketch elaborated by reason coincides fully with the real thing. However, a reasonable truth is a truth that does not fully coincide, but it is in a process of convergence. A sketch of a fundament could be reasonable because reality exceeds the power of reason¹⁰³². Reasonable is the real which exceeds reason. We will see that this is the case with theological rationality.

III.4.3.4 Rational and reasonable systems

We see many systems produced by reason: systematic explanation of the cosmos, philosophical systems to explain the world, theological systems that interpret the Christian message, etc. Is reason inherently systematic? If that is the case, why?

Zubiri affirms that already in the primordial apprehension we encounter systems in the apprehended reality. In our apprehension, we do not apprehend fragments of the cosmos, but things as systematic unities that are closed and autonomous with respect to the apprehensor¹⁰³³. Thanks to our sentient structure we apprehend homogeneous closed systems, which are the apprehended real things such as trees, dogs, house, etc.

Moreover, in the field we apprehend each real thing “with respect to” other things. This is what Zubiri calls **respectivity**. First, there is a respectivity of the real thing to the primordial apprehension (a real thing is real “with respect to” my apprehension of it). Second, there is a respectivity in the field that is the apprehension of one real thing with respect to other things in the field¹⁰³⁴. According to Zubiri there is a systematic unity of respectivity in the field: we apprehend each real thing in unity (of respectivity) to other things. In addition, the world is that unity in respectivity of the real things as real beyond my apprehension¹⁰³⁵. Things are not independent of each other. They are in a constitutive interdependence of other real things¹⁰³⁶.

In reason, we freely construct a system of possibilities (a model, a hypothesis or a theory) of the reality beyond our apprehension¹⁰³⁷. In other words, the sketch is a system of possibilities of what a thing is as a worldly reality¹⁰³⁸. For Zubiri, reason is systematic because there is a

¹⁰³² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 284.

¹⁰³³ X. ZUBIRI, *Inteligencia y Realidad*, p. 203.

¹⁰³⁴ X. ZUBIRI, *Inteligencia y Logos*, p. 27-28, 31.

¹⁰³⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 278 and 282.

¹⁰³⁶ This will be discussed below in chapter 6, section VI.1.3.2.

¹⁰³⁷ X. ZUBIRI, *Inteligencia y Realidad*, p. 221.

¹⁰³⁸ “Knowing begins with a system of reference from which one sketches a system of possibilities which permit one to experience what a thing is as worldly reality.” X. ZUBIRI, *Inteligencia y Razón*, p. 222.

systematic unity of all rational and reasonable truths. Reason is systematic because it bases its sketches (systems of possibilities) on previous sketches. Consider Zubiri's statement:

*“Explanation is formally and constitutively systematic. Rational truths as such constitute a system. This means, first of all, that every explanation is sketched based on others. In field intellection we see that each thing is intellectually known based on others. Now, in rational intellection, each explanation is intellectually known based on others. Conversely, every explanation leads, in and by itself, to others, and is only an explanation in unity with them. Therefore every rational intellection leads intrinsically and formally to its own superceding in others.”*¹⁰³⁹

If each explanation (sketch) is a “possible” then the systematic unity of explanations is a unity of “co-possibles”. What does this systematic unity of explanations seek? Zubiri's answer is *the system of the world*¹⁰⁴⁰ and this system is the unity of respectivity of the world where each thing is real with respect to other real things in the world. The systematic unity of all rational and reasonable truths refers and is due to the systematic character of the world.

*“The system is the unity of respectivity of the world. Therefore, the fact that every explanation is understood based upon others does not mean that it is deduced from them. It means rather that every explanation refers to others, regardless of what the mode of referral may be. The referral itself is the systematic character of the world, and not the other way around. The reasoning process is founded upon the respective character of the world, the respective character of reality rationally known intellectually. Only because the world is systematic unity, and only because of this, can there be, in some cases, a reasoning process. The essential unity of the world is not, then, reasoning; it is the real unity of respectivity.”*¹⁰⁴¹

Reason is not only systematic. It is also formally historical¹⁰⁴². Reason generates knowledge of the structures of reality in a process of adjustment, fitting and growing enrichment although it has not arrive, and perhaps it would never arrive, to the absolute identity between the sketch and the reality of the systematic unity of the world¹⁰⁴³.

III.5 Philosophy and its relation with science

Metaphysics and science are elaborated by reason to understand reality beyond apprehension. However, they are not equivalent. What are the differences between these two elaborated knowledges and how can they interact?

¹⁰³⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 287-288.

¹⁰⁴⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 288.

¹⁰⁴¹ X. ZUBIRI, *Inteligencia y Razón*, p. 289-290.

¹⁰⁴² X. ZUBIRI, *Inteligencia y Razón*, p. 302.

¹⁰⁴³ A. FERRAZ-FAYOS, *Zubiri: El realismo radical*, p. 87.

III.5.1 The meaning of research

When Zubiri accepted the prize *Ramón y Cajal* due to his research in philosophy, he made a presentation where the issue of research in philosophy and sciences was addressed¹⁰⁴⁴. There he affirms that we do research on the truth of reality itself. To do research is to show, to uncover what is manifested by reality itself. Research is a quest. Therefore, it is an activity of reason. All real things are constitutively open and for that reason research is always an activity that is never finished or complete. Reality is always open and multiple. Let's consider two aspects of this multiplicity of reality: the forms and the modes of reality.

III.5.1.1 Scientific research as a quest to understand the forms and modes of reality

The concrete thing that we apprehend has a particular content (notes and properties). The content is specific to each thing. The apprehended content normally does not have one note but many, it is a constellation of notes. In that case, what is real, what is *de suyo*, is not an individual note, but the whole ensemble of notes. Each note is real only in unity with other real notes of the constellation to the point that each note is a “note of” the constellation¹⁰⁴⁵. In that case, the ensemble is a constellation with a unity that is *de suyo*. This unity and closed totality, where all notes are “notes of” the constellation, is what Zubiri calls a **system**¹⁰⁴⁶. Each thing is a concrete form of reality with a system of notes that constitutes a form of unity of reality¹⁰⁴⁷. Each real thing is a coherent unity between its openness to other realities (the transcendental dimension) and its closure in itself¹⁰⁴⁸. If that would not be the case I could not distinguish an animal (e.g., a cat) from its environment (e.g., a garden). The animal is a systematic unity and closed totality different from plants, grass, stones, etc. At the same time, the animal is open in respectivity to other realities. The animal has a connection with its environment¹⁰⁴⁹.

A form of reality is an autonomous system of notes that constitutes concrete things, e.g, a star, cooper, tree, dog, the human being, etc. Dogs and cats shares some notes. However, the structure of the notes constitutes two different system of notes, i.e., two different forms of realities.

¹⁰⁴⁴ The date of this presentation is October, 19th 1982, one year before his death. He received this prize with Severo Ochoa, a well known scientist. X. ZUBIRI, *¿Qué es investigar?*, 1982.

¹⁰⁴⁵ X. ZUBIRI, *Inteligencia y Realidad*, p. 203.

¹⁰⁴⁶ X. ZUBIRI, *Inteligencia y Realidad*, p. 203.

¹⁰⁴⁷ X. ZUBIRI, *Inteligencia y Realidad*, p. 209-210. D. GRACIA, *Voluntad de Verdad*, p. 175.

¹⁰⁴⁸ P. SECRETAN, *El concepto de realidad en la filosofía de Xavier Zubiri*, p. 333 and 341.

¹⁰⁴⁹ X. ZUBIRI, *Inteligencia y Realidad*, p. 197. P. SECRETAN, *El concepto de realidad en la filosofía de Xavier Zubiri*, p. 342.

In addition, the content not only constitutes a particular form of reality but also a “mode of reality”. The mode of reality is a mode of being system that is shared by many forms of reality. There are countless forms of realities (systems of notes), however there are three modes of realities. These modes of realities are: (i) the material thing that just have notes as its own because it is a systematic unity; (ii) the mode of being alive; and (iii) the mode of person¹⁰⁵⁰.

Scientific research is the quest for the notes, the different properties of each real thing, for the dispositions of these notes into a systematic unity with its structure (the forms of reality) and the different modes of reality (material, organic and personal). This constitutes the diversity of sciences. Each real thing is related and in function of other real things due to its content and its internal structures. It is the task of sciences to study these functions, relationships and internal structures, which in the case of empirical-formal sciences are expressed by laws. The unity of all real things in terms of their contents, their functions and respectivity is what Zubiri calls the *cosmos*. The cosmos is the unity of all things (respectivity) considered from the perspective of the dimension of the apprehended content: notes and system of notes. To summarize, scientific knowledge seeks the structures of the content (notes and properties)¹⁰⁵¹.

However, there is another research that seeks not the concrete properties of the real thing and its systematic unity, but the character of the real as real¹⁰⁵². That is the research of philosophy.

III.5.1.2. Philosophical research as a quest to understand the real as real

Sciences study the specific content of things (notes and properties, systematic unity of notes and their internal structures). The content is specific (such color, such sound, such temperature, etc.). However, as we already explained, we apprehend not only a specific content but also the real thing as autonomous or *de suyo*, which is the aspect of formality of the apprehension. The formality of reality is not specific because it transcends the contents¹⁰⁵³. This transcendentalism means beyond the concrete content due to the openness of reality. This openness (transcendentalism) of real things is due to the fact that reality is not reduced to a real

¹⁰⁵⁰ In Zubiri's own words: “Many forms of reality can, then, have the same mode of reality. And these modes, as we have just seen, are three: mere having “as its own”, self-possessing, and being a person.” To simplify the expression we call the “mere having as its own its note” material mode of reality, the “self-possessing” as the living mode of reality and we follow the term “person”. However, we should not lose the perspective that for Zubiri these modes are not independent. On the contrary, each mode assumes the previous one: living organism have their notes as their own, person are also self-possessing. X. ZUBIRI, *Inteligencia y Realidad*, p. 211-212.

¹⁰⁵¹ X. ZUBIRI, *Inteligencia y Realidad*, p. 357. D. GRACIA, *Voluntad de Verdad*, p. 166.

¹⁰⁵² As we already discuss it, this is the same position of Ladrière. See J. LADRIÈRE, *Concept scientifique et idées philosophiques*, p. 151. See also J. LADRIÈRE, *L'articulation du sens III*, p. 275.

¹⁰⁵³ D. GRACIA, *Voluntad de Verdad*, p. 179.

thing. Reality overflows all concrete real things and makes them open in respectivity to other things in the field and to the world¹⁰⁵⁴.

A real thing is open with respect to other things in the field (respectivity). Moreover, a real thing is open with respect to reality as reality, the world. The **world** is neither the ensemble of real things nor the set of forms and modes of reality (that is the cosmos). It is the transcendental character of each real thing¹⁰⁵⁵, which means that the real is real with respect to other realities¹⁰⁵⁶. The transcendental dimension of reality is the formal openness of real things, their character of respectivity in the field and their worldly aspect¹⁰⁵⁷. The transcendental dimension drives me from “such” specific reality to the whole of reality, the unity in respectivity beyond our apprehension called the world¹⁰⁵⁸. In the transcendental dimension we apprehend each real thing as **established** in the world, as worldly real¹⁰⁵⁹.

There are various **figures of establishment** in the world¹⁰⁶⁰. Things belong to the world in various ways. First, there is the figure of **integration** in the world, which includes living non-human realities as well as non-living things. Integration is the unity of non-living things and non-human living things. An animal in the jungle is integrated to the world. The human reality shares this condition but is not reduced to it. The human person is relatively independent of everything else in the world. Besides integration, there is another figure that corresponds to the human being: **absolutization**. As an animal the human reality is integrated to the world through the body. However, as a human person he is relatively detached¹⁰⁶¹ and not completely integrated to its circumstances or to the world. The unity of human persons is primarily the **society**. There is also another superior unity, the personal **communion** with other persons¹⁰⁶².

Philosophy is a research that seeks not the concrete properties of the real thing (that is the task of science), but the character of the real as real. This research seeks in what consists to be

¹⁰⁵⁴ P. SECRETAN, *El concepto de realidad en la filosofía de Xavier Zubiri*, p. 333.

¹⁰⁵⁵ “What is the world? It is not the conjunction of real things, because this conjunction presupposes something which ‘conjoins’ these things. Now, that which conjoins real things is not some common concept with respect to which the real things are simply special cases. That which conjoins is a physical moment of the real things themselves. And this moment is the moment of pure and simple reality of each one of them. The character of being purely and simply real is what—because it is an open character—formally constitutes that physical unity which is the world. It is the formality of reality qua open, qua transcendent, of the real thing, and what constitutes it in a moment of reality itself. It is an openness, then, which radically and formally concerns each real thing by the fact of being purely and simply real. Therefore, were there but one single real thing, it would be constitutively and formally “worldly”. Everything is de suyo worldly. In this respect, each real thing is more than itself: it is precisely transcendental; it has the transcendental unity of being a moment of the world. The formality of reality is thus ‘world-making’.” X. ZUBIRI, *Inteligencia y Realidad*, p. 121-122.

¹⁰⁵⁶ J.-A. NICOLÁS, *La teoría zubiriana de la verdad*, p. 304.

¹⁰⁵⁷ D. GRACIA, *Voluntad de Verdad*, p. 180-181.

¹⁰⁵⁸ A. FERRAZ-FAYOS, *Zubiri: el realismo radical*, p. 156.

¹⁰⁵⁹ X. ZUBIRI, *Inteligencia y Realidad*, p. 212.

¹⁰⁶⁰ Zubiri sometimes calls this “figures” as “modes”. See D. GRACIA, *Voluntad de Verdad*, p. 181.

¹⁰⁶¹ The etymology of the term “absolute” in Latin is “freed” and “unrestricted”.

¹⁰⁶² X. ZUBIRI, *Inteligencia y Realidad*, p. 213-214.

real: the different modalities of being real and their establishment in the world and the difference between what is to be real as a thing integrated in the world and what is to be real as a person relatively detached from the world and in social and communitarian relationships.

III.5.2 Zubiri's different conceptions or types of philosophies and their methods

According to Zubiri, philosophy seeks not the concrete properties of the real thing, but the character of the real and its apprehension of it. For that reason philosophy seeks the structure of our apprehension of reality (*noology* and first philosophy) and the reality as a moment of the world (metaphysics). Lets consider each one.

III.5.2.1 Philosophy as *noology* and as first philosophy: a phenomenological description of the human intelligence

Following Ladrière's classification, there are two types of speculative philosophy in Zubiri. The first one is *noology*, which is a description (and not a theoretical explanation) of the act of intelligence. Here, Zubiri, as Husserl, follows the method of the *epoché*¹⁰⁶³. On it, Zubiri put between parentheses the reality beyond apprehension. Once he reduces everything to what is apprehended he discovers that the ultimate experience and ground is neither conscience (against Husserl) nor the comprehension of Being (against Heidegger), but the apprehension of reality. Its objective is to ground all our descriptions and knowledge (scientific and philosophic) in the most elementary and primordial apprehension of experience. This is intimately connected to first philosophy understood as the analysis of "reality" as apprehended by the act of the intellection¹⁰⁶⁴. As we already explained, through the act of co-actualization of the apprehension and the reality apprehended, intelligence and reality as apprehended are intrinsically united. Consequently, *noology* and first philosophy are connected.

III.5.2.2 Philosophy as metaphysics of the world

There is another type of speculative philosophy: metaphysics. Metaphysics goes to something beyond the obvious things that we encounter in ordinary life¹⁰⁶⁵. Its object is something beyond the immediate primordial apprehension, although it is grounded in it¹⁰⁶⁶. That

¹⁰⁶³ V.-M. TIRADO SAN JUAN, *Zubiri y Husserl*, p. 164.

¹⁰⁶⁴ D. GRACIA, *Voluntad de Verdad*, p. 112.

¹⁰⁶⁵ X. ZUBIRI, *Los problemas fundamentales de la metafísica occidental*, p. 18.

¹⁰⁶⁶ D. GRACIA, *Voluntad de Verdad*, p. 112.

is the sense of the prefix “*meta*” in metaphysics: starting in the content of what is immediately apprehended, it goes beyond it¹⁰⁶⁷. Metaphysics transcends the specific content, which is studied by science, and brings us to reality as reality, i.e., the whole of reality, which is in all real things. This metaphysics pretends to be knowledge of reality as reality, the transcendental dimension of the world¹⁰⁶⁸. Natural sciences seek the ground (reality in-depth) by studying the specific content of the apprehended things. Its overall object is the cosmos, which is the totality of things in terms of their content and disposition of notes. Metaphysics seeks the reality in-depth beyond apprehension by studying the formality of the real as real. Its overall object is the world, which is the unity in respectivity of the real as real¹⁰⁶⁹. Does this mean that philosophy (metaphysics) and science are independent knowledge? With the development of natural science, does something as metaphysics or philosophy of nature make sense?

The content of the apprehension constitutes a particular “form of reality” and also a “mode of reality”. The formality of reality transcends the contents but is not independent of it. The content (the notes and its dispositions) determines the modes of reality and the figures of establishment in the world. For that reason the cosmos (the unity of real things in terms of their content, functions and respectivity) and the world (the unity of the real as real in the transcendental dimension) are not two zones of reality different and independent. They are two aspects that we can distinguish in the real (content and formalization as the transcendental dimension) with a relation¹⁰⁷⁰. Consequently, real things apprehended are the point of departure to go to what transcends the obvious. Metaphysics transcends the specific content studied by science but depends on it to bring us to reality as reality¹⁰⁷¹. Their relation and articulation are based on the fact that each time we apprehend a real thing we apprehend a content, which is varied and specific, and the unspecific formality of reality (the transcendental dimension). The content is neither something separated nor confused with the formality of “*de suyo*”¹⁰⁷².

This means that part of the basis of metaphysics comes from science¹⁰⁷³. In that sense, metaphysics (and philosophy of nature) cannot be developed without the content studied by science. The scientific results about the content of reality shed light on the modes of reality and

¹⁰⁶⁷ A. PINTOR-RAMOS, *Zubiri y la historia de la filosofía*, p. 20.

¹⁰⁶⁸ “[I]t suffices to indicate that the metaphysical is the order of the real qua real, i.e., the order of the transcendental. Now, the transcendental is not something conclusive and a priori; it is something given in impression (the impression of reality), and it is something open, and dynamically open. Metaphysical truths are only stages of the intellectual progression toward the truth of reality.” X. ZUBIRI, *Inteligencia y Realidad*, p. 285.

¹⁰⁶⁹ X. ZUBIRI, *Inteligencia y Logos*, p. 17.

¹⁰⁷⁰ A. FERRAZ, *La filosofía de la naturaleza*, p. 352.

¹⁰⁷¹ See D. GRACIA, *Voluntad de Verdad*, p. 166.

¹⁰⁷² A. FERRAZ-FAYOS, *Filosofía, ciencia y realidad: apuntes zubirianos*, p. 86.

¹⁰⁷³ A. FERRAZ, *La filosofía de la naturaleza*, p. 353.

the figures of their establishment on the world. Metaphysics is not interested in the scientific theories about the content of reality but in the fact that the material reality is structured in a way that produced different forms and modes of reality with different establishment in the world¹⁰⁷⁴. We can do metaphysics about matter, time, space, and the hominids using information provided by science. On these matters, philosophy does not have information coming from a particular philosophical method. A philosopher studies real things that are studied by science and should take into consideration scientific facts and discoveries. Sciences consider these things from the perspective of it's the content of its own properties or notes. Meanwhile philosophy considers it from the perspective of reality itself and the modes of reality as moments in the world. We are doing metaphysics when we ask about real things studied by sciences in terms of their reality, i.e., in what sense an electron or any other subatomic particle is real? This is beyond the possibility of science. This is the task of metaphysics that thinks about the reality of things as moments of the world. That is why Zubiri's metaphysics is described as "with science but beyond science"¹⁰⁷⁵.

Metaphysics has the essential components of all rationalities: object, method and the verification process¹⁰⁷⁶. The object of metaphysics is reality itself in its different modes and figures in the world. Being a quest of reason, the method is the one already described: system of reference, sketch and experience. Finally it includes a process of verification. Let's consider the method in metaphysics.

III.5.2.3 Zubiri's method in metaphysics

Zubiri's method in his philosophy is grounded in his analysis where he uncovers three structural moments of the one act of intelligence: the primordial apprehension of reality as a fundamental experience, the logos and reason. In Zubiri's practice of philosophical and metaphysical elaborations, Cabria-Ortega distinguishes two moments of one method that corresponds to these three structural moments: (i) a moment of analysis and description (grounded in the primordial apprehension and the *logos*) and (ii) a moment of explanation (that follows the moment of reason)¹⁰⁷⁷. The first one is related to the analysis (i.e., *epoché*) of what is

¹⁰⁷⁴ A. FERRAZ, *La filosofía de la naturaleza*, p. 354.

¹⁰⁷⁵ A. FERRAZ, *La filosofía de la naturaleza*, p. 354.

¹⁰⁷⁶ D. GRACIA, *Voluntad de Verdad*, p. 166.

¹⁰⁷⁷ Diego Gracia agrees with Cabria-Ortega position. Gracia explains that Zubiri's method in different areas of philosophy and metaphysics consists of the phenomenological method (analysis of facts) and from there Zubiri elaborates his metaphysics. D. GRACIA, *Zubiri y la experiencia teológica*, p. 251-252. This is also the position of Tirado San Juan. See V.-M. TIRADO SAN JUAN, *Zubiri y Husserl*, p. 163.

immediately apprehended by the primordial apprehension and described by the *logos*¹⁰⁷⁸. When Zubiri describes through concepts what we apprehend immediately he is already in the moment of the *logos*. We should remember that in the primordial apprehension and in the *logos* we are in the reality as apprehended. In this moment of analysis and description Zubiri searches the facts in the field of reality. This is precisely what Diego Gracia calls “first philosophy”¹⁰⁷⁹. This analytical and description moment corresponds with one type of speculative philosophy in Ladrière’s classification: a descriptive phenomenology.

The second moment is a theoretical process operated by reason to explain reality beyond our apprehension. Here Zubiri opens a new way of doing metaphysics that takes advantages of the facts uncovered and described by the *epoché*. The motto of his effort is *from phenomenology to metaphysics*¹⁰⁸⁰. There he seeks to surpass Husserl’s phenomenology of the consciousness¹⁰⁸¹. The field of reality is transformed into a system of reference through the philosophical mentality. Zubiri develops his metaphysical sketches considering and integrating the facts found in the first moments of analysis and description, the suggestions from the system of reference and scientific facts elaborated following the scientific method. According to Antonio González, the force of Zubiri’s method is its capacity to integrate facts that emerge from the phenomenological analysis and facts that emerge from other rational methods¹⁰⁸². This theoretical moment of Zubiri’s method corresponds with the transcendental (speculative) philosophy in Ladrière’s classification. These rational constructions are always provisional and in need of revision. A philosopher must always test his metaphysical sketches with the experience¹⁰⁸³. Although Zubiri does not affirm it explicitly we believe that it is testing as conformation where I test in myself as an insertion, into my own reality, as a sketch of possibilities. It should be tested as well with the results of scientific research.

III.6 Zubiri and Ladrière: complementary or contrary philosophies?

We have discussed the contributions of Ladrière and Zubiri in terms of an analysis of the act of intelligence and its correlation to reality. Let’s now compare both of their analysis, their strengths, their limits and their complementarity.

¹⁰⁷⁸ J.-L. CABRIA-ORTEGA, *Relación teología-filosofía en el pensamiento de Xavier Zubiri*, p. 412-413.

¹⁰⁷⁹ D. GRACIA, *Voluntad de Verdad*, p. 113.

¹⁰⁸⁰ J. CONILL, *El sentido de la noología*, p. 285-286.

¹⁰⁸¹ J. CONILL, *El sentido de la noología*, p. 287.

¹⁰⁸² A. GONZÁLEZ, *Aproximación a la filosofía zubiriana de la religión*, p. 504.

¹⁰⁸³ D. GRACIA, *Voluntad de Verdad*, p. 241-242.

III.6.1 Same philosophical objective

Zubiri and Ladrière seek a foundation of human intelligence and rational thought that takes into consideration the limits and the historical efforts of reason. They want to go beyond the foundational crisis and the crisis of reason without pretending to arrive to a final total system of the whole. Husserl influenced them, although they criticize his idealist conclusion of the transcendental pure consciousness that renders problematic the constitution of the world. They are engaged in a serious dialogue with other rational systems such as natural and social sciences. Finally, they propose a speculative philosophy, a metaphysics, which considers scientific facts, discoveries and conclusions. For them, the task of any rational knowledge is a never-ending work that always approximates reality.

Ladrière mentions that the ultimate foundation of intelligence consists of two moments: the manifestation of things and a fundamental immediate experience characterized by an inseparable couple sense-reason. In the first one he was influenced by Heidegger's understanding of *aletheia* as unconcealment. Zubiri grounds our act of intelligence completely in the primordial apprehension as a fundamental immediate experience.

One difference is the method applied by both thinkers to retrieve the foundations of the human act of intelligence and rational thought. Ladrière follows an inductive method: a survey and analysis of different forms of rationalities. Zubiri's method is a phenomenological analysis (*epoché*) of the internal structure of the intellectual act and the idea of reality¹⁰⁸⁴.

III.6.2 Contributions of Zubiri

For Zubiri, there are three intellectual modes of actualizing reality: primordial apprehension of reality, which is intuitive¹⁰⁸⁵; the *logos*, which is descriptive; and reason, which is explanatory¹⁰⁸⁶. These three modes are not autonomous levels; they belong to one united act of the intelligence. Zubiri analysis makes possible to go beyond the ancient impasse and opposition between reality and appearance. For him, there are appearances that could end in logical and rational errors. However, even these appearances have as a base the presence of physical notes or properties as "*de suyo*". The presence of physical notes in the primordial apprehension, even when they are limited, enables Zubiri to reestablish the confidence on the human intelligence and

¹⁰⁸⁴ X. ZUBIRI, *Inteligencia y Realidad*, p.14 and 20

¹⁰⁸⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 337. Intuition here is not in the sense of Husserl's intuition of the *eidos*, the essence of the thing given immediately to conscience. D. MORAN, *Edmund Husserl. Founder of phenomenology*, p. 97-98. I. GOMEZ-ROMERO, *Husserl y la crisis de la razón*, p. 122.

¹⁰⁸⁶ D. GRACIA, *Ciencia y filosofía*, p. 9 and 26.

capacity. Nevertheless, this confidence is not absolute but limited due to the errors we make. Another contribution of Zubiri is his concept of reason. He grounds in his analysis what Ladrière discovers in his comparative study of reason: all rational knowledge consists of an object, a method and a verification process. Finally, Zubiri distinguishes different notions of truth related to different moments of the intellectual act: real truth as ratification in the primordial apprehension, dual truth as coincidence in the *logos* and rational truth as verification in reason.

This is a summary of Zubiri's effort to overcome the foundational crisis of reason. He, as Ladrière, does not develop a notion of an absolute reason attached to a final total system of the whole. He affirms that reason is historical and operates in trials and errors, not only in sciences, but also in all types of rational enquiry, which includes philosophy and theology.

Zubiri criticizes and corrects what has been the main conception of western philosophy about the intelligence: the concipient or sensible intelligence (see Table 4.1). This concipient or sensible intelligence has as the primary object the sensible. According to this view, the object is given to the intelligence. The formal act and main activity of the intelligence is to conceptualize and to judge. For Zubiri, this is the main problem of the western concept of intelligence. We have separated sense and intelligence as two acts or faculties. Zubiri discovers that the formal object is not the data provided by the sense, but reality as given by the senses "in" the intelligence. As a consequence, the fundamental activity is not the conceptualization of data or the sensible, but the primordial apprehension of reality, which is pre-linguistic and ineffable. To think that concepts and judgments are the foundations of the intellect is to fall in what Zubiri calls "the logification of the intelligence". This "logification of the intelligence" has a series of consequences:

(a) The "logification of the intelligence" conceives the *logos* as the foundation of our intellectual act.

(b) The *logos* would be separated from real things as a consequence of separating senses and intelligence.

(c) Finally, the *logos* is considered as self-sufficient and an autonomous act or level of thinking¹⁰⁸⁷.

According to Zubiri, the "logification of the intelligence" is mistaken in thinking that truth appears in language (concepts and judgments) and not in a prelinguistic primordial apprehension of truth.

¹⁰⁸⁷ A. PINTOR-RAMOS, *Realidad y Verdad*, p. 198.

Table 4.1 Concipient vs. Sentient Intelligence

	Concipient or Sensible Intelligence	Sentient Intelligence
Object	Primary object: the sensible.	Proper object: reality
	The object is given by the senses “to” the intelligence.	This formal object is not given by the senses “to” the intelligence, but is given by the senses “in” the intelligence.
Formal act of the intellect	Conceptualizes and judges what is given by the senses “to” the intelligence.	Apprehension of reality; the sentient apprehension of the real.
Notion of the <i>logos</i>	It is the <u>logification of the intelligence</u> : intellection is converted into a declaration of what a thing is. It is the identification of the intellection and the predicative <i>logos</i> . It subsumes the intellection under the <i>logos</i> ¹⁰⁸⁸ . To know is to judge.	The <i>logos</i> is grounded upon sentient apprehension of the real; i.e., in sentient intellection. Instead of “logifying” intellection, Zubiri “ <u>intelligizes</u> ” the <i>logos</i> : i.e., make the <i>logos</i> an ulterior mode of the primordial apprehension of the real ¹⁰⁹¹ .
	The essence of the <i>logos</i> consists in predicative affirmation.	The <i>logos</i> , prior to being a declaration, is intellection of one thing based upon other things in the field. This means that the <i>logos</i> itself is an ulterior mode of intellection ¹⁰⁹² .
	Rational truth is logical truth ¹⁰⁸⁹ . Consequently, it also conceptualizes reason in the mode of the <i>logos</i> ¹⁰⁹⁰ .	Reason is another ulterior mode of intellection different from the <i>logos</i> .

One limit of Zubiri is that he even seems to pay no attention to the linguistic and the hermeneutics turn of the 20th century. Although he reflects about the *logos*, he does not reflect upon the role of language in the *logos*. Finally, in Zubiri’s three volumes of *Inteligencia Sentiente* the issue of practical reason and the specific rationality of ethics is absent¹⁰⁹³.

III.6.3 Contributions of Ladrière

In his comparative analysis of concrete figures of rational knowledge, Ladrière contributes to clarify that reason is characterized by being plural. He also has the merit of considering not only theoretical rational systems, but also practical rationalities. Ladrière analyses the concrete role of concepts, discourses and experiences in our rational theories. He offers a catalogue of philosophical rationality that enables us even to better understand Zubiri’s project of *noology* (descriptive phenomenology) and metaphysics (theoretical philosophy). Fundamental immediate experiences are related to the manifestation of things¹⁰⁹⁴. This prepares the terrain for relating the

¹⁰⁸⁸ X. ZUBIRI, *Inteligencia y Realidad*, p. 224.

¹⁰⁸⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 296.

¹⁰⁹⁰ X. ZUBIRI, *Inteligencia y Razón*, p. 315.

¹⁰⁹¹ X. ZUBIRI, *Inteligencia y Realidad*, p. 225.

¹⁰⁹² X. ZUBIRI, *Inteligencia y logos*, p. 48.

¹⁰⁹³ He grounds ethics in his analysis of the will and not in his work of sentient intelligence. See X. ZUBIRI, *Sobre el sentimiento y la volición*, Madrid, Alianza Editorial, 1992.

¹⁰⁹⁴ Zubiri elaborates his concept of manifestation in the “real truth”. “*Manifestation is not the same as making evident, because what is evident is certainly manifest, but it is evident because it is manifested. Manifesting is the mode of ratification of the totality*”

fundamental experience with revelation in theology.

Moreover, Ladrière analysis of language is one of its mayor contributions. He analyses the transgressive capacity of language and its capacity to manifest as a linguistic formulation a reality previously apprehended. Ladrière shows the presence of an act of interpretation in different rational systems. He makes explicit how philosophy can appropriate conclusions and facts of science in a process of semantic transgression. He also contributes with his studies of the relation between truth and meaning at the linguistic and human life level.

One limit of Ladrière is that he did not free himself fully from Hegel's philosophy, reason is a human faculty (identify with the *logos*) and an autonomous historical movement. For Ladrière reason becomes hypostases in concrete historical institutions and systems.

After mentioning the contributions and limits of Ladrière and Zubiri, there is fundamental question. Can we relate Ladrière's contributions in linguistic analysis, hermeneutics and interdisciplinary dialogue with Zubiri's analysis of the intelligence act and the real? That is our effort in the following subsections¹⁰⁹⁵.

III.6.4 From the apprehension of reality to the quest for meaning and comprehension of human life

This section is our effort to relate Ladrière's contribution in the field of philosophy of language and hermeneutics with Zubiri's analysis of the apprehension of reality. We will follow the works of others to elaborate that articulation between both scholars. In addition, this effort will be fruitful in chapter 5 where we will analyze the theological rationality¹⁰⁹⁶. Theology claims that it has an access to a revealed reality. At the same time the method in theology is hermeneutics of the meaning of revelation as witnessed in some foundational texts. How do we relate this access to a reality (Zubiri's contribution) with meaning and the hermeneutical character of theology (Ladrière's contribution)? Let's consider in the following lines the articulation of these two perspectives.

All developments of the pre-linguistic primordial apprehension of reality are done in the

in richness; a thing manifests the richness of all its notes." X. ZUBIRI, *Inteligencia y Realidad*, p. 240. According to Juan Antonio Nicolas, Zubiri integrates in the **real truth** as ratification the constitutive moment of the self-unconcealment of reality as was expressed by Heidegger's notion of *aletheia*. J.-A. NICOLÁS, *La teoría zubiriana de la verdad*, p. 294 and 302.

¹⁰⁹⁵ As Pintor-Ramos affirms, Zubiri leaves the foundations to develop a philosophy of language. See A. PINTOR-RAMOS, *Realidad y Verdad*, p. 187.

¹⁰⁹⁶ As we will see in the following chapter, theology claims that it has an access to a revealed reality. At the same time its method is hermeneutics of some foundational texts. How do we relate this access to a reality (Zubiri's contribution) with the hermeneutical character of theology?

medium of language¹⁰⁹⁷. Ladrière and Zubiri agree on this¹⁰⁹⁸. We unfold and develop this foundational experience through a scientific, philosophical, theological or poetic language, among others. Ladrière affirms that all these languages constitute semantic constellations or horizons. They have a historical dimension and evolution that we must take into account. We should not describe (*logos*) or explain (reason) an experience using concepts from another social, cultural and historical context without re-interpreting their meaning by means of other concepts and discourses. However, what is the relation between language and the act of apprehension in the *logos*? Let's discuss how language and meaning are rooted in the *logos* and its dual apprehension. Then we will discuss how interpretation and hermeneutics are rooted in reason.

III.6.4.1 Language and meaning in the *logos*

We do not apprehend meaning in the primordial apprehension due to its ineffable or pre-linguistic character¹⁰⁹⁹. In this fundamental experience we apprehend contents (notes and properties) in the formality of *de suyo*. Meaning and language belong to an ulterior mode of apprehension, which is the *logos*. The *logos* is the specific mode of apprehension of all meaning¹¹⁰⁰, which does not mean that the *logos* is only about meaning. The simple apprehensions are these structures in the *logos* that make possible language with its concepts, affirmations, discourses and their meanings¹¹⁰¹.

A. Meaning as enrichment in the *logos* of the content apprehended in the primordial apprehension.

Pintor-Ramos proposes, from the perspective of Zubiri's philosophy, that meaning is added in the *logos* to the primordial apprehension. Meaning is not something we can find in the actualization of a real thing in the primordial apprehension. We develop the content of this original experience in the *logos* and in reason, adding to it other received realities, such as language and meaning¹¹⁰². As an act of the *logos* based on simple apprehensions (percepts, items

¹⁰⁹⁷ When we state that there is a pre-linguistic (in french *antéprédicatif*) character of the primordial apprehension we state that language does not ground this experience. On the contrary, it is this apprehension that grounds language and all other intellectual acts. The prefix "pre" should not be understood in the sense of being a temporally "before of". It should be understood in the sense of dependency and foundation. The characteristic of "pre-linguistic" does not mean that language does not have any role, as we will see.

¹⁰⁹⁸ Ladrière agrees that signification and meaning are not immediately given in the world. J. LADRIÈRE, *l'articulation du sens I*, p. 26.

¹⁰⁹⁹ A. PINTOR-RAMOS, *Realidad y Verdad*, p. 191.

¹¹⁰⁰ A. PINTOR-RAMOS, *Realidad y sentido*, p. 150.

¹¹⁰¹ A. PINTOR-RAMOS, *Realidad y Verdad*, p. 193.

¹¹⁰² A. PINTOR-RAMOS, *Realidad y Verdad*, p. 196-197.

of fictions and concepts), meaning is conventional; it is a free creation. Nevertheless, that does not mean that meaning is arbitrary. First of all, meaning is grounded in the notes and properties of the real thing¹¹⁰³. Second, meaning is grounded in the relation of the apprehended thing with other things in the field reality.

Meaning is always grounded in the content (notes and properties) of real things. However, meaning cannot be reduced to this physical content; it is “more”. Consider a symphony, which is grounded in the physical notes and properties of sounds actualized in the primordial apprehension. The symphony’s meaning is “more” than this set of physical notes and properties. A painting is grounded in the physical notes of colors, surroundings, forms, etc. Nevertheless, its meaning as a painting is more than the collection of these notes and properties. Meaning is the actualization of the real thing (the symphony or the painting) with respect to other things in the field of reality. Meaning is an enrichment of the physical notes, which is a free creation but never arbitrary¹¹⁰⁴.

Real things and their physical notes or properties do not change by changing their meaning. An expert and an amateur will actualize a symphony (or the painting) in the *logos* by providing different meanings (each one will have a different enrichment of the symphony’s contents). Nevertheless, they (the expert and the amateur) will apprehend the same physical notes. This enrichment depends on the physical content and on the simple apprehension.

B. Meaning actualized in the *logos* with respect to other things in the field and with respect to our life.

We should affirm without any ambiguity: reality is neither grounded in meaning nor reduced to it. On the contrary, it is meaning that is grounded in reality by means of the medium of language. To name a real thing and to judge it is to enrich its content. Meaning is part of the free creation of the *logos* that enriches the content. Without this construction a poem would be a group of words without coherence, a cathedral would be no more than a group of stones, a symphony would be a simple group of sounds, and a car would be a mere ensemble of metals, polymers and fluids¹¹⁰⁵.

Through the *logos*’ new apprehension we have a meaning that did not “exist” in the primordial apprehension. The primordial apprehension presents us a stone, a piece of wood, or a

¹¹⁰³ A. PINTOR-RAMOS, *Realidad y sentido*, p. 154.

¹¹⁰⁴ A. PINTOR-RAMOS, *Realidad y Verdad*, p. 203.

¹¹⁰⁵ A. PINTOR-RAMOS, *Realidad y sentido*, p. 159.

metal, even prior to name them¹¹⁰⁶. Moreover, by means of the *logos* we apprehend this group of stones, woods and metals as a thing with some meaning for us: “it is a house”. This “thing with meaning” is what Zubiri calls **meaning-thing** as different from mere **real-thing**, which is nothing more than a system of notes. Without the *logos* an “ensemble of metal, polymers and fluids” would not be a car. In the primordial apprehension we apprehend a constellation of notes. When we apprehend in the *logos* their meaning in my life, these constellations become this house and this car, i.e., “meaning-things”¹¹⁰⁷. Meaning then is a new condition of reality, but it is a meaning in my life that does not add or change its physical notes. Finally, we should add that in the field we have field-things that are simple real-things (e.g., a thing that we name “rock”) and we have field-things that are meaning-things (e.g., a car, a house, a symphony or a painting).

All of this implies that meaning is a double actualization in the *logos*: (i) it is an actualization as a field thing with respect to other things in the field; (ii) it is an actualization with respect to the human person’s life¹¹⁰⁸. The first actualization enables us to name it and to make affirmations about it based on simple apprehensions. The second implies that meaning is a human dimension. We can apprehend a tree by affirming “this is in reality a tree” by means of the concept of tree. Moreover, we can also apprehend that “this tree provides ‘me’ a shadow in a sunny hot day”. Only the second apprehension belongs to the dimension of meaning “for me”. This is one point of relation between Zubiri’s analysis of the intelligence and Ladrière reflection on meaning and human existence.

C. Meaning as a dimension of human life

When a human being actualizes things in terms of their meaning, he also actualizes himself. Human life is an open reality, which means that the human person is neither determined nor achieved. The human person apprehends meaning because he is open to multiple possibilities. When the human person actualizes the meaning of a real-thing he does it in relation to his personal accomplishment¹¹⁰⁹. Being open to multiple possibilities, human life is a quest for meaning. Through meaning we seek to provide a structure and consistence to our human life. Meaning-things are resources that enable the actualization of human capacities and possibilities. Is another point of relation between Zubiri’s analysis and Ladrière’s idea of the human responsibility to seek the personal achievement through human action.

¹¹⁰⁶ Again, prior has here a structural foundational sense and not a temporal one.

¹¹⁰⁷ X. ZUBIRI, *Inteligencia y Realidad*, p. 59-60.

¹¹⁰⁸ A. PINTOR-RAMOS, *Realidad y sentido*, p. 170.

¹¹⁰⁹ A. PINTOR-RAMOS, *Realidad y sentido*, p. 172.

The field of reality becomes a horizon of meaning, from which we can constitute, construct, configure and achieve our human life. The horizon of meaning, which consisted of a set of meaning-things constructed by means of simple apprehensions, grounds our actions and projects that achieve our human lives. In other words, the human person needs and requires meaning to configure and achieve his life.

D. Supra-individual aspect of language: the cultural and historical heritage of meaning

The human person is not an individual detached from others, from society or from history. To talk about an individual meaning or an individual field of meaning is a non-sense as it is a non-sense the notion of private or individual language¹¹¹⁰. Language has a supra-individual aspect. Through the medium of language we communicate¹¹¹¹ our experience of reality by making reference to real things, even in the absence of the immediate primordial apprehension. If the primordial apprehension presents us a real thing, language enables us to make reference to the primordial apprehension at a distance¹¹¹². This is due to the formality of “*de suyo*”. As we explained already what was apprehended “remains” in the apprehensor. Language also fixates partially and sediments at the supraindividual level the multiple experiences of reality¹¹¹³ in a historical, linguistic and cultural context. Without this partial fixation and sedimentation we could not transmit our experiences.

All languages have a huge volume of experiences of reality that we inherit. These experiences are communicated through inherited percepts, items of fictions and concepts. Sometimes their meaning is ambiguous, which creates difficulties in the process of communication and interpretation¹¹¹⁴. Nevertheless, we are not fully determined and passive vis-à-vis this heritage of experiences and meanings. We can reformulate the meaning of concepts, as proposed explicitly by Ladrière. These reformulations might help us better enrich with meaning the content of our experiences and might improve our communication of them. This is Ladrière’s process of semantic transgression based on the reinterpretation of concepts.

Finally, we reformulate language and meaning of things as something derived from reality. Language and meaning must be grounded in the field of reality, although they cannot be reduced to the physical content of an apprehension. As a consequence, concepts and speculative

¹¹¹⁰ A. PINTOR-RAMOS, *Realidad y sentido*, p. 183.

¹¹¹¹ X. ZUBIRI, *Inteligencia y Realidad*, p. 118.

¹¹¹² A. PINTOR-RAMOS, *Realidad y Verdad*, p. 214.

¹¹¹³ A. PINTOR-RAMOS, *Realidad y Verdad*, p. 211.

¹¹¹⁴ A. PINTOR-RAMOS, *Realidad y Verdad*, p. 217.

discourses are neither self-sufficient nor separated from the foundational experience of reality. This is the case even when there is cultural heritage that refers at a distance to previous primordial apprehensions. This meets Ladrière's thesis that the fundamental immediate experience enables the constitution of basic significations of language.

*"The most elementary forms of language, in which the basic significations are constituted, concern the segments of reality accessible to the immediate experience that could be characterized as the elements of the universe of perception"*¹¹¹⁵

III.6.4.2 Hermeneutics, interpretation, and comprehension in the mode of reason

The field of reality becomes a system of reference from which we initiate the quest for the foundation of real things. Therefore, the field of meaning-things and its horizon of meaning is the point of departure to seek the foundation of meaning in our life. If the *logos* seeks new meaning¹¹¹⁶, reason seeks the foundation, the reality in-depth of such meaning in our life. In other words, the meaning we have in the *logos* goes beyond itself to seek its ground¹¹¹⁷. This brings us to the following question: what is the fundamental act that explains the foundation of meaning?

Heidegger and Gadamer affirm that the fundamental act of intelligence is interpretation¹¹¹⁸. From the perspective of Zubiri we can argue that understanding and interpretation is possible because reality irrupts and provides a level of pre-comprehension for the act of comprehension. It is the moment of the primordial apprehension of reality and not language that is foundational¹¹¹⁹.

It is apprehension and not comprehension the elemental act of the intellect. Understanding

¹¹¹⁵ "Or les formes les plus élémentaires du langage, en lesquelles se constituent les significations de base, concernent les segments de la réalité qui sont accessibles à l'expérience immédiate et que l'on pourrait caractériser comme composant l'univers de la perception." The underlined emphasis is ours. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 267.

¹¹¹⁶ A. PINTOR-RAMOS, *Realidad y sentido*, p. 185.

¹¹¹⁷ A. PINTOR-RAMOS, *Realidad y sentido*, p. 187.

¹¹¹⁸ For Heidegger, understanding in the sense of comprehension is one kind of cognitions, among others. Interpretation is a development of the project of understanding (comprehension). For Heidegger, it is in the realm of meaning that we find the essence of understanding (comprehension). The method of hermeneutical circle proposed by Heidegger, is adequate to its object: the human existence. The fundamental intellectual act of the hermeneutical circle is interpretation of the Being of Dasein. Heidegger already notes that there is an experience of Being that is pre-linguistic. However, in Gadamer, hermeneutic experience is found in language. Understanding (as comprehension) coincides with intellection and the radical level is linguistic. For Gadamer the field of experience is larger than empirical-scientific experiment. There is a fundamental experience of truth that is supposed even by scientific knowledge. For Gadamer, this fundamental experience of truth happens in understanding. This experience of truth is constituted essentially in a linguistic and historical mode. Nevertheless, Gadamer forget something, he has not analyzed the "thing" that is at the origin of the fundamental experience of truth from which comes its meaning. See M. HEIDEGGER, *Being and Time*, §12, §15, § 37, §143. J.-A. NICOLÁS et Ó. BARROSO-FERNANDEZ, *Comprensión y realidad, Zubiri ante el reto hermenéutico*, p. 776-777. In Gadamer's words: "The phenomenon of understanding not only pervades all human relations to the world. It also has an independent validity within science, and it resists any attempt to reinterpret it in terms of scientific method. The following investigation starts with the resistance in modern science itself to the universal claim of scientific method. They are concerned to seek the experience of truth that transcends the domain of scientific method wherever that experience is to be found, and to inquire into its legitimacy." H.-G. GADAMER, *Truth and Method*, p. xx-xxi.

¹¹¹⁹ "[...] to apprehend something as real is the elemental act of the intelligence. Every other intellectual act is constitutively and essentially grounded upon the act of apprehension of the real as real. Every other intellectual act, such as forming ideas, conceiving, judging, etc., is a manner of apprehending reality." X. ZUBIRI, *Inteligencia y Realidad*, p. 77.

and interpretation are grounded in this apprehension. At the level of the *logos* we constitute the meaning as an enrichment of the content. The horizon of meaning is constituted in the terrain of the field apprehension. At the level of reason the elaboration of the sketch depends of the primordial apprehension and the field of reality.

However, the elaboration of the sketch is also historically and culturally conditioned due to the percepts, items of fictions and concepts inherited through language. In other words, we elaborate our sketches from a system of reference, which is influenced by the mental horizon (horizon of meaning) composed of previous experiences of reality and meanings sedimented in the history of our language. Here we arrive to one of the fundamental thesis of hermeneutics: *our explanations are conditioned by history, culture and even language*. Nevertheless, there are some fundamental differences with respect to Gadamer's philosophy. The ultimate ground to our explanations and the horizon of meaning that influences it is not language but the primordial apprehension of reality¹¹²⁰. There could not be a fusion of horizon without a shared reality that grounds all meaning¹¹²¹.

Having said that, there is a question that subsists: how are comprehension and interpretation related to the apprehension of reality? For Zubiri, comprehension¹¹²² is to know the individual real thing as structured. To comprehend is not something different to explain¹¹²³. Actually, explanation is a mode of comprehension¹¹²⁴. To understand (equivalent to comprehend) is a unified intellectual mode of what a thing is by a logical (*logos*) and rational (reason) mediation. We return to our fundamental experience with the affirmation of the *logos* and the sketches of reason in order to comprehend it. Consequently, comprehension is the intellectual act characterized by being the unified mode of the intellect (it unifies the primordial apprehension, the *logos* and reason). Through comprehension we understand the structure and the content (notes and properties) of the apprehended thing. Ladrière is right when he argues that a scientist seek to comprehend the cosmos. However, Ladrière uses the term "interpretation" when he refers to natural sciences. For Zubiri, **interpretation** is one mode of comprehension besides another mode such as causal or scientific explanation¹¹²⁵. Interpretation is the understanding of our personal

¹¹²⁰ J.-A. NICOLÁS and Ó. BARROSO-FERNANDEZ, *Comprensión y realidad, Zubiri ante el reto hermenéutico*, p. 790.

¹¹²¹ A. PINTOR-RAMOS, *Realidad y sentido*, p. 186.

¹¹²² "Here the word 'comprehension' does not have its etymological meaning but rather its ordinary one, that of understanding something. The "com-prehension" of a real thing, from the intellection of what it really is, makes us understand or comprehend what that real thing is. The "re-" of reactualization and its dependence on the real already actualized in primordial apprehension is what "comprehension" is. The unitary act of this intellection is then comprehension." X. ZUBIRI, *Inteligencia y Razón*, p. 329-330.

¹¹²³ This implies that comprehension is an act situated in the ulterior mode of reason. See X. ZUBIRI, *Inteligencia y Razón*, p. 331.

¹¹²⁴ X. ZUBIRI, *Inteligencia y Razón*, p. 339.

¹¹²⁵ X. ZUBIRI, *Inteligencia y Razón*, p. 339.

experiences¹¹²⁶. For that reason we reserve the terms “interpretation” to the comprehension of our personal (existential) experiences. Therefore interpretation is the understanding of human life and experiences as structured by the reality of meaning. Without meaning the human reality could not be structured in the personal mode. Meaning is necessary to structure the human reality by means of his actions and projects.

Although Zubiri does not mention it, our interpretation is conditioned by the mediation of language and culture, i.e., the horizon of meaning that includes philosophical traditions. Here we join, from another ground, Gadamer’s statement of the fusion of horizon. The fusion of horizon happens in our actual elaboration of sketches to interpret the reality of our personal experiences. When we read a text we interpret our life and its experiences through sketches formulated and written in other historical and cultural contexts. Consequently, we must reinterpret (understand) the concepts and discourses found in these texts. At the same time, we revise these sketches from our own system of reference.

Why there is a plurality of comprehensions? First, this plurality is due to our intellectual limitations. Second, comprehension is gradual¹¹²⁷. Third, it depends on free creations of the *logos* and reason that are culturally and historically conditioned. Fourth, there are different levels from which it is possible to understand a real thing: biochemical, philogenetical, etc. Finally, the differences in understanding are due to different types of comprehensions: causal explanation, interpretation of what we are personally experiencing, the understanding of personal causality (freedom), etc.

IV. Conclusion

In this chapter, following the contributions of Ladrière and Zubiri, we discussed the homologous structure of all rational knowledge. All rational knowledge is grounded in three inseparable moments united in one single intellectual act. The first one is a fundamental

¹¹²⁶ “To comprehend is, for Dilthey, to interpret the meaning, and conversely a meaning is interpretation of personal experience. But this not adequate. To comprehend is not to interpret; rather, to interpret is only a mode of comprehending. Moreover, as a mode of comprehending it does not encompass all real things, but just some, the personal experiences of which Dilthey speaks. Now, even considering personal experiences, comprehending is not interpreting their meaning. The formal terminus of comprehension of a personal experience is not a meaning. [...] what is comprehended is not the meaning of that reality but the reality of that meaning. The meaning is but a moment of the reality of the personal experience. What is comprehended is not the personal experience of reality but the reality of the personal experience. Meaning is but a moment of the reality of the personal experience. What is comprehended, [...] is, if one wishes, the personal experiential reality, the fact that this reality has, and must have, a meaning. Then the ultimate difference, assumed by Dilthey, between explication and comprehension disappears. Moreover, it is not just personal experiences—personal realities—which are comprehended; the same applies to all realities. Every reality intellectually known in primordial apprehension can be, and in principle must be, re-intellectively known in comprehension.” X. ZUBIRI, *Inteligencia y Razón*, p. 330-331.

¹¹²⁷ X. ZUBIRI, *Inteligencia y Razón*, p. 338-340.

immediate experience as an event of manifestation and as an act of apprehension. This fundamental act could be seen from the perspective of the manifested object and from the perspective of the apprehensor. From the perspective of the manifestation, this act makes present the manifested world, which is **reality in the apprehension**. From the perspective of the apprehensor, this act is an impression characterized by the inseparable union of senses and intelligence.

Second, there is the moment called by Zubiri the *logos*, which is a milieu where we apprehend things with respect to other things. Language as a semantic constellation resides there. In this moment we identify, affirm and describe apprehended realities. Another aspect of the *logos* is that we enrich our apprehensions with the creation of meaning. This meaning enables us to structure our life and to seek our achievement. Moreover, through language we communicate to others our experiences. Finally, we inherit from our cultural, social and linguistic contexts a universe of sedimented experiences and meanings. We are conditioned by this universe of meaning but not totally determined by it because we can reinterpret the meaning of concepts and discourses.

There is a third moment, reason. This moment depends on our fundamental immediate experience of apprehension and the *logos*, which includes language. It is a quest of knowledge of the fundamental structure of **reality as it is beyond our apprehension**. We have retrieved a homologous *rational structure: objects, methods (i.e., a system of reference, a sketch and an experience as testing), verification processes and notions of truth*. In addition, there is a plurality of rational knowledge that shares this homologous rational structure: natural sciences, philosophy, politics, etc. This quest for knowledge is also a historical movement of trial and errors that seeks an adequation to reality, although in practice we arrive to partial adequations. Reason is grounded in the transgressive capacity of language that enable us to go from the obvious, the empirical aspects of perception, to the invisible aspects of the structure and foundation of reality. However, this transgressive capacity does not mean that reason establishes itself outside reality or as something independent of the fundamental experience. Reason will always be an “experiential reason”¹¹²⁸.

Moreover, we have discussed the notion of reality. There are serious limitations to the position of naïve realism and idealism. Through Zubiri and Ladrière we have affirmed that reality is not something independent of the manifestation of things to the human person and the person’s

¹¹²⁸ J. CONILL, *El sentido de la noología*, p. 287.

apprehension of it through a fundamental immediate experience (**reality in the apprehension**). This is the point of departure that enable us through the moment of reason to seek the real nature of things beyond apprehension (**reality as it is beyond our apprehension**). We are never in a position outside reality, we are always in reality. We seek through reason to deepen our knowledge of it. As we will see in the following chapter this is relevant to understand theological rationality. The point of departure, as in all rationalities is a reality given to us, Christian revelation. We do not need to immerse us into that reality to do theology. We are always in God's revealed reality. Theologians seek to deepen God's revelation, i.e., explain reality as beyond the fundamental experience of grace and beyond the system of reference, which consist of Scriptures and Tradition.

Beside this analysis of our intellectual and rational acts, we analyse philosophy as a rational knowledge. There are two types of philosophical rationalities: analytical and speculative. The first one is the study of language and its transgressive capacity. The second one is philosophy as a description of reality (phenomenology, including noology understood as the description of our intellectual acts) and theoretical philosophy as an explanation and comprehension of the foundation of reality (theory of knowledge, metaphysics and philosophy of nature, hermeneutics of human life and ethics, etc.). We have shown that the philosophical rationality shares the rational structure of an object, a method and a verification procedure.

Finally, not all our meanings have the same value. Although meaning is grounded in reality, there is a distance between both, the distance of the dual apprehension in the *logos*. Therefore, we can be mistaken in our creation of meaning or in what we inherit from culture, history and language. These erroneous meanings can be deviated ways that separate us from reality and that bring us to the alienation and even destruction of our person. All comprehension of meaning requires a critic to all idols and alienating ideologies that cover reality¹¹²⁹. We need a hermeneutic of suspicion to destruct the idols. At the same time we need a hermeneutic of construction, an interpretation of our human experiences and lives in order to structure them. Having only a hermeneutic of suspicion would not lead us to the creation of meaning and we might fall into a meaningless life. Only having a hermeneutic of construction might lead us into alienation. Zubiri's and Ladrière's philosophies enable us to search and comprehend meaning by hearing the voice of reality. This is the true sense of all hermeneutics.

The following chapter will analyze the theological rationality. There we will benefit from a

¹¹²⁹ A. PINTOR-RAMOS, *Realidad y sentido*, p. 187.

series of point of this chapter. We will show that theology shares the same homologous rational structure (object, method and verification process). In theology that homologous rational structure is grounded in three inseparable moments: a fundamental religious experience, a milieu of religious-spiritual meaning (Scriptures and religious-spiritual languages) and finally a theological rationality. There we will address the issues of theological truths and the access of theology to a revealed reality. In addition we will address the issue of meaning in revelation and our interpretation of it. Consequently, our notion of rationality will be expanded even more.

The homologous rational structure shared by natural sciences, philosophy and theology is one of the fundamental conditions, the other is the relation between the order of manifestation and the order of revelation, that renders possible the dialogue and articulation between natural sciences and theology.

Chapter 5. The order of revelation and the project of rationality: theology

I. Introduction: specific objective and hypothesis of this chapter

In previous chapters we have presented scientific and philosophical rationalities. They refer to the order manifestation and self-constitution. The present chapter is an analysis that seeks to render explicit what theological rationality is. We will analyze and discuss the notions of revelation, faith, reason and theology. There are two hypothesis linked to this chapter. Let's consider each one.

Hypothesis of intellectual inseparable moments: *Theology, as all rationalities, is grounded in three inseparable moments: (i) fundamental immediate experience in the sense of an apprehension of reality, (ii) a milieu where we apprehend things in relation to previous knowledge (language and a field of reference) and (iii) the elaboration of theories or sketches. Through experiences one apprehends each real thing as individual and in itself. Through the field of references and language one intellectually knows what the real thing is in function of other realities previously apprehended. Elaborated theories or sketches are the methodological explanation of what things are and why they are. Finally, the notion of "reality" is intimately related to these three inseparable moments of the rational method.*

In chapter 4 we discussed that the human act of intelligence, for that reason philosophy and sciences, are grounded in these three inseparable moments. We followed Ladrière's inductive analysis and Zubiri's phenomenological analysis. Through their contributions we analyzed the "givenness" of the manifestation. In this chapter we will analyze the "givenness" of revelation and its relation to these three moments. This will include an analysis of the correlation between a fundamental religious experience and religious languages that operate as a system of reference and as a semantic milieu. Finally, we will analyze the relationship between faith and reason.

Hypothesis of specific rationalities that share a homologous structure: *Sciences, philosophy and theology have their own distinctive rationalities. Nonetheless, they share a homologous rational structure: objects, methods (i.e., a system of reference, a sketch and an experience as testing), verification processes and notions of truth. The distinctiveness lies in the fact that each component is specific and particular to each science, philosophy and theology.*

Here we will discuss the debate on the object of theology. Then we will discuss the theological method adequate to that object. Finally we will discuss the issue of the verification process.

We consider the reflections of Jean Ladrière and Xavier Zubiri in order to understand theology as an effort of human reason. However, we will start by considering other theologians and their different positions with respect to the object and method in theology. This will enable us to contrast and understand Ladrière's and Zubiri's decisions and positions in their epistemologies of theology.

II. A preliminary analysis of the notions of rationality and theology

As we have discussed already, in all rationalities an object cannot be understood without referring it to a particular method¹¹³⁰. There is a mutual influence between method and object. The objective of this section is double: (i) to present the complexity of the relationship object-method in theology and (ii) to show that the plurality of theological methods is born out of the plurality of conceptions of the object of theology. This preliminary analysis does not present all positions in the history of theology, which is outside our scope. It is limited to some figures: Thomas Aquinas, Paul Tillich, Karl Rahner, Bernard Lonergan, Karl Barth and George Lindbeck. Our choice of theologians follows a series of criteria: Aquinas who is one of the most influential theologians from the Middle Ages, catholic and protestant contemporary theologians and German speaking and English speaking theologians (given the fact that Ladrière and Zubiri represent the French and Spanish speaking world). Another criterion was the fact that the chosen theologians develop an epistemology of theology. Finally, this list represents two accents: one group of theologians puts the accent in a "religious experience" and the other group puts the accent in the "Word of God".

II.1. Saint Thomas Aquinas: God as the object and reference of theology

For Aquinas it is evident that God is the fundamental object of theology¹¹³¹. However, Aquinas does not deny that there are other objects in theology. Theology is about God and God's creation, plan of salvation and revelation¹¹³². According to Aquinas, theology thinks these other objects referring them to God. A theologian does not think the human being as a psychologist does, but in total reference to God and his revelation. The source of our access to God is divine

¹¹³⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 151-152.

¹¹³¹ Here Aquinas takes a position different from others. For Hugues de Saint Victor the object of theology was the act of redemption. For Bonaventure the object was Christ and the Church. THOMAS AQUINAS, *Summa Theologiae*, Ia, q1, art. 3 and 7. J.-P. TORREL, O.P., *Saint Thomas d'Aquin, maître spirituel*, p. 12.

¹¹³² T. O'MEARA, O.P., *Thomas Aquinas Theologian*, p. 88.

revelation expressed through the articles of faith as found in the Scriptures, Symbols of faith, texts of the Fathers of the Church, Councils and theologies¹¹³³.

Aquinas elaborates his theology following Aristotle's notion of science. Therefore, he considers theology to be an argumentative (deductive) science¹¹³⁴ or a science of syllogistic conclusions¹¹³⁵. The method of theology can be summarized as follows: starting with the articles of faith (the first principles), theology using the deductive method (syllogism) clarifies some points of faith. These clarifications are expressed in the form of new syllogistic conclusions. For Aquinas, there are two types of arguments: arguments grounded in the authority of revelation and arguments grounded in the authority of natural reason. In the first group we find arguments grounded in the Holy Scriptures and the articles of faith. There are also arguments grounded in the authority of the Fathers or Doctors of the Church. Their authority does not share the certainty of Holy Scriptures or dogmatic formulas. As a consequence, the arguments grounded in the Fathers are probably certain. Finally, the second group consists of arguments that make use of the authority of philosophers who argue from the standpoint of natural reason. These arguments are also probable but with less certainty than arguments that come from the Fathers or the Doctors of the Church.

Finally, our brief description of Aquinas's theology would be incomplete if we do not refer to his *via negativa*¹¹³⁶. For Aquinas, influenced by Dionysius, we remain ignorant with respect to God due to his absolute perfection that surpasses and exceeds our intellect. God transcends our knowledge and remains incomprehensible¹¹³⁷. There is no creature that can grasp God's essence that remains totally unknown. For Aquinas, there is no affirmation can be appropriate to a transcendent being. It is better to deny attributes of God¹¹³⁸: He is not finite, visible, corporeal, etc. However, Aquinas' negative theology is not a total unknowing. It is an affirmation that God always exceeds human knowledge¹¹³⁹.

¹¹³³ T. O'MEARA, O.P., *Thomas Aquinas Theologian*, p. 88. J.-P. TORREL, O.P., *Saint Thomas d'Aquin, maître spirituel*, p. 2-3.

¹¹³⁴ THOMAS AQUINAS, *Summa Theologiae*, Ia, q1, art. 8.

¹¹³⁵ J.-P. TORREL, O.P., *Saint Thomas d'Aquin, maître spirituel*, p. 4.

¹¹³⁶ For a deeper reflection about this subject see W. BEINERT and F. SCHÜSSLER FIORENZA (eds.), *Handbook of Catholic Theology*, p. 5-7, 495 and 700. Rik van NIEUWENHOVE and Joseph WAWRYDOW (ed.), *The Theology of Thomas Aquinas*, South Bend, University of Notre Dame Press, 2005 (see chapter 5).

¹¹³⁷ G.-P. ROCCA, *Aquinas on God-Talk: Hovering over the Abyss*, p. 645.

¹¹³⁸ "Now because we cannot know what God is, but rather what He is not, we have no means for considering how God is, but rather how He is not. Therefore, we must consider: (1) How He is not; (2) How He is known by us; (3) How He is named. Now it can be shown how God is not, by denying Him whatever is opposed to the idea of Him, viz. composition, motion, and the like." THOMAS AQUINAS, *Summa Theologiae*, Ia, q3.

¹¹³⁹ "Everything is knowable according to its actuality. But God, whose being is infinite, as was shown above (Q[7]) is infinitely knowable. Now no created intellect can know God infinitely. For the created intellect knows the Divine essence more or less perfectly in proportion as it receives a greater or lesser light of glory. Since therefore the created light of glory received into any created intellect cannot be infinite, it is clearly impossible for any created intellect to know God in an infinite degree. Hence it is

The *via negativa* in Aquinas' theology, the way of negating attributes to God, is one of three moments within the structure of his affirmative theology: *via affirmationis*, *via negationis* and *via eminentiae*¹¹⁴⁰. The *via affirmationis*¹¹⁴¹ is based on revelation and creation, the *via negationis* negates that God has an attributes in the same manners as us imperfect creatures and the *via eminentiae*¹¹⁴² affirms that God has an attribute in a manner that surpasses the creature. The *via negativa* serves to correct the deficiencies and univocalist tendencies of an affirmative theology¹¹⁴³. It complements and corrects the *via affirmationis* by establishing the limits of all our affirmations and analogies applied to God. Our affirmations about God are neither univocal nor equivocal but analogical. Aquinas refuses univocity since it diminishes God's unity, simplicity and infinite transcendence¹¹⁴⁴. He refuses equivocality since we can affirm some truths about God based on reason and revelation¹¹⁴⁵. The analogy becomes the nexus between the positive and the negative theology¹¹⁴⁶. As we will see, Aquinas' *via negativa* as a corrective of affirmative theology has influenced many theologians.

A possible objection we can present to Aquinas' notion of theology is, in principle, the question of how God in Himself can be the object (or subject) of theology¹¹⁴⁷. We do not have an immediate access to God¹¹⁴⁸. All our access to God is mediated (reason or revelation). However,

impossible that it should comprehend God." THOMAS AQUINAS, *Summa Theologiae*, Ia, q12, art. 1. See also G.-P. ROCCA, *Aquinas on God-Talk: Hovering over the Abyss*, p. 646.

¹¹⁴⁰ "Hence we know that His relationship with creatures so far as to be the cause of them all; also that creatures differ from Him, inasmuch as He is not in any way part of what is caused by Him; and that creatures are not removed from Him by reason of any defect on His part, but because He superexceeds them all." THOMAS AQUINAS, *Summa Theologiae*, Ia, q12, art. 12. "Now from the divine effects we cannot know the divine nature in itself, so as to know what it is; but only by way of eminence, and by way of causality, and of negation as stated above." THOMAS AQUINAS, *Summa Theologiae*, Ia, q13, art. 8.

¹¹⁴¹ "Because we know and name God from creatures, the names we attribute to God signify what belongs to material creatures, of which the knowledge is natural to us." THOMAS AQUINAS, *Summa Theologiae*, Ia, q13, art. 1.

¹¹⁴² "[...] that these names signify the divine substance, and are predicated substantially of God, although they fall short of a full representation of Him. Which is proved thus. For these names express God, so far as our intellects know Him. Now since our intellect knows God from creatures, it knows Him as far as creatures represent Him. [...] Hence every creature represents Him, and is like Him so far as it possesses some perfection; yet it represents Him not as something of the same species or genus, but as the excelling principle of whose form the effects fall short, although they derive some kind of likeness thereto, even as the forms of inferior bodies represent the power of the sun. This was explained above (Q[4], A[3]), in treating of the divine perfection. Therefore the aforesaid names signify the divine substance, but in an imperfect manner, even as creatures represent it imperfectly. So when we say, "God is good," [...] the meaning is, "Whatever good we attribute to creatures, pre-exists in God," and in a more excellent and higher way. Hence it does not follow that God is good, because He causes goodness; but rather, on the contrary, He causes goodness in things because He is good; according to what Augustine says (*De Doctr. Christ.* i, 32), 'Because He is good, we are.'" THOMAS AQUINAS, *Summa Theologiae*, Ia, q13, art. 2.

¹¹⁴³ G.-P. ROCCA, *Aquinas on God-Talk: Hovering over the Abyss*, p. 647 and 660.

¹¹⁴⁴ G.-P. ROCCA, *Aquinas on God-Talk: Hovering over the Abyss*, p. 654 and 656.

¹¹⁴⁵ G.-P. ROCCA, *Aquinas on God-Talk: Hovering over the Abyss*, p. 655-657.

¹¹⁴⁶ G.-P. ROCCA, *Aquinas on God-Talk: Hovering over the Abyss*, p. 659.

¹¹⁴⁷ Aquinas uses the term "subject" and not "object". When Aquinas mentions that God is the "subject" of theology, he means that we can know the living God of salvation history. Aquinas is not reducing God to a modern "object" of study that we can manipulate and control. A subject is a person that we can know and love. J.-P. TORREL, O.P., *Saint Thomas d'Aquin, maître spirituel*, p. 12-13.

¹¹⁴⁸ Jn 1, 18.

when Aquinas refers to God in Himself, he implies God as mediated by reason or by the *Sacra Doctrina*¹¹⁴⁹.

II.2. Theologies that follows the anthropological turn and the religious experience

Since the beginning of that cultural movement called modernity, the dominant aspect of our mental horizon has been anthropological. Some Christian theologians have argued that theology should consider this “anthropological turn” in order to render revelation accessible to contemporary people. Although they do not form one school we will consider in this section Paul Tillich, Karl Rahner and Bernard Lonergan due to some common features, as we will see in our discussion.

II.2.1 Paul Tillich: the ultimate concern and the method of correlation¹¹⁵⁰

Paul Tillich searches for an anthropological dimension of the object of theology. He receives the influence of Schleiermacher, for whom the essence of religion is neither thinking nor acting, but the feeling of absolute dependence. Although Tillich fundamentally agrees with this thesis, he considers that its formulation as “religious feeling” is unfortunate because it was misunderstood as a psychological and subjective emotion¹¹⁵¹. In explaining Schleiermacher, Tillich affirms that this feeling of absolute dependency is the immediate awareness of something unconditional¹¹⁵² that grounds everything in us¹¹⁵³. It has an emotional element, as everything that involves the person as a whole, but this emotional element does not define the character of religion. For Tillich, religious experience is an experience of being grasped by the “ultimate concern”¹¹⁵⁴.

For Tillich, the object of theology “*is what concerns us ultimately. Only those propositions are theological which deal with their object in so far as it can become a matter of ultimate*

¹¹⁴⁹ *Sacra doctrina* has different meanings. It means the Christian truth as a body of doctrines (Scriptures, dogmas, etc.), the teachings of God through revelation, Scriptures, Tradition, Church’s teachings and theologians’ teachings. J.-P. TORREL, O.P., *Saint Thomas d’Aquin, maître spirituel*, p. 2.

¹¹⁵⁰ In our discussion about Tillich’s reflections on theology, its object and method we will focus our attention only on his “Systematic Theology”.

¹¹⁵¹ P. TILlich, *Perspectives on 19th and 20th Century Protestant Theology*, p. 96.

¹¹⁵² In his early writings Tillich uses the term “Unconditioned” while in later writings he uses other terms such as the “ultimate”. See M.-A. STENGER and R.-H. STONE, *Dialogues of Paul Tillich*, p. 74-75.

¹¹⁵³ P. TILlich, *Perspectives on 19th and 20th Century Protestant Theology*, p. 96 and 99.

¹¹⁵⁴ This is against some interpretations, such as Lindbeck’s, who considers the reflections of Schleiermacher and Tillich as theologies that ground religions in internal experiences such as inner feelings (in the sense of emotions), attitudes, or existential orientations. Lindbeck even considers that these liberal theologies are the result of the modern religions yearning that seeks their own individual quest for symbols of transcendental ego. G. LINDBECK, *The Nature of Doctrine*, p. 16 and 126.

concern for us.”¹¹⁵⁵ However, sometimes Tillich mentions that theology’s object is the Christian message¹¹⁵⁶ or Christ as the ultimate concern¹¹⁵⁷. There is no contradiction in these statements. For Tillich, the ultimate concern is the abstract translation of the commandment: “*Lord, our God, the Lord is One; and you shall love the Lord with all your heart, and with all your soul, and with all your mind, and with all your strength*” (Mk 12:29)¹¹⁵⁸. It is this object that distinguishes theology from other sciences. The issue of “concern” implies already the anthropological and the existential character of religious experience: the object of theology is the ultimate concern of the human person. However, Tillich distinguishes between the ultimate concern and some preliminary concerns, which have various degrees of urgency: food, shelter, cultural development, social concerns, economical needs and political rights. The ultimate concern is unconditional, total and infinite. The content of this object is what expresses “*that which determines our being or non-being*”¹¹⁵⁹. The religious substance of rites, symbols, myths or doctrines expresses this content¹¹⁶⁰. These rites and religious symbols are most adequate when they express not only the ultimate but also their lack of ultimacy, i.e., their own limits. Only when the religious symbols are not confused with the unconditional, total and infinite they are able to express the unconditioned¹¹⁶¹. For Tillich, the content of the ultimate concern is the content of Christian faith¹¹⁶². Theology is the methodical interpretation of the contents of Christian faith and any concrete assertion about God, which is symbolic in nature.

Tillich also distinguishes between theology’s object and theology’s sources. There are three sources of theology: the Bible, church history and the history of religion and culture¹¹⁶³. Although he rejects the notion that the Bible is the only source, Tillich sustains that the Bible is the foundational source¹¹⁶⁴. The second source, Church history, shows us the way believers have dealt in the past with the ultimate concern¹¹⁶⁵. Finally, the history of religion and culture contributes in showing how the ultimate concern grounds the theologian’s culture: philosophy, politics, art, ethics and social thought¹¹⁶⁶.

¹¹⁵⁵ P. TILlich, *Systematic Theology*, p. 15.

¹¹⁵⁶ P. TILlich, *Systematic Theology*, p. 12.

¹¹⁵⁷ P. TILlich, *Systematic Theology*, p. 56.

¹¹⁵⁸ P. TILlich, *Systematic Theology*, p. 14.

¹¹⁵⁹ P. TILlich, *Systematic Theology*, p. 17.

¹¹⁶⁰ P. TILlich, *Systematic Theology*, p. 17, 19 and 122-123.

¹¹⁶¹ M.-A. STENGER and R.-H. STONE, *Dialogues of Paul Tillich*, p. 71-72.

¹¹⁶² P. TILlich, *Systematic Theology*, p. 68.

¹¹⁶³ P. TILlich, *Systematic Theology*, p. 45.

¹¹⁶⁴ P. TILlich, *Systematic Theology*, p. 39.

¹¹⁶⁵ P. TILlich, *Systematic Theology*, p. 43.

¹¹⁶⁶ This corresponds with Zubiri’s notion of the personal mentality and the mental horizon of the researcher. Still, there is a major difference. For Tillich this is a source of theology while for Zubiri it affects the configuration of the system of reference from which a researcher (i.e., a theologian) elaborates his sketches. P. TILlich, *Systematic Theology*, p. 45.

In Tillich's concept of religion and theology there is another anthropological aspect: namely religious experiences. According to Tillich, religious experience is neither a new revelation nor a source of theology, but a "*medium through which the sources speak to us*"¹¹⁶⁷. This experience is the medium through which the theologian participates in the reality of revelatory events. The history of religion and the history of Christianity are an immense reservoir of religious experiences. A religious experience is not a psychological function, but an awareness of the ultimate, of Being-itself¹¹⁶⁸. In the history of religion, this experience of the ultimate concern has been expressed in symbols. It is the task of theology to interpret these symbols. Finally, for Tillich, religious experiences are shaped by the sources¹¹⁶⁹. After discussing the object of theology and its sources, Tillich discusses the norm of theology. The norm is the criterion for the use of all sources of systematic theology¹¹⁷⁰. It is the norm that decides the canonicity of the books in the Bible. At the same time, the norm is the criterion to judge the medium and any religious experience¹¹⁷¹. For Tillich, the material norm of theology is the New Being in Jesus the Christ as our ultimate concern.

How does Tillich conceive the theological method? His notion of theological method corresponds to his notion of revelation. Tillich clearly affirms that revelation is not ordinary knowledge or knowledge about our world (e.g., scientific knowledge). Revelation is religious knowledge about the unconditional mystery of reality, truth and value¹¹⁷². Revelation occurs in shattering experiences that appear at our limits, at the crisis of our finitude¹¹⁷³. These "limit situations", which are fundamental threats to our existence, are the areas of religious crisis and of religious answers. Revelation is always the experience of someone and is received as an experience of shock, of healing and of reunion of what is broken¹¹⁷⁴. For that reason revelation is always salvation. Here we already see in Tillich the relation between existential questions that emerges from crisis and the revelation as salvation experienced in events that heals the human person. There is a fundamental correlation between a fundamental threat that shocks our existence and the courage of faith that receives the solid ground and the healing of the unconditional.

¹¹⁶⁷ P. TILlich, *Systematic Theology*, p. 46.

¹¹⁶⁸ P. TILlich, *Systematic Theology*, p. 46-47.

¹¹⁶⁹ This contrasts with Lindbeck, who argues that for Tillich and other "experiential oriented" theologians there is an individual origin of the inner religious experience that is later objectified in religious language. P. TILlich, *Systematic Theology*, p. 54. G. LINDBECK, *The Nature of Doctrine*, p. 37-38.

¹¹⁷⁰ P. TILlich, *Systematic Theology*, p. 56.

¹¹⁷¹ P. TILlich, *Systematic Theology*, p. 59.

¹¹⁷² L. GILKEY, *Gilkey on Tillich*, p. 48.

¹¹⁷³ L. GILKEY, *Gilkey on Tillich*, p. 49.

¹¹⁷⁴ L. GILKEY, *Gilkey on Tillich*, p. 49-50.

From this conception of revelation it follows that for Tillich a method, which must be adequate to its object, should express the correlation between the existential anxiety and the answer and healing of revelation. For that reason the theological method of correlation “*explains the content of Christian faith through existential questions and theological answers in mutual interdependence*”¹¹⁷⁵. There are two moments in this method. The first moment is an existential analysis of the human situation¹¹⁷⁶. This analysis employs materials from all realms of culture: philosophy, poetry, drama, novel, psychology and sociology¹¹⁷⁷. However, it is philosophy the most appropriated partner of theology in the method of correlation due to philosophy’s reflection about the “being” in general and about the human existential questions in particular¹¹⁷⁸. Then, the second moment consists in providing the answer that is contained in the sources, through the medium and under the norm¹¹⁷⁹. If the Christian message does not answer the existential questions within our contemporary settings, it will arrive into deaf ears. Its objective is to make religious experience intelligible to modern (contemporary) culture where the gospel has become opaque¹¹⁸⁰. To make things worst, the separation between a particular religion (with its possible theological answer) and cultural reason (that formulates existential questions) would lead such religion to superstition and even repression¹¹⁸¹.

Moreover, the role of theologians is not only to answer the existential questions of our contemporaries. Theologians must also denounce the idols that prevent our recognition that the ultimate concern is only God, the Ground of Being¹¹⁸². Among these idols there are even religious symbols that we make absolute and cultural and political symbols that pretend to be the ultimate meaning of our existence.

Tillich has been criticized for reducing the Christian message to anthropology and philosophy of religion in order to reach out to our contemporaries.

II.2.2 Karl Rahner and its anthropological turn: the immediate experience of God and the Mystery of God in revelation

Representatives of Transcendental Thomism articulate Aquinas’s thought with Kant’s turn to the subject and attempt to combine the cognitive aspects of faith and the anthropological

¹¹⁷⁵ P. TILlich, *Systematic Theology*, p. 68.

¹¹⁷⁶ P. TILlich, *Systematic Theology*, p. 70.

¹¹⁷⁷ P. TILlich, *Systematic Theology*, p. 71.

¹¹⁷⁸ J. DOYON, *La méthode correlative dans la Christologie de Paul Tillich*, p. 522.

¹¹⁷⁹ P. TILlich, *Systematic Theology*, p. 72.

¹¹⁸⁰ G. LINDBECK, *The Nature of Doctrine*, p. 129.

¹¹⁸¹ L. GILKEY, *Gilkey on Tillich*, p. 44.

¹¹⁸² J. DOYON, *La méthode correlative dans la Christologie de Paul Tillich*, p. 535.

dimension of religious experience¹¹⁸³. Let's consider in this section Rahner and his notion of an immediate experience of God and the anthropological structures that enables it: a transcendental structure and a categorical thematization of the transcendental experience. We will start with the immediate experience of God, which we think is the main concept of his whole systematic theology. Then we will discuss Rahner's gnoseology, including his thesis: *every cognitive effort is preceded by a pre-reflexive inter-relation between the knowing subject and the object of knowledge*¹¹⁸⁴.

II.2.2.1 The immediate experience of God

Karl Rahner considers that theology cannot be detached from a spiritual experience. The theologian's spiritual experiences are the origin of a theological work that is addressed to the reader's faith¹¹⁸⁵. This is clear even in Rahner's theological works. In spite of Rahner's abstract and perhaps dry vocabulary and style, a concrete personal experience of God is at the origin of his theology. But, what does Rahner mean by the notion of "spiritual experience"? Rahner wrote a text in the name of Ignatius of Loyola where he refers to the experience of God. It is a text entitled "Ignatius of Loyola Speaks to a Modern Jesuit."¹¹⁸⁶ Let's simply quote some parts that will clarify the relationship between spiritual experience and theology.

*"I thought, and this opinion was true, that I could say what was old in a new way. Why? I was convinced that I had encountered God, at first incipiently during my sickness at Loyola and then decisively during my retreat time at Manresa; and I wanted to mediate such experience to others in so far as this is possible"*¹¹⁸⁷

*"God himself I experienced, not human words about it."*¹¹⁸⁸

¹¹⁸³ G. LINDBECK, *The Nature of Doctrine*, p. 16.

¹¹⁸⁴ "In any act of cognition it is not only the object known but also the subject knowing that is involved. It is dependent not only upon the distinctive characteristics of the object, but also upon the essential structure of the knowing subject. The mutual interconnection and the mutual interconditioning process between the subject knowing and the object known precisely as known and as knowable are in themselves the object of a transcendental enquiry. The a priori transcendental subjectivity of the knower on the one hand and the object of knowledge (and of freedom) on the other are related to one another in such a way that they mutually condition one another, and they do this in such a way that knowledge of the a priori conditions which make knowledge possible in the subject necessarily constitutes also an element in the actual knowledge of the object itself both with regard to the question of what the nature of the object known is as a matter of metaphysical necessity, and also with regard to the question of what the concrete historical conditions of this object are, factors which are precisely not intrinsically necessary." K. RAHNER, *Reflection on methodology in theology*, p. 87.

¹¹⁸⁵ B. SESBOUE, *Karl Rahner*, p. 42.

¹¹⁸⁶ K. RAHNER, *Ignatius of Loyola Speaks to a Modern Jesuit*, in P. IMHOF (ed.), *Ignatius of Loyola*, London, Collins, 1979, p. 11-38.

¹¹⁸⁷ Quoted on P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 13.

¹¹⁸⁸ Quoted on P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 140.

Rahner here refers to a genuine experience of God as the center of our existence. The notion “experience” used by Rahner is *Erfahrung* in contrast with *Erkenntnis*. *Erkenntnis* is related to knowledge in the sense of clarity and distinctness while *Erfahrung* is related to an immediate contact to which we could have some access but that rests in some obscurity¹¹⁸⁹. When Rahner uses it as an “experience of God” *Erfahrung* means a self-testimony of the presence of grace¹¹⁹⁰. Consequently, Rahner characterizes the experience of God as an experience of grace, avoiding the conventional distinction between the study of mysticism and the study of grace¹¹⁹¹.

For Rahner, there is an immediate experience of God beyond all mediations and beyond all representations (“*God himself I experienced, not human words about it*”). Rahner refers here to what Ignatius of Loyola called the “*consolation without preceding cause*”¹¹⁹². This type of spiritual experience, whose origin is divine, is a spiritual consolation that is not grounded in any previous perception, awareness, understanding, action or mediation by a created thing. When this key Ignatian experience occurs the subject becomes aware of whom he is under God¹¹⁹³. It is an experience in which God’s presence, who is present in all experiences, emerges into reflexive awareness¹¹⁹⁴. This spiritual immediate experience is self-evident and operates like the first principles in logic¹¹⁹⁵, i.e., it is not deduced from other principles but grounds all other knowledge¹¹⁹⁶. The consolation without preceding cause is self-evident, granted by God, and is confirmed by the consequence that it produces in the subject¹¹⁹⁷. For Rahner, this immediate experience of God is not a special privilege of a chosen few. At least it is not denied to anyone.

Moreover, for Rahner, there is also an experience of God mediated through created things. Human words and actions can also mediate the experience of God. This is clear in some of Rahner’s texts written in “*Ignatius of Loyola Speaks to a Modern Jesuit*”:

“[...] As you know, I wanted to help souls, that is to say something to people about God and God’s grace and about Jesus Christ, the crucified and risen one, something meant to redeem their freedom into that of God.”¹¹⁹⁸

¹¹⁸⁹ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 29-30.

¹¹⁹⁰ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 59.

¹¹⁹¹ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 39.

¹¹⁹² B. SESBOUE, *Karl Rahner*, p. 44.

¹¹⁹³ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 131.

¹¹⁹⁴ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 133.

¹¹⁹⁵ B. SESBOUE, *Karl Rahner*, p. 47-48.

¹¹⁹⁶ This is the equivalent to the fundamental immediate experience in the order of manifestation as studied in the previous chapter. See chapter 4, sections II.3.1 and III.3.1.

¹¹⁹⁷ B. SESBOUE, *Karl Rahner*, p. 49.

¹¹⁹⁸ Quoted on P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 143.

*“Every call in God’s name from outside is only meant to make clear the self-pledge of God’s own self within; and this latter also requires that call in some earthly form or other – even if this form can be much more diverse and unassuming than your theologians used to allow in earlier times, and even if, too, such a call from outside, a call of responsibility, love, fidelity, of a selfless commitment to freedom and justice in society, can sound much more worldly than your theologians might like to hear.”*¹¹⁹⁹

*“But it remains true: human beings can experience God’s own self. An your pastoral care must have this goal in sight always, at every step, remorselessly.”*¹²⁰⁰

There is an experience of God found in the concrete life of prayer, liturgy and ordinary life. This experience of grace is mediated through the created world, history, traditions, human words and Scriptures.

According to Endean, Rahner’s central theological concern is to thematize and to understand “the immediate experience of God”¹²⁰¹ and its relation with the historical reality¹²⁰². We should add that Rahner seeks to understand also all mediated experiences of grace. In doing this, Rahner moves back the subject of “the experience of God” from the periphery to the center and heart of theology¹²⁰³.

To thematize and understand the “experience of God”, Rahner seeks the human conditions that render possible this experience of grace. He seeks the human original disposition that orients the human being to this experience¹²⁰⁴. That is the object of Rahner’s analyses of the transcendental experience in his *The Spirit in the World* and *Hearer of the Word*, which are integrated in the first part of his *Foundation of Christian Faith*. Rahner effort aims to connect the experience of grace with a philosophical account of human experience and knowledge¹²⁰⁵. Let’s consider now Rahner’s analysis of the human experience.

II.2.2.2 Analysis of the transcendentale experience and its thematization

When Rahner analyzes the human cognitive structure he finds that there is a common foundation to all knowledge: the human experience¹²⁰⁶. Human experience is the ground and the original unity of all sciences before any distinction of fields could be made¹²⁰⁷. This human

¹¹⁹⁹ Quoted on P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 148-149.

¹²⁰⁰ Quoted on P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 17.

¹²⁰¹ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 50.

¹²⁰² P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 54.

¹²⁰³ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 64.

¹²⁰⁴ B. SESBOUE, *Karl Rahner*, p. 49.

¹²⁰⁵ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 50.

¹²⁰⁶ B. SESBOUE, *Karl Rahner*, p. 109.

¹²⁰⁷ Again, this corresponds in the order of manifestation to the fundamental immediate experience.

experience, including spiritual experience, and the knowledge of it are grounded in two poles: the categorical pole and the transcendental pole¹²⁰⁸.

A. The categorical pole

In the knowing subject there is a categorical pole. This categorical pole is the knowledge mediated through categories, linguistic terms, culture and history. This is the pole of language where the beings are called and where the categories and concepts are elaborated¹²⁰⁹. Moreover, the categorical pole is about meaning found in the world, nature, other human beings, objects, and history¹²¹⁰. It is the actual explicit knowledge of any object mediated by the concrete historical conditions of the relation subject-object.

This categorical knowledge has a particular characteristic. When the human being knows a concrete object, the human being becomes aware of himself and of his openness to being in general¹²¹¹. Therefore, all knowledge of any object becomes an opportunity to return to oneself and to become conscious of our openness to God.

B. The transcendental pole¹²¹²

In knowing an object the subject also knows something about himself. However, the knower's subjective consciousness as a whole always remains unthematic¹²¹³. It is an original self-presence of the subject that is never fully and completely captured in terms of its content. This is what Rahner calls a transcendental pole, which is the horizon of understanding that is never fully grasped. It is an unthematic self-presence of the subject.

Rahner qualifies as "transcendental" this unthematic horizon of understanding for the following reasons. When the human being recognizes himself as limited, he goes beyond that limit. When the human being affirms the possibility of a mere finite horizon of knowledge he surpasses already this limit. This shows that the human person is a being with an infinite

¹²⁰⁸ As we have discussed already in the previous chapter, this is not far from Ladrière's and Zubiri's moment of a fundamental immediate experience and the moment of language or *logos*. Both moments are interrelated. They can be distinguished but not separated. For Ladrière, the first moment is about a fundamental experience in the *Lebenswelt*. The second moment is linguistic in nature. For Zubiri, the fundamental experience operates as a concrete pre-linguistic (unthematic) primordial apprehension of a real thing through all our senses. The *logos* is an ulterior movement that unfolds all that was apprehended in the fundamental experience.

¹²⁰⁹ B. SESBOUE, *Karl Rahner*, p. 111.

¹²¹⁰ G. VASS, *A Theologian in Search of a Philosophy*, p. 98.

¹²¹¹ B. SESBOUE, *Karl Rahner*, p. 49-50.

¹²¹² In Rahner, the concept of transcendence has different connotations, depending on the context. In Rahner's philosophy transcendence refers to the conditions that render possible human knowing and willing. In Rahner's theology it refers to the conditions present within the self in actual graced world. See P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 115.

¹²¹³ K. RAHNER, *Foundations of Christian Faith*, p. 18.

horizon¹²¹⁴. In other words, the knower is open to the whole breath of an unlimited horizon¹²¹⁵. This unlimited horizon is an unthematic knowledge, an anticipation (*Vorgriff*) that searches to become explicitly and consciously apprehended¹²¹⁶. It is the condition of possibility of all knowledge and all decisions by which the human person goes beyond and exceeds himself (transcendence) permanently¹²¹⁷. The human being experiences himself as a finite being with an infinite desire to know and to will. That experience is what Rahner calls the “transcendental experience” or the “experience of the transcendence”¹²¹⁸.

According to Rahner these two poles, categorical and transcendental, are in a dynamic relationship. Both poles are in a continuous double movement: (i) from the original unthematic transcendental pole to the categorical and historical pole and (ii) from the categorical we bring back what we have thematized to ourselves where it becomes part of the self-experience¹²¹⁹.

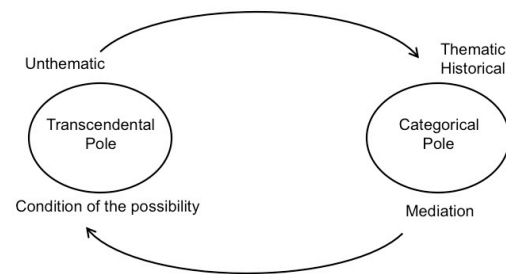


Figure 5.1 The transcendental and the categorical poles in Rahner's anthropology.

Consequently, all our knowledge is both transcendental and historically constituted¹²²⁰. The transcendental experience is an *a posteriori* knowledge insofar as every transcendental experience is mediated by a categorical encounter in the world¹²²¹. At the same time the transcendental experience is the condition of the possibility of our categorical knowledge.

II.2.2.3 Our knowledge about God

¹²¹⁴ K. RAHNER, *Foundations of Christian Faith*, p. 32.

¹²¹⁵ G. VASS, *A Theologian in Search of a Philosophy*, p. 49.

¹²¹⁶ K. RAHNER, *Foundations of Christian Faith*, p. 52.

¹²¹⁷ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 125.

¹²¹⁸ “We shall call transcendental experience the subjective, unthematic, necessary and unfailing consciousness of the knowing subject that is co-present in every spiritual act of knowledge, and the subject's openness to the unlimited expanse of all possible reality. It is an experience because this knowledge, unthematic but ever present, is a moment within and a condition of possibility for every concrete experience of any and every object. This experience is called transcendental experience because it belongs to the necessary and inalienable structures of the knowing subject itself, and because it consists precisely in the transcendence beyond any particular group of possible objects or of categories. Transcendental experience is the experience of the transcendence, in which experience the structure of the subject and therefore also the ultimate structure of every conceivable object of knowledge are present together and in identity.” K. RAHNER, *Foundations of Christian Faith*, p. 20.

¹²¹⁹ As Rahner affirms it, “In knowledge not only is something known, but the subject's knowing is always co-known.” K. RAHNER, *Foundations of Christian Faith*, p. 18. See also B. SESBOUE, *Karl Rahner*, p. 112.

¹²²⁰ K. RAHNER, *Foundations of Christian Faith*, p. 56.

¹²²¹ K. RAHNER, *Foundations of Christian Faith*, p. 52.

What about our knowledge of God? According to Rahner, our knowledge of God is not the same kind of knowledge of an object that manifests itself directly or indirectly to the subject. It is a knowledge that has the character of a transcendental experience: the subject in its transcendence is always orientated toward the holy mystery. The term and the source of the transcendence is the absolute mystery of God. The knowledge of God is unthematically, without a categorical identification¹²²². This means that our knowledge of God is a transcendental unreflexive knowledge because we are permanently oriented toward absolute mystery even before we speak about it. In Rahner's own words:

*“This unthematic and ever-present experience, this knowledge of God which we always have even when we are thinking of and concerned with anything but God, is the permanent ground from out of which that thematic knowledge of God emerges which we have in explicit religious activity and in philosophical reflection.”*¹²²³

Rahner seems to claim that there is an experience of God that somehow transcends language and grounds all our linguistic expressions of it. This is clear in Rahner's Ignatius affirmation: *“God himself I experienced, not human words about it.”*¹²²⁴ At the same time our unthematic transcendental knowledge or experience of God, as all our knowledge, is *a posteriori* knowledge that comes from our encounter with the world and history and is expressed in linguistic terms¹²²⁵. An explicit religious activity directed to God only makes explicit for ourselves what we already know implicitly through the unthematic experience of our orientation toward God¹²²⁶. The transcendental experience of God becomes always concrete through the mediation of the categorical encounter with concrete things in the world and its linguistic formulations¹²²⁷. This means that God's creation, history, cultural and linguistic context are a necessary mediation to thematize our experience of God¹²²⁸.

It is clear that the categorical is necessary to the thematization and the awareness of the immediate experience of God. At the same time, the transcendental unthematic experience of God is the condition of the possibility of our discourses about God¹²²⁹. This original reference to the absolute mystery is a structural and permanent orientation toward God. Rahner calls it grace

¹²²² K. RAHNER, *Foundations of Christian Faith*, p. 21.

¹²²³ K. RAHNER, *Foundations of Christian Faith*, p. 53.

¹²²⁴ This is a problematic issue for Endean who affirms that a linguistic competence is an *a priori* condition of experience. As we saw with Zubiri, that is not the case: there are prelinguistic fundamental experience that we thematize through language. See P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 140.

¹²²⁵ K. RAHNER, *Foundations of Christian Faith*, p. 52.

¹²²⁶ K. RAHNER, *Foundations of Christian Faith*, p. 53.

¹²²⁷ B. SESBOUE, *Karl Rahner*, p. 114.

¹²²⁸ G. VASS, *A Theologian in Search of a Philosophy*, p. 99.

¹²²⁹ B. SESBOUE, *Karl Rahner*, p. 114-115.

because it orients our whole existence toward God¹²³⁰. Consequently, Rahner understands Ignatius' consolations without preceding causes and our discernment of consolations mediated by created things as the "*transcendence becoming thematic*"¹²³¹.

Rahner seems to claim that a spiritual experience, as an experience of grace, is somehow foundational in theological epistemology¹²³². This is so because all our knowledge and experiences of God are grounded in God's self-communication to the subject. The experience of grace is nothing else than this divine self-communication to the human person where God becomes immediate to the subject¹²³³. Moreover, God becomes Himself the innermost constitutive element of the human being¹²³⁴. This is the foundation of our experience of God and of God's revelation to humanity.

The Word of revelation enables the human person to thematize his transcendental experience of God's self-communication. The universality of the transcendental experience of God does not deny the history of particular revelation accomplished in the Ancient and New Testament¹²³⁵. On the contrary, the human person needs that particular revelation to become aware of God's immediate presence through his divine self-communication. To understand the relationship between this particular revelation and the transcendental experience, let's consider the role of the prophet. The prophet is that person in whom the transcendental experience, empowered by grace, becomes an intelligible linguistic formulation that is communicable¹²³⁶. In him, the experience shared by all of us becomes "words". The prophet announces from God his faith and expresses it in a language of faith. This prophetic charism is given to a few for the benefit of all.

All of this, as we will see, is the object of Rahner's transcendental theology¹²³⁷. According to Rahner, the object of theology is "*a twofold one: the reference to God as remote and the reference to God as making himself near by an act of self-bestowal*"¹²³⁸. The first of these two aspects is the incomprehensible transcendental horizon that could not be known in the same way

¹²³⁰ B. SESBOUE, *Karl Rahner*, p. 116.

¹²³¹ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 138.

¹²³² P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 139.

¹²³³ K. RAHNER, *Foundations of Christian Faith*, p. 122.

¹²³⁴ K. RAHNER, *Foundations of Christian Faith*, p. 116.

¹²³⁵ B. SESBOUE, *Karl Rahner*, p. 133.

¹²³⁶ B. SESBOUE, *Karl Rahner*, p. 133.

¹²³⁷ "For that which is initially and in the truest sense freely posited by God is precisely the enduring and supernatural existential modality of grace considered as the offering of God's self-communication – in other words a transcendental state in which man is constituted. And this free grace, considered as a transcendental determination of man, has a history of its own in that which we call the history of salvation and revelation, which it is quite impossible to conceive of precisely as such without this a priori possibility on man's part. Now it is this that is the object of consideration for transcendental theology". K. RAHNER, *Reflection on methodology in theology*, p. 100-101.

¹²³⁸ K. RAHNER, *Reflection on methodology in theology*, p. 106.

as individual objects¹²³⁹. This infinite transcendental horizon is God as a *Mysterium*, as the condition that makes possible for us to know all finite beings. This aspect will always be the incomprehensibility and mystery of God¹²⁴⁰. For that reason an analogical way of thinking that characterizes theology must always be corrected with the *via negativa*. There must be always a back and forth movement between affirmation and negation that correlates with a “*silent incomprehensibility of God’s very self*”¹²⁴¹. The second aspect of theology’s object is the content of Christian mysteries revealed in Salvation History and affirmed by the Church. However, does this mean that there are two objects of theology: God’s mystery and the multiplicity of Christian mysteries? Rahner affirms the following thesis:

*“And yet it is perfectly possible to lay down the following thesis: there is, and there can be, only one single absolute mystery in the strictest sense of the term, namely God Himself and in relation to Him all those aspects under which man with his finite knowledge has to conceive of God to himself are specified in the same manner by this character of the mystery.”*¹²⁴²

Here Rahner is clearly following Aquinas when he affirms that there is one theological object: God. All other objects are studied in theology in reference to God. However, to avoid the notion that the object of theology is delimited and constituted by theology, as other sciences do, Rahner clarifies that God remains being an incomprehensible Mystery.

II.2.2.4. Rahner’s transcendental method

Rahner’s transcendental method reflects a clear anthropological turn. His focus is the human’s concrete experience of God’s self-communication¹²⁴³. In correspondence with Rahner’s two poles on knowledge and two aspects of one theological object, there are two theological levels in the method. The first level of reflection studies the human subjectivity affected by God’s self-communication. This level, which corresponds to fundamental theology, is about faith (and its place in the human being) as the point of departure of theology¹²⁴⁴. This point of departure is about the believer’s life, existence and attitude of surrender with respect to the object of faith, God’s Mystery¹²⁴⁵. This level embraces the totality of faith and not the details of every

¹²³⁹ K. RAHNER, *Reflection on methodology in theology*, p. 104.

¹²⁴⁰ Here Rahner follows Aquina’s negative theology as a correction of an affirmative theology.

¹²⁴¹ K. RAHNER, *Experiences of a Catholic Theologian*, p. 5.

¹²⁴² Underlined emphasis is ours. K. RAHNER, *Reflection on methodology in theology*, p. 105-106.

¹²⁴³ G. VASS, *The Mystery of Man*, p. 1.

¹²⁴⁴ K. RAHNER, *Foundation of Christian Faith*, p. 8 and 10.

¹²⁴⁵ As we will see below, this corresponds to Zubiri’s notion of fundamental theology.

theological discipline¹²⁴⁶. The objective of this level is to ground our belief with intellectual honesty¹²⁴⁷. This first level is insufficient and it requires a second level of reflection.

The second level of reflection corresponds to the study of categorical aspects in theology. It is scientific and it investigates particular objects of faith according to a plurality of theological methods¹²⁴⁸. It refers to the content of faith of various doctrines of Christianity. At the same time, it is also the subjective appropriation of this content¹²⁴⁹. This second level of Rahner's method has a mystagogic perspective. As he himself affirms:

*"It should constitute a 'mystagogia' leading men to the experience of grace, and should not merely speak of grace as of a material subject which is present in man's life solely through the conceptions which he formulates of it."*¹²⁵⁰

This *mystagogia* demands an attitude of trembling and of silent adoration because grace is a reality experienced, which in consequence means that "*theology is no more and no less than a disciplined reflection on ongoing experience, on spirituality.*"¹²⁵¹ Here theology is not only scientific but a *theologia meditativa*¹²⁵².

Finally, Rahner has been criticized for being anthropologically oriented as Schleiermacher and Tillich¹²⁵³. Their theologies are considered a reduction to anthropology. They are accused of domesticating Christianity for human consumption. However Rahner's anthropological turn does not go as far as reducing theology to anthropology. Theology is about God because He communicates Himself to the human being. God is the foundation of the human being, the reference from whom the human person is contemplated (as in Thomas Aquinas). Rahner's theology is also about a human being who is divinized by God's self-communication¹²⁵⁴. It is not anthropology but theological anthropology from the point of view of our faith and God's revelation.

Nonetheless, there is difficulty in Rahner's system. He presupposes one axiom: *there is a fundamental relationship between the subject's capacity of self-transcendence by questioning the meaning of his existence and God's self-communication to man*. In other words, for Rahner the experience of the transcendental horizon is closely related to an experience of God's Mystery.

¹²⁴⁶ K. RAHNER, *Foundation of Christian Faith*, p. 6 and 10.

¹²⁴⁷ K. RAHNER, *Foundation of Christian Faith*, p. 12.

¹²⁴⁸ K. RAHNER, *Foundation of Christian Faith*, p. 9.

¹²⁴⁹ G. VASS, *The Mystery of Man*, p. 14.

¹²⁵⁰ K. RAHNER, *Reflection on methodology in theology*, p. 111.

¹²⁵¹ P. ENDEAN, *Karl Rahner and Ignatian Spirituality*, p. 66.

¹²⁵² K. RAHNER, *Reflection on methodology in theology*, p. 112.

¹²⁵³ G. VASS, *The Mystery of Man*, p. 19.

¹²⁵⁴ G. VASS, *The Mystery of Man*, p. 20.

This axiom is not fully grounded in any canonical source¹²⁵⁵. Although we can argue that God's self-communication to the creature is the condition of the possibility for his self-transcendence, it is difficult to sustain from the point of view of Christian revelation that any quest for meaning and any transcendental experience in itself is a sign of God's self-communication.

II.2.3 Bernard Lonergan and its anthropological turn: our experience of God's love as an inner word, the outer word and theology

Bernard Lonergan is another representative of Transcendental Thomism. Lonergan's subject is not Kant's transcendental subject but a concrete historical human person. For Lonergan a fundamental religious experience is the concrete experience of God's love.

II.2.3.1. Religious experience: the prior inner word of God's ineffable love

For Lonergan, the unknown mystery of God is the point of departure of all religious experiences and all theological reflection. God is transcendental, in the sense of being nothing of this world¹²⁵⁶. However, God has the initiative of giving us his inner word, which is his own love¹²⁵⁷. God's love changes our heart and provokes in us to love him without limits. This desire of unrestricted self-giving to God fulfills our capacity for self-transcendence¹²⁵⁸. The unmediated experience of God's love flooding into our heart is prior to words and to the world of meaning. This does not mean that it is an irrational experience but prior to language and intellectual reflection. Lonergan calls it the prior inner word¹²⁵⁹.

This prior inner word can resonate differently in different temperaments and in different stages of religious development¹²⁶⁰. It is a personal and intimate experience of being in love

¹²⁵⁵ There are some references in the works of Saint Augustine. He affirms that God is more intimate to the human being than he himself. *"Thou wast more inward to me than the most inward part of me; and higher than my highest reach."* [...] *"Let the restless and the unrighteous depart and flee away from thee. Even so, thou seest them and thy eye pierces through the shadows in which they run. For lo, they live in a world of beauty and yet are themselves most foul. And how have they harmed thee? Or in what way have they discredited thy power, which is just and perfect in its rule even to the last item in creation? Indeed, where would they fly when they fled from thy presence? Wouldst thou be unable to find them? But they fled that they might not see thee, who sawest them; that they might be blinded and stumble into thee. But thou forsakest nothing that thou hast made. [...]* For in truth they do not know that thou art everywhere; that no place contains thee, and that only thou art near even to those who go farthest from thee." SAINT AUGUSTINE, *Confessions*, p. 68 and 96. Another reference is found in the notion that the human being is *capax-dei*. *"It is in virtue of the fact that it [the human mind] has the capacity for God and the ability to participate in God, that it is his image: only because it is his image can so high a destiny be conceived for it"*. SAINT AUGUSTINE, *The Trinity*, p.108-109.

¹²⁵⁶ B. LONERGAN, *Method in theology*, p. 110.

¹²⁵⁷ B. LONERGAN, *Method in theology*, p. 112 and 119.

¹²⁵⁸ D. LARDNER CARMONY, *The Desire for Transcendence: Religious Conversion*, p. 61.

¹²⁵⁹ The expression "inner word" comes from Saint Augustin *"verbum interius"*, which also comes from the Stoics' *"logos endiathetos"*. According to Augustin, this is the word that we speak in the heart. It is also the thought before it is articulated in any linguistic form. Consequently, it is pre-linguistic. See A.S. JENSEN, *Theological Hermeneutics*, p. 45-46. B. LONERGAN, *Method in theology*, p. 119.

¹²⁶⁰ B. LONERGAN, *Method in theology*, p. 112.

without restriction¹²⁶¹. However, it is not simply an individual experience. The same gift can be given to many who can recognize in one another a common orientation and communion with God¹²⁶². This “same gift” recognized in others is the root of a religious community. Moreover, this experience is historical in the sense that through this experience God enters into our history. It is God’s historical communication to his people¹²⁶³. Lonergan identifies this personal, communal and historical experience with the state of sanctifying grace¹²⁶⁴.

Does this imply that all religions are reduced to subjective experiences? As Lonergan argues, the concrete subject is not locked in the world of immediacy. He is also open to a world mediated by meaning, questions, confirmations, values, options and actions. In the world mediated by meaning “*one not merely experiences but understands and manifests one’s understanding in one’s words and deeds [...]*”¹²⁶⁵.

II.2.3.2. The outer word¹²⁶⁶ in a world mediated by meaning

Religious experiences and their meanings can be expressed by words¹²⁶⁷. The subject goes from his immediate individual subjectivity to the objectivity of the world mediated by meaning through the process of asking questions and seeking answers¹²⁶⁸. This is a discernment process that affirms, questions and clarifies the validity of religious experience¹²⁶⁹.

Ordinarily we retrieve the meaning of our spiritual experiences by means of words and concepts rooted in a plurality of religious expressions: commandments, narratives, ascetic or mystical formulations, teachings of wisdom or a compound of these forms¹²⁷⁰. This outer word is a personal word announced by religious leaders¹²⁷¹. The word is also social because it enables individuals to be gathered in a group. Moreover, the word is historical because, although they may remain unchanged for a longtime, they periodically develop and adapt to different social and cultural conditions¹²⁷². The meaning of religious experiences takes place in a context that varies with time. It borrows and adapts a language that enables us to speak about the meaning of our

¹²⁶¹ B. LONERGAN, *Method in theology*, p. 118.

¹²⁶² B. LONERGAN, *Method in theology*, p. 118.

¹²⁶³ B. LONERGAN, *Method in theology*, p. 119.

¹²⁶⁴ B. LONERGAN, *Method in theology*, p. 120.

¹²⁶⁵ B. LONERGAN, *The Ongoing Genesis of Methods*, p. 151.

¹²⁶⁶ The expression “outer word” also comes from S. Augustine. It is Augustine’s “*verbum externum*” and the Stoics’ “*logos prophorikos*”. A.S. JENSEN, *Theological Hermeneutics*, p. 45-47.

¹²⁶⁷ B. LONERGAN, *Method in theology*, p. 112.

¹²⁶⁸ As in Ladrière and Zubiri, for Lonergan meaning is not something immediate in the experience. It is a product of an effort of interpretation. B. LONERGAN, *Religious Knowledge*, p. 135.

¹²⁶⁹ B. Lonergan, *Religious Knowledge*, p. 129.

¹²⁷⁰ B. LONERGAN, *Method in theology*, p. 118.

¹²⁷¹ B. LONERGAN, *Method in theology*, p. 113.

¹²⁷² B. LONERGAN, *Method in theology*, p. 118.

experience. Consequently, these outer words are historically conditioned¹²⁷³. At the same time, religious words are expressions of religious experience and make religious experience effective in the world¹²⁷⁴. Through the word, religious experiences exit the realm of intimacy and have an impact in the surrounding culture.

Moreover, as Lardner Carmony affirms, the outer words of religions must not be equated with the inner experience of God's self-communication in love. The inner experience is prior and unmediated¹²⁷⁵. The outer expressions are posterior and mediated but necessary to understand the meaning of our experience and to become socially effective. However, this outer word should not be understood as having simply a human, subjective, communal and historical origin. It is the narrative of God's encounter with his people. This outer word is not just the objectification of God's love; it is the word of God¹²⁷⁶.

II.2.3.3 The realm of theory

According to Lonergan, religion moves to the realm of theories by its dogmas and theologies. The religious experience of God's love and grace is foundational and may be the cause of our seeking knowledge of God¹²⁷⁷. For Lonergan, it is love that triggers the desire to know and not knowledge that triggers the desire to love. The objective of theology is to help us in the process of integrating God's gift of love and grace with all other human dimensions¹²⁷⁸.

A. The object of theology

Let's consider theology from the perspective of its object and method. For Lonergan, an object is anything that is intended in questions and known through correct answers. As a consequence, God's transcendental mystery, which exceeds our intellect, cannot be an object. God in Himself does not belong to the world mediated by meaning¹²⁷⁹. Moreover, the proper human attitude to this mystery of love is not inquiry but adoration¹²⁸⁰. However, the object of theology consists of objectifying images, concepts, and words with meaning born out of our

¹²⁷³ B. LONERGAN, *Method in theology*, p. 112.

¹²⁷⁴ D. LARDNER CARMONY, *The Desire for Transcendence: Religious Conversion*, p. 65.

¹²⁷⁵ This is equivalent to the fundamental immediate experience in the order of manifestation. D. LARDNER CARMONY, *The Desire for Transcendence: Religious Conversion*, p. 65.

¹²⁷⁶ For Lonergan, the relationship between revelation - inspiration and the outer word is not a question of methodology (theological epistemology) but a question of theology. B. LONERGAN, *Method in theology*, p. 119.

¹²⁷⁷ B. LONERGAN, *Method in theology*, p. 114, 123 and 340-341.

¹²⁷⁸ B. LONERGAN, *Method in theology*, p. 123.

¹²⁷⁹ This is the influence of Aquinas' negative theology in Lonergan.

¹²⁸⁰ B. LONERGAN, *Method in theology*, p. 344.

experience of God's gift of love. God also becomes indirectly an object of inquiry when we have questions about the foundation of the world and of our moral actions.

B. The general transcendental method: Lonergan's transcendental turn to the concrete subject

For Lonergan, a method is not a recipe that one must follow automatically. A method is a structure that seeks to create in collaboration with others¹²⁸¹. Creation means here the capacity to apprehend anew, to renew our knowledge¹²⁸². Lonergan affirms that the method in theology follows a general transcendental method that belongs to the human structure of inquiry¹²⁸³. This general transcendental method consists of different operations that correspond to different levels of conscience and intentionality¹²⁸⁴. These operations are experience, understanding, judgment and deliberation¹²⁸⁵. **Experience**, the empirical level, is the operation that consists of sensing, perceiving, imagining, feeling, speaking and moving. Through this operation we apprehend empirical data¹²⁸⁶. **Understanding**, the intellectual level, is the operation that consists of inquiring, conceiving, formulating, and interpreting. Through this operation we search for the idea or the intelligible unity and organization of data. **Judgment**, the rational level, consists in weighing the evidence, discerning the certainty or probability of statements elaborated at the level of understanding. It is concerned with the truth or falsity of a statement elaborated at the level of understanding. **Deliberation**, the responsible level, is the operation that consists in evaluating and deciding possible actions. It is concerned with values and responsible exercise of freedom. Through this operation we engage ourselves in a course of action.

According to Lonergan, the transcendental method is one general human structure whose unity (i.e., the unity of the four operations) is founded in the conscience of the subject¹²⁸⁷. All concrete methods are particular instances of this transcendental general method. In other words, sciences, philosophy and theology share a homologous structure of human inquiry: experience, understanding, judgment and deliberation-decision. Theology is a particular instance with its specific experience (data), understanding, judgments and decisions, which are different from

¹²⁸¹ G. WOIMBÉE, *La presque île du divin. Objectivité de la raison théologique chez Bernard Lonergan*, p. 368.

¹²⁸² G. WOIMBÉE, *La presque île du divin. Objectivité de la raison théologique chez Bernard Lonergan*, p. 369.

¹²⁸³ Lonergan's work *Insight* is an effort to bring to light the general homologous structure of inquiry shared by all human persons. According to Lonergan this structure is found in common sense, mathematics, natural sciences, social sciences, philosophy and theology.

¹²⁸⁴ B. LONERGAN, *Method in theology*, p. 9.

¹²⁸⁵ B. LONERGAN, *Insight*, p. 456-457, 626-627, 633-639 and 757. B. LONERGAN, *Method in theology*, p. 14-15.

¹²⁸⁶ B. LONERGAN, *Method in theology*, p. 13.

¹²⁸⁷ B. LONERGAN, *Method in theology*, p. 16-17.

scientific experiment-data, understanding, judgments and deliberation-decision¹²⁸⁸. Putting theology in the framework of transcendental method enables Lonergan to conceive theology as a set of related and recurrent operations advancing toward an ideal goal¹²⁸⁹. These operations become functional theological specializations that pursue different objectives by different methodical precepts¹²⁹⁰. According to Lonergan, there are eight functional specialties. All of them are needed for the complete process that goes from data to results. Table 5.1 summarizes the eight functional specialties and their relationship with the structure of human inquiry.

There are two phases that group these eight functional specialties. The first phase is about the sources: Scriptures, tradition (e.g., history of dogmas), Fathers of the church, Doctors of the church and historical theology. The Christian message comes to us through the mediation of a community which has expressed it through a number of documents. This phase is also called the mediating phase¹²⁹¹. Theologians have (i) to establish the actual content of the documents, which is the objective of *research*, (ii) to understand the meaning of the documents (*interpretation*) and (iii) to relate the authors and documents to other persons and events of their times (*history*)¹²⁹². However, this is not enough. To complete these mediating phase the theologian (iv) must seek to what extent and in what respects the authors were justified in affirming what they did. That is the objective of the fourth functional specialty (*dialectic*) where one moves from a description and interpretation of the past to an evaluation (judgment) of it.

The second phase addresses contemporary issues. Lonergan calls it the mediated phase¹²⁹³. It seeks to develop theological systems that respond to our historical, social and cultural contexts. It takes into consideration the varied sensibilities, mentalities and interests of mankind¹²⁹⁴. In this phase theologians seek (v) to explore the nature of intellectual, moral and religious conversions (*foundations*); (vi) to judge the authors affirmations with respect to a religious tradition (*doctrines*) and (vii) to achieve a systematic understanding of the doctrines, their coherence and their relation to the rest of human knowledge (*systematics*)¹²⁹⁵. The last functional specialty (*communications*) is about the transmission of understanding in systematics to all human persons in their circumstances and particular intellectual development.

¹²⁸⁸ B. LONERGAN, *Method in theology*, p. 23.

¹²⁸⁹ B. LONERGAN, *Method in theology*, p. 125.

¹²⁹⁰ B. LONERGAN, *Method in theology*, p. 136-137.

¹²⁹¹ H.-A. MEYNELL, *The Theology of Bernard Lonergan*, p. 14.

¹²⁹² H.-A. MEYNELL, *The Theology of Bernard Lonergan*, p. 15.

¹²⁹³ H.-A. MEYNELL, *The Theology of Bernard Lonergan*, p. 14.

¹²⁹⁴ B. LONERGAN, *Method in theology*, p. 142.

¹²⁹⁵ H.-A. MEYNELL, *The Theology of Bernard Lonergan*, p. 15.

Table 5.1. Theology's eight functional specialties

Phase A. <i>Oratione oblique</i>: tells what others in the past had to say about God and the economy of salvation ¹²⁹⁶ . The objectives of this phase are to assimilate the past ¹²⁹⁷ , reveal the religious situation and mediate an encounter with persons that witnessed (and still witness today) Christ ¹²⁹⁸ .		
Functional specialization They are interdependent. Each one is related to other specializations and to the four structures of human inquiry, although one structure predominates.	Structure of human inquiry Correspondence with each operation.	Multiplicity and Unity
<u>Research</u> : uncovers and make available the data. It corresponds to textual criticism ¹²⁹⁹ . It is the availability of better texts – sources (Holy Scriptures and tradition) for the work of theology ¹³⁰⁰ .	Experience-Data	Multiplicity of data ↓ Dialectical unity
<u>Interpretation</u> : understands the meaning of data. It corresponds to commentaries and interpretative monographs ¹³⁰¹ .	Understanding	
<u>History</u> : judges and narrates what occurred. It corresponds to Church's history, history of dogmas, historical theology.	Judgment	
<u>Dialectic</u> : unravels the conflicts concerning values, facts, meanings and experiences. It corresponds to an ecumenical variant of the controversial apologetic theology.	Deliberation-Decision	
Phase B. <i>Oratione recta</i>: theologian, enlightened by the past, confronts the problems of his own day ¹³⁰² .		
<u>Foundation</u> : reflects on authentic conversion and horizons within which doctrines are to be apprehended ¹³⁰³ . It corresponds to fundamental theology.	Deliberation-Decision	Unity of grounding horizons ↓ Multiplicity of communications
<u>Doctrine</u> : expresses judgments (affirmations and negations) of dogmatic and moral theologies. It corresponds to dogmatic theology.	Judgment	
<u>Systematics</u> : works out appropriate systems of conceptualization to remove apparent inconsistencies, grasps inner coherence by means of analogies offered by more familiar human experience. It corresponds to speculative theology.	Understanding	
<u>Communication</u> : produces data in the present for the future. It deals with interdisciplinary relations with art, language, literature, other religions, natural and human sciences, with philosophy and history. This data is differentiated according to media, to class of men and to common cultural interest ¹³⁰⁴ . It corresponds to pastoral or practical theology.	Data	

¹²⁹⁶ B. LONERGAN, *Method in theology*, p. 133.

¹²⁹⁷ B. LONERGAN, *Method in theology*, p. 134.

¹²⁹⁸ B. LONERGAN, *Method in theology*, p. 135.

¹²⁹⁹ B. LONERGAN, *Method in theology*, p. 136.

¹³⁰⁰ We can think of works done to produce better texts of Scriptures (e.g. the *Novum Testamentum Graece* by Nestle-Aland), of Fathers of the Church (e.g. the texts produced by *Sources Chrétiennes*) and the documents of the Magisterium of the Church (e.g., Jacques Dupuis, *The Christian Faith: In the Doctrinal Documents of the Catholic Church*).

¹³⁰¹ B. LONERGAN, *Method in theology*, p. 136.

¹³⁰² B. LONERGAN, *Method in theology*, p. 133.

¹³⁰³ B. LONERGAN, *Method in theology*, p. 135-136.

¹³⁰⁴ B. LONERGAN, *Method in theology*, p. 135-136.

These eight theological specialties operate as a dynamic unity. Development in theology happens through a movement of specialization and a movement of systematic integration.

In Lonergan's effort, there are still some things that are not clear. In theology, what is the relationship between the methodical level of experience that produces "data" and our experience of God's love? Although we think that Lonergan rightly introduces our spiritual experiences in the theological method, he risks reducing this "inner word" to mere "data" of inquiry. The three aspects of religious experience, words and theoretical reflections, are they separated chronological stages? Or, are they three inseparable moments interconnected in some way? Lonergan seems to imply the first, when he refers to experience as data to be analyzed by the level of understanding¹³⁰⁵. We think that the difficulty and the lack of clarity is due to the absence of a theology of revelation that connects in some way the foundational spiritual experience of God's love and the witness of Scripture and Tradition.

Lonergan develops the relation between theology and religious experience through the topic of religious conversion. For him the foundation of theology is the authentic conversion of theologians¹³⁰⁶. Lonergan implies that religious conversion, related to the experience of God's love really plays an important role in the second phase of the theological method¹³⁰⁷. According to Meynell, for Lonergan the three conversions general occurs in the direction of religious conversion, moral conversion and then intellectual conversion. The religious conversion is a response to the experience of God's offer of love. This leads oneself to give order to one's moral and perhaps one's intellectual life¹³⁰⁸. But, what is the relation of the Church's historical elaboration of dogmas and the experience of God's grace? There are no clear answers to these questions.

Other question that emerges is the specificity of the theological method. According to some, e.g., Rahner, the method proposed by Lonergan is not sufficiently specific for theology but a general one¹³⁰⁹. However for some that is precisely what enables theology to dialogue with other rationalities¹³¹⁰. Lonergan's objective was to develop a method that enables a dialogue and an encounter between Christian faith and human culture¹³¹¹.

¹³⁰⁵ Here Lonergan falls into Zubiri's critique to a separation between sensing and intelligence, which has been predominant in western philosophy.

¹³⁰⁶ W. REISER, S.J., *The Primacy of Spiritual Experience*, p. 100.

¹³⁰⁷ H.-A. MEYNELL, *The Theology of Bernard Lonergan*, p. 38.

¹³⁰⁸ H.-A. MEYNELL, *The Theology of Bernard Lonergan*, p. 17.

¹³⁰⁹ H.-A. MEYNELL, *The Theology of Bernard Lonergan*, p. 37.

¹³¹⁰ H.-A. MEYNELL, *The Theology of Bernard Lonergan*, p. 37.

¹³¹¹ G. WOIMBÉE, *La presqu'île du divin. Objectivité de la raison théologique chez Bernard Lonergan*, 371.

II.3 Theologians that stress the uniqueness of God's revelation and the singularity of theology with respect to all other rationalities

Tillich, Rahner and Lonergan understand the object and method in theology from an anthropological horizon. Their objective is to establish a dialogue with contemporary mentality in order to give reasons of our hope, or as Rahner says, to ground our faith with intellectual honesty. However, other theologians stress the distinction between theology and other fields of knowledge. This understanding affirms without any ambiguity that faith and theology are grounded only in God's initiative and revelation. We, by our own capacities, could not have reached God's gift to us¹³¹². We will consider two theologians who follow this understanding of theology: Karl Barth and George Lindbeck.

II.3.1 Karl Barth: the uniqueness of God's Word

For Barth, the object of theology is the Word of God. However, this protestant theologian has evolved in his understanding of the Word of God as a theological object. For the sake of simplicity let's consider the Barth of the dialectical period and the Barth of the Dogmatics.

II.3.1.1 The dialectical period

Karl Barth affirms in the second edition of the *Letter to the Romans* (1922)¹³¹³ that the object of theology is the Word of God exposed in the words¹³¹⁴. The Word of God is not one thing among other things that could be directly apprehended and comprehended by our human efforts¹³¹⁵. The Word of God is completely different from us¹³¹⁶. He is the Hidden God (*Deus absconditus*), the unknown God. During this period, Barth considers, quoting Kierkegaard, that there is “an infinite qualitative distinction” between time and eternity, consequently between God and the human being¹³¹⁷. The method proposed during this period is hermeneutics¹³¹⁸, which is biblical hermeneutics and not a philosophical effort to interpret the Word of God. Although for Barth historical criticism is necessary and justified, as a first step for a biblical commentary¹³¹⁹,

¹³¹² Lonergan and Rahner do not deny this. On the contrary this is affirmed in their statements about God's incomprehensible mystery that is revealed to us. This is their way of assuming Aquinas' negative theology.

¹³¹³ Barth started the first edition of the *Römerbrief* in 1915 and it appeared in 1919. His second edition appeared in 1922. See D. MÜLLER, *Karl Barth*, p. 20.

¹³¹⁴ K. BARTH, *The epistle to the Romans*, p. 8.

¹³¹⁵ K. BARTH, *The epistle to the Romans*, p. 28.

¹³¹⁶ K. BARTH, *The epistle to the Romans*, p. 36.

¹³¹⁷ K. BARTH, *The epistle to the Romans*, p. 10.

¹³¹⁸ K. BARTH, *The epistle to the Romans*, p. 9.

¹³¹⁹ K. BARTH, *The epistle to the Romans*, p. 6.

he proposes to go beyond it and interpret the text itself. In terms of the cultural, historical and linguistic gap between the biblical writer and the reader he writes: “*the conversation between the original record and the reader moves round the subject-matter, until a distinction between yesterday and today becomes impossible*”¹³²⁰. Later, this would influence Gadamer who would develop the notion of *fusion of horizons*.

II.3.1.2 The period of Church Dogmatics

Barth experiences a change in his conception and practice of theology during his study of Saint Anselm published in 1931. That work points at the end of the dialectical period and the beginning of the period of the Church Dogmatics¹³²¹. During the previous dialectical period, he stressed the radical separation between the Word of God and our human realm. During the period of the Church Dogmatics, he stresses that God is “God among us” who becomes man “to take up our case”. The man Jesus is the eternal Word of God¹³²², the Immanuel, God with us¹³²³. As Denis Müller affirms, the study of Anselm’s theology makes Barth discover that a truly Christian theology should be focalized on Christ, God incarnated¹³²⁴.

During this period, in the *Evangelical Theology* written by the mature Barth in 1962, he affirms that the object of theology is the Word of God witnessed by the Holy Scriptures¹³²⁵. This object is never to be taken for granted. The theologian must go continuously to receive its object from the Scriptures, which reflects and echoes the Word of God¹³²⁶. It is not theology that constitutes its object, but in this case it is the object, the Word, who calls and constitutes theology. In terms of theology’s task, Barth affirms the following:

“Theology is a science seeking the knowledge of the Word of God spoken in God’s work – science learning in the school of Holy Scripture, which witness to the Word of God; science laboring in the quest for truth, which is inescapably required of the

¹³²⁰ K. BARTH, *The epistle to the Romans*, p. 7.

¹³²¹ According to McCormack much of Barth’s method in the Church Dogmatics emerges from his study of Saint Anselm, although not completely. He sustains that some methodological elements of Barth’s Dogmatic’s period were already unfolding since 1924. There are actually three evolutions in Barth’s thought. First, there is a concentration into the eschatology with the accent on the “not yet”. Then in 1924 with the Dogmatics of Göttingen, Barth moves from an eschatological accent to a Christological one but still “pneuma-centric.” Finally, there is a new Christological concentration after Barth’s revision of the doctrine of election in 1936. See B.-L. MCCORMACK, *Karl Barth’s Critically Realistic Dialectical Theology*, p. 20-23, 428, 434, and 441. B. BOURGINE, *L’herméneutique théologique de Karl Barth*, p. 95-96.

¹³²² K. BARTH, *Church Dogmatics, Selections*, p. 111-113.

¹³²³ K. BARTH, *Evangelical Theology*, p. 12.

¹³²⁴ D. MÜLLER, *Karl Barth*, p. 43.

¹³²⁵ K. BARTH, *Evangelical Theology*, p. 82. It is the Word of God given to the human being through the incarnation and is the human being as given to God. For that reason the object of theology is the true human being that comes from God, Jesus-Christ as witnessed by Scriptures.

¹³²⁶ K. BARTH, *Evangelical Theology*, p. 32-33.

*community that is called by the Word of God. In this way alone does theology fulfill its definition as the human logic of the divine Logos*¹³²⁷.

Faith is not a blind assent because it is not only about "I believe", but also about "I believe to understand". The task of theology is to help the community to understand the Word of God, to preach, to teach, and to do her pastoral counseling. The method of theology is a procedural regime that corresponds adequately to the task of theology and to its object¹³²⁸. The theologian inquires, thinks and speaks with his intellect, but not independently of his faith. Faith is not the object of theology, but the *condition sine qua non* of theological science¹³²⁹. For Barth, the theological method should be understood from the perspectives of four theological disciplines: biblical theology, history, systematics and practical theology. Each one has its own task and methodological principles.

A. Method of biblical theology and exegesis

According to Barth there are two principles in biblical interpretation. First, biblical theology must employ all known and available means, e.g., all rules and criteria applicable to grammar, linguistic and style. It should also use knowledge gathered in history, culture and literature that enables the theologian to understand the contexts¹³³⁰. However, this is not enough. The second principle is that the text must be read and explained as attestation and proclamation of a divine action and speech. It is the recognition that the ultimate reference of the biblical texts is God's action in history.

B. Method in church's history, history of dogmas and historical theology

It is the study of the history of the community gathered and ordered by God's Word. This study includes the community's theoretical reflection developed through history and its practical life¹³³¹. This community acts as a secondary witness of God's Word. Theology serves today's community by being rooted also in the community of past times, its older and recent tradition¹³³².

¹³²⁷ K. BARTH, *Evangelical Theology*, p. 49.

¹³²⁸ K. BARTH, *Evangelical Theology*, p. 86.

¹³²⁹ K. BARTH, *Evangelical Theology*, p. 100 and 102.

¹³³⁰ K. BARTH, *Evangelical Theology*, p. 176.

¹³³¹ K. BARTH, *Evangelical Theology*, p. 178.

¹³³² K. BARTH, *Evangelical Theology*, p. 42.

Tradition is composed of community's dogmas, creeds and confessions that witness the community's resistance to hear strange voices not related to God's Word¹³³³.

C. Method in systematic theology

A theologian searches for the inner relationship, the clarity and the lucidity of the Word of God. However, he must recognize that his systematic work is always open to better interpretations of God's Word in the future¹³³⁴. There is no final system that expresses and apprehends fully the Word of God. In order to express systematically the Word, the theologian may use viewpoints, concepts, images, and linguistic media that had been handed down or have newly arisen in its time and situation¹³³⁵. However, theologians should not be bounded or ruled by a philosophical system¹³³⁶.

D. Practical theology

This domain of theology is concerned with the proclamation of the Word of God in today's context¹³³⁷. Theology has the task of stimulating and leading the community in its task of preaching, teaching and counseling¹³³⁸. The real problem of practical theology is the issue of language: how the Word of God may be served by human words in the proclamation of the community¹³³⁹.

II.3.1.3 Barth's notion of theology

One major issue of Barth's theology is the issue of analogy and its uses in theology. Barth expresses that a theologian could use contemporary viewpoints and concepts in order to develop his systematics theology¹³⁴⁰. Analyzing Barth's notion of *analogia fidei*, Balthasar justifies this use of contemporary concepts in theology when he argues the following: "*because the order of creation is oriented to the order of Incarnation, it is structured in view of the Incarnation: it*

¹³³³ K. BARTH, *Evangelical Theology*, p. 45.

¹³³⁴ K. BARTH, *Evangelical Theology*, p. 181.

¹³³⁵ K. BARTH, *Evangelical Theology*, p. 90.

¹³³⁶ K. BARTH, *Evangelical Theology*, p. 91-92.

¹³³⁷ K. BARTH, *Evangelical Theology*, p. 182.

¹³³⁸ K. BARTH, *Evangelical Theology*, p. 41.

¹³³⁹ K. BARTH, *Evangelical Theology*, p. 182-183.

¹³⁴⁰ "Naturally, as a human science, theology constantly and universally employs the viewpoints, concepts, images, and linguistic media that have been handed down or have newly arisen in its time and situation." K. BARTH, *Evangelical Theology*, p. 90.

contains images, analogies, as it were, dispositions, which in a true sense are presuppositions for the Incarnation.”¹³⁴¹

Although Barth uses analogies in the *Church Dogmatics* to describe the God-creature relation¹³⁴² he has not explicitly developed the theological method of how to do that¹³⁴³. In the background is his notion of the analogy of faith and his criticism of the analogy of being. However, how can the analogy of faith integrate non-theological concepts without reducing theology to a philosophical system? This is something that must be addressed¹³⁴⁴. We will continue this issue below and how Ladrière develops explicitly a method to integrate non-theological concepts into theological systems¹³⁴⁵.

II.3.2 George Lindbeck: the singularity of religious language

George Lindbeck considers that the object of theology is the religious data from religious language (including scriptural and doctrinal data)¹³⁴⁶. For him, religions are comprehensive interpretative schemes of reality that structure human experience and understanding of the self and the world¹³⁴⁷. A religion operates as a cultural and linguistic framework that shapes entirely a person’s life, thought and world-vision¹³⁴⁸. Religious language transforms our life through prayer, praise, preaching and exhortation¹³⁴⁹. There is a reciprocal relationship between experience and religious language; one influences the other. However, in Lindbeck’s cultural linguistic framework, the leading partner is religious language¹³⁵⁰. He criticizes liberal theologians for whom religious experience grounds religions¹³⁵¹. For Lindbeck, religious

¹³⁴¹ H.-U. VON BALTHASAR, *The theology of Karl Barth*, p. 163.

¹³⁴² Balthasar provides many examples of Barth’s usage of analogies. See H.-U. VON BALTHASAR, *The theology of Karl Barth*, p. 164.

¹³⁴³ Benoît Bourguine clearly states that Barth does not develop an explicit analysis and system of his theological method. In Bourguine’s own words: “Barth n’a pas su entièrement rendre compte de sa pratique dogmatique ; il ne l’a pas pensée au point d’en donner une théorie ad hoc. Voilà qui, de soi, n’entame nullement la validité de cette pratique, tant il apparaît que la force de sa théologie ne réside pas dans sa formalisation ; ce n’est d’ailleurs pas là que porte le poids de son effort”. B. BOURGUINE, *L’herméneutique théologique de Karl Barth*, p. 489.

¹³⁴⁴ Barth provides the conditions to transform the philosophical concepts of “cause” and “concursum” in order to be used in theology. What we do not see is the theological method explicitly developed and exposed. See H.-U. VON BALTHASAR, *The theology of Karl Barth*, p. 132-133.

¹³⁴⁵ See in this chapter section III.5.5.3, part B.2.1.

¹³⁴⁶ This is equivalent to Lonergan’s specialty of research that makes available the religious data. G. LINDBECK, *The nature of doctrine*, p. 10.

¹³⁴⁷ G. LINDBECK, *The nature of doctrine*, p. 32.

¹³⁴⁸ G. LINDBECK, *The nature of doctrine*, p. 33.

¹³⁴⁹ G. LINDBECK, *The nature of doctrine*, p. 69.

¹³⁵⁰ G. LINDBECK, *The nature of doctrine*, p. 33-34.

¹³⁵¹ This is Lindbeck’s interpretation of Schleiermacher’s and Tillich’s theology.

language is the condition that shapes and enables the experience of inner attitudes. Lindbeck understands religious experience in the sense of feelings, sentiment or emotions¹³⁵².

With respect to change or innovation in any religion, Lindbeck affirms that this is not the product of religious experience or mysticism. Renovation comes after one realizes that there is a discrepancy between an interpretation of reality by means of religious language and a situation in a changing world. When that happens, it is not religion that must be reinterpreted in the light of the world. On the contrary, it is the changing world that must be reinterpreted in the light of religion¹³⁵³.

Lindbeck understands religious doctrines as “*communally authoritative rules of discourse, attitude and action*”¹³⁵⁴. Doctrines are more than cognitive propositions or expressive symbols. They are rules with invariant meaning under changing conditions. Doctrines function as norms of belief and practice¹³⁵⁵. These doctrines do not change according to different contexts or conditions, as grammatical rules do not change either. We must learn the language of faith and its rules before we can know its message¹³⁵⁶. The truth, more than being related with affirmations or propositions, is correlated with forms of life¹³⁵⁷. With respect to the language of faith, the criterion of truth proposed by Lindbeck is the coherence between our interpretation of the world and the Christian form of life and not the correspondance to an ontological reference¹³⁵⁸. Consequently, primary knowledge is not about propositions but rather about how to become religious in a particular way.

Theology as *fides quaerens intellectum* (faith seeking understanding) is understood as a second order reflection on the data of religion¹³⁵⁹. Technical theology and official doctrines are second order discourses about first order religious language. Theology and doctrine are to religious language what grammar is to ordinary language. However, this does not mean that theology and doctrines belong to the same order of reflection. There is a distinction between them shown by the fact that there can be a great variety of theological explanations and interpretations of a particular doctrine¹³⁶⁰. The objective of theology is not to develop a good theory¹³⁶¹, but to

¹³⁵² G. LINDBECK, *The nature of doctrine*, p. 39.

¹³⁵³ G. LINDBECK, *The nature of doctrine*, p. 82.

¹³⁵⁴ G. LINDBECK, *The nature of doctrine*, p. 18.

¹³⁵⁵ G. LINDBECK, *The nature of doctrine*, p. 85.

¹³⁵⁶ G. LINDBECK, *The nature of doctrine*, p. 59.

¹³⁵⁷ G. LINDBECK, *The nature of doctrine*, p. 64.

¹³⁵⁸ G. LINDBECK, *The nature of doctrine*, p. 106.

¹³⁵⁹ G. LINDBECK, *The nature of doctrine*, p. 10.

¹³⁶⁰ G. LINDBECK, *The nature of doctrine*, p. 76.

¹³⁶¹ In this point Lindbeck is against Lonergan's specialty of Systematics and Barth's notion of systematic theology. If Lindbeck is right, then it is not clear how theology can dialogue with other rationalities, e.g., natural sciences. It suffices to learn the language of faith and its grammar. G. LINDBECK, *The nature of doctrine*, p. 123.

focus on the concrete life and praxis of the community expressed and influenced by a religious language. For Lindbeck, theological speculations about the correspondence between God and a metaphysical structure are not a doctrinal necessity, cannot be binding and are irrelevant to the way Christians live and think¹³⁶². Influenced by Barth, Lindbeck affirms that there is no need to give metaphysical (or philosophical) interpretations to doctrines. The criterion to evaluate theology is neither a correspondence with an ontological reference nor with an experiential reference. It is how well it organizes scriptural data and tradition to be used in Christian worship and life.

The theological method is an interpretation of the primary religious texts, which are sources of religious data. Explicitly, these primary religious texts are above all, the Holy Scriptures and Christian doctrines. Lindbeck makes a distinction between intratextual and extratextual interpretations. He proposes an intratextual interpretation that considers the immanent meaning of the text. We can retrieve this meaning by following and practicing religious language's norms as we follow and practice grammar in order to learn a language¹³⁶³. The objective of this intratextual method is fidelity to biblical texts and the assimilation of the extra-biblical cultural context into the universe of the Bible. Lindbeck considers that Augustine, Thomas Aquinas and Karl Barth are theologians who had followed this intratextual method¹³⁶⁴.

In terms of extratextual interpretation, Lindbeck affirms that this method is an interpretation of biblical texts in terms of theories that are alien to religious language¹³⁶⁵. It locates the religious meaning outside the text, in an alien culture or language that becomes the basic framework of interpretation. Consequently, Holy Scripture ceases to be the lens through which the theologian viewed the world. Instead, Holy Scripture becomes the object of study whose religious significance is located outside it¹³⁶⁶. According to Lindbeck this describes the methods of Schleiermacher, Tillich, Bultmann, Hans Küng, Schillebeeckx, David Tracy and Teilhard de Chardin, among others. Lindbeck, as Barth before him, argues that the use of philosophical hermeneutics to interpret religious data does not respect the singularity of the object of theology.

One of the major contributions of this notion of religious language is that it integrates life, prayer, doctrine, beliefs, liturgy, attitudes and praxis of the believer and the whole community in

¹³⁶² G. LINDBECK, *The nature of doctrine*, p. 106.

¹³⁶³ G. LINDBECK, *The nature of doctrine*, p. 114.

¹³⁶⁴ G. LINDBECK, *The nature of doctrine*, p. 117.

¹³⁶⁵ G. LINDBECK, *The nature of doctrine*, p. 116.

¹³⁶⁶ G. LINDBECK, *The nature of doctrine*, p. 119.

the theological endeavor. This notion avoids the extremes of individualism and a pure speculative theology disconnected from the community's life and praxis. Lindbeck's concept of religious language and his notion of intratextual interpretation avoid the temptation of reducing theology to a philosophy of religion or one anthropology among others. For theology, God's revelation and faith is the point of departure. We cannot use any type of theory or philosophical system to interpret the sacred text, without taking into consideration the particularity of this object.

In spite of these relevant contributions, Lindbeck's "cultural-linguistic" model has some difficulties. His notion of religious language misses a clear theological reference. It is not clear what grounds the religious grammar: God?, Holy Scriptures?, doctrines? The role of the Holy Spirit seems to be reduced to a grace for hearing and recognizing the truth that comes from God. There is no reflection about the action of the Holy Spirit in the development of the language of faith¹³⁶⁷.

Lindbeck's notion of religious experience seems to be reduced to a religious emotion. This is one sense of the word "experience". Another sense of the word "experience" implies an event that leaves an impression on the subject¹³⁶⁸. We can overcome this difficulty in relating both, religious experience and religious language, to the notion of religious event. This could explain how the reading and meditation of religious texts can induce a religious experience. This could also explain the case of Saint Paul's conversion who did not know the religious language of the first communities, but who learned the language after his conversion *de subito*, which was a product of "experiencing" a religious event or encounter.

When Lindbeck mentions that religious truth is correlated with the forms of life more than with affirmations, he seems to confuse different notions or levels of truth¹³⁶⁹. As we have discussed already in chapter 4 there is a truth connected with the fundamental immediate experience. There is a level of truth correlated with language and affirmations and there is a rational truth. Religious truth is correlated with three levels of truth: (i) a spiritual experience (faith as grace and experience), (ii) with religious affirmations related to the content of faith and (iii) with a theological truth (the rational level)¹³⁷⁰. Lindbeck does not distinguish them. Religious truths correlate with forms of life (real truth), also with affirmations (dual truths) and with theological reflections (rational truths). Another limit is the fact that he falls into what he

¹³⁶⁷ We will see how this is done by Ladrière and Zubiri.

¹³⁶⁸ This is the sense of the French word "*vecu*" or the Spanish word "*vivencia*".

¹³⁶⁹ We already have discussed Zubiri's distinction between real, dual and rational truth. We will see below how this is applied to theology.

¹³⁷⁰ We will explain that below.

criticizes, a use of philosophical framework to interpret religious data. In Lindbeck we see traces of Wittgenstein's philosophy of language and forms of life. Finally, Lindbeck's focus on intratextual interpretation and his preoccupation for modern individualism lacks the category of dialogue and a reflection about the mission of sharing the Good News to the world. If the religious language is Good News it must address the world and our contemporaries.

II.4 Summary of the preliminary analysis

We have discussed two basic points of view in contemporary theology. One point of view seeks to root the theological method in anthropological structures (Tillich, Rahner and Lonergan). Tillich argues for an anthropological dimension of a religious experience of the Unconditional. For him, there is a relation between revelation and our reception of it through existential experiences of shock, of healing and of reunion of what is broken or separated. His theological method, following what God reveals to us, seeks to answer existential questions, born from existential experiences. Rahner grounds our capacity for an immediate experience of God in an anthropological dimension that includes a transcendental and a categorical pole. The theological method seeks to make explicit that spiritual experience. Finally, Lonergan grounds his theological method in the experience of God's unconditional love and in the intellectual, moral and religious conversion of the theologian.

The other point of view seeks to root theology in the singularity of God's revelation in order to distinguish it from other human experiences and rationalities (Barth and Lindbeck). Both of them seek to avoid a reduction of theology into a philosophy of religion. Barth makes an explicit reference to God's Word, the witness of Scriptures and the history of the community. He stresses without ambiguity the singularity of theology's object: the Word of God. For that reason, the theological method should be adequate to the singularity of that object. Finally, Lindbeck refers to the category of language of faith. He integrates the community of believers, Christian praxis, liturgy and spiritual life in the theological reflection.

The following sections will discuss Ladrière's and Zubiri's position with respect to theological rationality. They will present how each one assumes some contributions already presented by the previously discussed theologians, how they surpass some of their limits and finally how they address the issue of the relationship between religious experience, religious language (including the Word of God) and theological reflection. Let's start with Jean Ladrière.

III. Jean Ladrière: religious experience, the languages of faith and theology

III.1. Theology and the order of revelation

In this section we will present Ladrière's conception of theological rationality. For Ladrière, theology is a rational knowledge of a reality that is accessible by revelation¹³⁷¹. This reality is the salvation that Jesus Christ introduces in history, which is about the encounter between God and humanity that attains its highest point in the incarnation of the Eternal *Logos*¹³⁷². Therefore, this salvation is the event of Jesus Christ who invites each person to make a choice that will involve his whole existence. The adequate answer to this invitation is nothing else than faith. As we will see, Ladrière integrates the experience of faith, the Word of God, languages of faith, anthropological structures, contemporary viewpoints and human actions.

III.2 Anthropological structures as conditions of the possibility of faith

According to Ladrière, there are some anthropological conditions that enable the human being to receive God's revelation and to respond with faith. These anthropological conditions of the possibility of faith consist of an epistemological structure and an ethical dimension shared by each human being. The epistemological structures enable an experience of faith. The ethical dimension receives faith as a fulfillment of the human existence.

III.2.1 Epistemological structure – human experience as openness to otherness

In each person there is a receptive capacity that renders him open to nature, other persons, culture, history and the whole of reality¹³⁷³. This receptive openness is nothing else than human experience¹³⁷⁴. The human experience is a capacity to be affected that renders possible any apprehension of reality¹³⁷⁵. This receptive openness renders possible the experience of faith where God reveals Himself as an act of grace¹³⁷⁶. Consequently, the experience of faith is an authentic human experience that corresponds to the structure of human existence and at the same time is God's gift¹³⁷⁷.

¹³⁷¹ J. LADRIÈRE, *L'articulation du sens III*, p. 64-65.

¹³⁷² J. LADRIÈRE, *L'articulation du sens III*, p. 303.

¹³⁷³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 119 and 275.

¹³⁷⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 120.

¹³⁷⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 200.

¹³⁷⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 295.

¹³⁷⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 199-200.

III.2.2. The ethical dimension – personal accomplishment and search for meaning

According to Ladrière, human existence is a mode of being that is responsible of itself¹³⁷⁸. Ladrière distinguishes two aspects in our human reality. There is the biological dimension, which is inherited and received. There is also our openness to the future, which is a responsibility to accomplish¹³⁷⁹. This last aspect is the ethical dimension of our existence. The biological components are the base from which the human existence unfolds itself. The ethical dimension is an immanent calling to search for the meaning of our life and a human desire for authentic accomplishment¹³⁸⁰. A personal project, with its implied actions, is an initiative by which a human person takes a risk to answer that immanent calling to fulfillment¹³⁸¹. According to Ladrière, this ethical dimension of the human existence is the place where faith comes to be settled¹³⁸². To propose Christian faith is equivalent to propose salvation in Christ as the authentic human accomplishment¹³⁸³.

III.2.3 Relationship between the anthropological structures and Christian faith

Although the epistemological structure and the ethical dimension are together the place where faith is received, they are not themselves Christian faith¹³⁸⁴. Human experience and human search for accomplishment are rooted in the givenness of the order of manifestation. Meanwhile, the gift of faith is grounded in the order of revelation and salvation. Although Ladrière affirms this distinction, he affirms that faith is not superposed as something exterior to our openness and to our search for meaning because the order of revelation is not superposed to the order of manifestation. Faith assumes the potentialities of the human existence¹³⁸⁵.

Let's consider now how faith enters into these epistemological (*noological* in Zubiri) structures of openness-reception and the human search for meaning. As we have explained in our previous chapter, the epistemological structures of openness-reception and the search for meaning and understanding consist of three inseparable moments: experience, language and reason¹³⁸⁶.

¹³⁷⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 175.

¹³⁷⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 201.

¹³⁸⁰ This is not far from Tillich "ultimate concern". J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 124 and 275.

¹³⁸¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 202.

¹³⁸² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 115-116.

¹³⁸³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 275.

¹³⁸⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 203.

¹³⁸⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 209-210.

¹³⁸⁶ These moments appears clearly when Ladrière distinguishes between three moments of Christian faith: revelation itself as experience of the *Logos*, the confession of faith and theology. J. LADRIÈRE, *L'articulation du sens III*, p. 63-74.

III.3 Faith as an experience

According to Ladrière, there is a foundational level of faith that is not an abstract system of dogmatic truths. The foundational moment is, above all, an experience of a personal calling and promise¹³⁸⁷. However, this experience is not a simple receptivity, testing, perception, feeling, or intellectual intuition¹³⁸⁸. Ladrière explicitly declares that the experience of faith is not a religious feeling¹³⁸⁹. For him, the experience of faith consists of some inseparable aspects: grace, encounter, acknowledgement, commitment, participation and action¹³⁹⁰.

Faith is a gift, a grace that makes human intelligence capable to access the reality of revelation and salvation in Christ¹³⁹¹. The experience of faith is an encounter with the person of Christ that leads us to recognize that Jesus comes from God¹³⁹². Faith is also an acknowledgement of the calling made by God's Word¹³⁹³. It is an acknowledgment of God's mystery present in Christ¹³⁹⁴. Faith-experience is an invitation to a radical commitment¹³⁹⁵: the adoption of a way of life that corresponds to the Gospel and the Kingdom of God. It is a participation in Christ life¹³⁹⁶ that makes the Kingdom present¹³⁹⁷. Finally, faith is an interior attitude through which the believer makes a fundamental decision¹³⁹⁸ that is manifested by the practice of the beatitudes, the search of sainthood¹³⁹⁹ and a true conversion as a reform of life¹⁴⁰⁰. Consequently, the most fundamental aspect of faith is to follow Christ in order to encounter God¹⁴⁰¹.

III.4 Faith as a language that expresses the religious experience

¹³⁸⁷ In this point, Ladrière is closer to Tillich, Rahner and Lonergan. See J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 113 and 174.

¹³⁸⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 170.

¹³⁸⁹ This is also different from Lindbeck's interpretation and critics of Schleiermacker and Tillich. See J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 205.

¹³⁹⁰ All of these aspects show that for Ladrière, the experience of faith is more than an intellectual activity. It enters in the totality of the human existence. See J. LADRIÈRE, *L'articulation du sens II*, p. 170.

¹³⁹¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 272-273.

¹³⁹² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 176, 177, 178 and 180. J. LADRIÈRE, *L'articulation du sens III*, p. 87.

¹³⁹³ J. LADRIÈRE, *L'articulation du sens II*, p. 170.

¹³⁹⁴ J. LADRIÈRE, *L'articulation du sens II*, p. 37.

¹³⁹⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 111.

¹³⁹⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 178.

¹³⁹⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 170.

¹³⁹⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 37.

¹³⁹⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 32.

¹⁴⁰⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 37-38.

¹⁴⁰¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 183

The human being has the capacity to express any experience into linguistics' structures. For this reason, it is not strange that religious experiences set in motion our linguistic capacities¹⁴⁰². Religious language is a milieu of meaning that seeks to make sense of the experience of faith¹⁴⁰³. This linguistic milieu gives access to the reality that works in the religious experience¹⁴⁰⁴. However, this access is different from the means provided by scientific language¹⁴⁰⁵, which provides access through formal representations of segments of cosmic reality. Religious language provides access to a religious reality through its inseparable connection with the experience of faith. It is a milieu of meaning of religious experience. At the same time it renders possible a spiritual experience by means of words that perform what they signify¹⁴⁰⁶.

III.4.1 First order language of faith rooted in the event of Christ

For Ladrière, a language of faith provides us access to the event of Christ. This event invites the human person to make a choice that will involve his whole existence. The adequate answer is nothing else than faith, which is at the same time a gift of God and a human response. A language of faith is not only language of personal experience but also a language of the Church¹⁴⁰⁷. It expresses the experience of faith of a community of believers and at the same time it engenders faith in the person and in the community who are committed.

Ladrière distinguishes two sets of languages of faith: (i) the set of first order languages of faith that are related to soteriological and religious experiences and (ii) the set of second order languages that are related to theological discourses¹⁴⁰⁸. First order languages contribute to make present the economy of salvation brought by Christ. This set of first order languages of faith express through particular formulations and words the content of faith¹⁴⁰⁹. These words have meaning for those who accept the gift of faith as grace¹⁴¹⁰. In other words, faith enables us to receive, accept and respond to the content of faith¹⁴¹¹.

III.4.2 The content of the language of faith and the experience of Christian first witness

¹⁴⁰² This is similar to Lonergan's conception of the relation between the inner word and the outer word. J. LADRIÈRE, *L'articulation du sens III*, p. 295. J. LADRIÈRE, *L'articulation du sens II*, p. 170.

¹⁴⁰³ J. LADRIÈRE, *L'articulation du sens II*, p. 170. J. LADRIÈRE, *L'articulation du sens III*, p. 87.

¹⁴⁰⁴ J. LADRIÈRE, *L'articulation du sens II*, p. 170.

¹⁴⁰⁵ In this point Ladrière get closer and integrates the position of Barth and Lindbeck.

¹⁴⁰⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 219.

¹⁴⁰⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 71, 88, 98, 104-105.

¹⁴⁰⁸ This position bears a resemblance with Lindbeck's distinction between first and second order language. J. LADRIÈRE, *L'articulation du sens II*, p. 169-171 and 214-215. J. LADRIÈRE *L'articulation du sens III*, p. 87.

¹⁴⁰⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 209.

¹⁴¹⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 103.

¹⁴¹¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 188.

We encounter Christ by means of a language that witnesses the first Christians' experience of Christ¹⁴¹². Christ is the event-source to which the languages of faith make reference¹⁴¹³. Christ becomes present to us by means of this set of first order languages of faith¹⁴¹⁴ through the action of the Holy Spirit in the Church¹⁴¹⁵.

Faith considered as content is relative to the historical event of Christ, his life, death and resurrection¹⁴¹⁶ witnessed by the first Christian. This content of faith is not the content of a scientific theory or the content of some metaphysical discourse. The languages of faith do not consist in reporting historical events, in describing objects, in formulating theoretical hypotheses, in reporting experiment's results or in transmitting information¹⁴¹⁷. The content of the language of faith is related to the coming of the *Logos*¹⁴¹⁸ and the meaning of this event for our salvation. The meaning of this event, contemplated from the perspective of faith, could not be reduced to a perception or to a logical thinking¹⁴¹⁹. This salvific event of Christ and the content of faith make sense in light of the experience of faith as an acknowledgment of Christ as Son of God and Savior¹⁴²⁰.

How do the first order languages of faith give us access and make present for us the event of Christ? Ladrière answers this question with the notion of performativity of religious languages.

III.4.3 The performativity of the first order languages of faith

For Ladrière, the performativity of ordinary language makes possible our access to the event of Christ by means of first order languages of faith. Here Ladrière is influenced by the analytic philosophy of *speech acts*. For the sake of clarity, let's consider briefly this tradition. Wittgenstein, in his first period, affirmed a theory according to which a picture is a model of reality¹⁴²¹ that presents a situation in logical space¹⁴²². The logical linguistic structure of a picture is isomorphic with the logical structure of the state of affairs in reality¹⁴²³. In his second period, that of the *Philosophical Investigations*, Wittgenstein claimed that "*the meaning of a word is its*

¹⁴¹² J. LADRIÈRE, *L'articulation du sens II*, p. 117. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 176-177.

¹⁴¹³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 177-178.

¹⁴¹⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 80.

¹⁴¹⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 278.

¹⁴¹⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 264.

¹⁴¹⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 55-56, 170 and 215. J. LADRIÈRE, *L'articulation du sens III*, p. 173.

¹⁴¹⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 264. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 205.

¹⁴¹⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 264.

¹⁴²⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 264.

¹⁴²¹ L. WITTGENSTEIN, *Tractatus Logico Philosophicus*, No. 2.12.

¹⁴²² L. WITTGENSTEIN, *Tractatus Logico Philosophicus*, No. 2.11.

¹⁴²³ L. WITTGENSTEIN, *Tractatus Logico Philosophicus*, No. 2.1511.

use in the language”¹⁴²⁴. He used the concept of language-game in order to address the variety of uses of language. There is a great variety of language games such as making promises, giving and obeying orders, describing appearances of objects, reporting events, making jokes, thinking, requesting, thanking, greeting and praying, among others¹⁴²⁵.

Following the second Wittgenstein, John Langshaw Austin developed much of the current theory of speech acts¹⁴²⁶. Austin first attempted to distinguish between a constative and performative utterance. Constative propositions are the “*descriptive, fact-stating, true or false sentences*”¹⁴²⁷. The second type of utterance, however, does not describe or state a fact. Rather, it performs a social act by producing the very reality it names¹⁴²⁸. By the use of performative sentences we are “*doing things with words*”. Austin’s objective was to distinguish the performative from the “true”/“false” dichotomy. Performatives are actions and, as such, they are not “true” or “false”. Then, Austin followed another direction in his analysis by distinguishing between locutionary act, illocutionary act and perlocutionary act. The locutionary act is the action of “saying something”, which has a meaning and a reference¹⁴²⁹. The illocutionary act is the speaker’s intention, what he does in fact when he says something, e.g., a promise, an order, a judgment, etc. The perlocutionary act is the actual psychological effect on and reaction of the hearer. Based on Austin reflections, Donald D. Evans went further in his development of speech acts and applied it to the Christian use of religious language. He developed the idea that we are self-involved in some classes of performative expressions.

Jean Ladrière follows the development of Austin and Evans in order to analyze the diverse modalities of languages of faith¹⁴³⁰. For him, the essential of Evans’ analysis is that certain categories of expressions have the character of self-involvement, i.e., they engage and commit in a direct manner the subjective life of the speaker¹⁴³¹. Even some “constatif” expressions involve the speaker. This self-involvement has an illocutionary force¹⁴³² that happens by means of a linguistic operator. In natural sciences predominate the operators: “I notice”, “I observe”, “I certify”, “I state”, “I verify” or “I confirm”. Meanwhile, the linguistic operator “I believe” is

¹⁴²⁴ L. WITTGENSTEIN, *Philosophical Investigations*, No. 43.

¹⁴²⁵ L. WITTGENSTEIN, *Philosophical Investigations*, No. 23.

¹⁴²⁶ J. LADRIÈRE, *L’articulation du sens I*, p. 93-97. J. LADRIÈRE, *L’articulation du sens II*, p. 25-27.

¹⁴²⁷ W.-G. LYCAN, *Philosophy of language, a contemporary introduction*, p. 176.

¹⁴²⁸ W.-G. LYCAN, *Philosophy of language, a contemporary introduction*, p. 176.

¹⁴²⁹ J. LADRIÈRE, *L’articulation du sens I*, p. 97.

¹⁴³⁰ J. LADRIÈRE, *L’articulation du sens II*, p. 10.

¹⁴³¹ J. LADRIÈRE, *L’articulation du sens II*, p. 29.

¹⁴³² The term illocutionary force is Searles’ and it is equivalent to performatif force in Evans. It implies the specific usage (pragmatic specificity) of a proposition. It is the type of act that is performed when the proposition is affirmed. See J. LADRIÈRE, *L’articulation du sens II*, p. 26. J-F. MALHERBE, *Le langage théologique à l’âge de la science*, p. 67.

essential for communicating the experience of faith and for self-involvement in the first order language of faith¹⁴³³. All these linguistic operators imply different meanings and different levels of human involvement.

First order languages of faith express the experience of faith and at the same time they engender faith to the person and to the community who are committed. They prolong and make explicit the Christian religious experience¹⁴³⁴. This prolongation is possible since religious language is a language of self-involvement and commitment that binds oneself in a variety of forms¹⁴³⁵. The commitment, adhesion and action already present in faith as experience is manifested in the languages of faith and this character of self-involvement. The theory of illocutionary force of language and speech acts assists us to acknowledge that religious language is meaningful¹⁴³⁶.

III.4.4 A plurality of languages of faith

For Ladrière, there is a plurality of first order languages of faith. He attributes greater importance to the sources of that experience of faith: Christ in Himself (who is the *Logos* addressed to humanity), the kerygmatic languages (that announce the reality of the Kingdom of God) and the canonical sources, i.e., Holy Scriptures¹⁴³⁷. In addition, there are the confession of faith expressed by the Creed, the magisterial language, the liturgical language, the homiletic language, the language of attestation and the language of spiritual experience. These languages share the following characteristics.

First, they talk about an invisible reality¹⁴³⁸ associated to historical events and to a certain form of historicity. This does not mean that this invisible reality is reducible to empirical aspects verified in historical events¹⁴³⁹. It means that there is a relationship between the order of manifestation and the order of revelation, even when the order of revelation cannot be reduced to the order of manifestation.

Second, there is an operation of existential induction by which a linguistic expression or corporal gesture awakes in the person who assumes it an effective disposition that opens his

¹⁴³³ This linguistic operator is present in the Gospels. See Jn 11, 27: "Yes, Lord, I believe that you are the Messiah, the Son of God, the one coming into the world."

¹⁴³⁴ J. LADRIÈRE, *L'articulation du sens II*, p. 214.

¹⁴³⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 214.

¹⁴³⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 83.

¹⁴³⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 12, 14, 70-74 and 128.

¹⁴³⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 267.

¹⁴³⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 267.

existence to the reality of revelation and salvation¹⁴⁴⁰. This operation induces an experience of faith¹⁴⁴¹. For Ladrière, there is a circularity of faith: faith (experience) is induced by the language of faith and the language of faith operates in those who already have faith (experience-grace)¹⁴⁴².

Third, all religious languages are rooted in an illocutionary force¹⁴⁴³ expressed by means of operators that manifest a confession of faith¹⁴⁴⁴. Consider, for example the operator of the symbol of faith: “*I believe*”. Another operator is found in the magisterial declarations: “*It is of faith (de fide) that...*”¹⁴⁴⁵. These are operators of commitment and self-involvement and at the same time they are an acknowledgement. This acknowledgement can be formulated as follows: “*I acknowledge this is truth because it was revealed by Christ according to what I received by the tradition of the church*”¹⁴⁴⁶.

Finally, there is a semantic transgression in these religious languages¹⁴⁴⁷. The languages of faith enable us to go beyond the ordinary signification based on the ordinary language grounded in perception (manifestation) to a second signification that is, properly speaking, in the language of faith.

III.4.5 Examples of language of faith

There are many forms of first order language of faith that are interdependent. These languages act as mediators between the reality of the Kingdom and us. Let’s summarize Ladrière’s analysis of some examples.

III.4.5.1 Gospel’s Narratives

¹⁴⁴⁰ Ladrière agrees with Tillich and Lindbeck about the role of the sources in shaping religious experience. See J. LADRIÈRE, *L’articulation du sens II*, p. 57.

¹⁴⁴¹ This means that for Ladrière religious experiences are born from mystical experiences or from the existential induction effect of first order languages of faith. This idea is found in Christian religious tradition. According to Ignace of Loyola we could have an experience that is a pure initiative of God, “*Consolation sin causa precedente*”: “*Sólo es de Dios nuestro Señor dar consolación a la ánima sin causa precedente; porque es propio del Criador, salir, hacer moción en ella, trayéndola toda en amor de la su divina majestad. Digo sin causa, sin ningún previo sentimiento o conocimiento de algún obyekto, por el qual venga la tal consolación mediante sus actos de entendimiento y voluntad*” (EE 330). However, normally there are consolations that come from normal acts such as prayers, liturgical rites, etc. “*Con causa puede consolar al ánima así el buen ángel como el malo, por contrarios fines: el buen ángel por provecho del ánima, para que crezca y suba de bien en mejor; y el mal ángel para el contrario, y adelante para traerla a su dañada intención y malicia*” (EE 331). See J. LADRIÈRE, *L’articulation du sens II*, p. 32 and 60. J. LADRIÈRE, *L’articulation du sens III*, p. 184-185. IGNACIO DE LOYOLA, *Ejercicios Espirituales*, no. 330 and 331.

¹⁴⁴² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 278.

¹⁴⁴³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 278.

¹⁴⁴⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 254.

¹⁴⁴⁵ J. LADRIÈRE, *L’articulation du sens III*, p. 68.

¹⁴⁴⁶ J. LADRIÈRE, *L’articulation du sens III*, p. 69.

¹⁴⁴⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 278.

There are different narratives in the gospels, e.g., miracles, Christ's preaching, parables, etc.¹⁴⁴⁸. In these narratives we find two points of view: the narrator and the reading community that assumes the text through different usages (liturgical, didactic, theological, mystical, etc.). From the perspective of the narrator, the illocutionary force is the testimony¹⁴⁴⁹. For the narrator there are visible events, i.e., Christ's actions and words, that announce and perform the invisible reality of God's Kingdom¹⁴⁵⁰. This transition from a manifestation to a revelation is not automatic. It requires faith¹⁴⁵¹.

From the perspective of the community, the narrative is one of the major mediations by which the reading community rejoins the foundational events that ground our faith¹⁴⁵². Even when there is a distance between these foundational events and us, the gospel narratives make present, into the life of those that believe and assume it, the salvific events to which they refer: the concrete and historical presence of God's Word¹⁴⁵³. Here we see the circularity that characterizes faith: (i) faith is the condition of the possibility to encounter the salvific reality in the visible signs of the gospel and (ii) the salvific reality encountered in the gospels' narrative reinforces and engenders faith.

III.4.5.2 The liturgical language

The liturgical language consists of a multiplicity of genres: narratives, prayers, homiletic instructions, confession of faith, adoration and commemoration. Each one has its mode of meaning¹⁴⁵⁴ and realizes something through their operativeness¹⁴⁵⁵. The liturgical language as a whole has a triple performativity: existential induction, the institution of the community and the performativity of the presence of Christ¹⁴⁵⁶.

The existential induction occurs through concrete acts by which persons and the community commit themselves. The pronouns (*I* or *we*) become operators of self-commitment. Through the pronoun of the second person (*You*, *Thy*, *Thou*) the words are addressed to somebody (e.g., the ministers, God, etc.) in a dialogue¹⁴⁵⁷. The liturgical language also institutes

¹⁴⁴⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 32.

¹⁴⁴⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 33.

¹⁴⁵⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 34-35.

¹⁴⁵¹ J. LADRIÈRE, *L'articulation du sens II*, p. 37.

¹⁴⁵² J. LADRIÈRE, *L'articulation du sens II*, p. 38.

¹⁴⁵³ J. LADRIÈRE, *L'articulation du sens II*, p. 39.

¹⁴⁵⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 277

¹⁴⁵⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 56.

¹⁴⁵⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 57.

¹⁴⁵⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 58.

the community¹⁴⁵⁸. It accomplishes the mystery of communion, the mystery of the Body of Christ¹⁴⁵⁹. In addition, the liturgical language neither describes nor represents but makes present the mystery of Christ¹⁴⁶⁰. This happens through the liturgy of the Word by reading the texts that announce the mystery of Christ. Also it happens through the sacramental aspect: the constitution of the Eucharist through the words of the Last Supper¹⁴⁶¹.

Here, we find the circularity of faith: faith presupposes faith. Faith-grace is necessary for the performativity of the liturgical language¹⁴⁶². Liturgical language also engenders faith in us and provides to faith a medium where it is structured through words, rites and gestures.

III.4.5.3 The symbol of faith

All Christian languages of faith are rooted in a confession of faith in the form of the kerygma or in the form of the symbol of faith¹⁴⁶³. The symbol of faith is a fundamental form because it expresses the content of faith¹⁴⁶⁴. It is a discourse of effectuation, in the sense of making present the reality of the economy of salvation¹⁴⁶⁵. The structure of the symbol of faith consists of a series of propositions expressed by the operator “*I believe*”. This operator is the explicit form of the symbol’s illocutionary force¹⁴⁶⁶, which is personal commitment in the order of revelation and salvation. The affirmations of the symbol of faith provide an expression that reunites in one formulation the content of faith¹⁴⁶⁷.

III.4.5.4 Magisterium’s declarations

A magisterium’s declaration is another language, beside the symbol of faith, where the content of faith is directly expressed¹⁴⁶⁸. It is also a language of self-commitment related to the question of truth. In each proposition affirmed by the magisterium there is the operator “*It is the*

¹⁴⁵⁸ J. LADRIÈRE, *L’articulation du sens II*, p. 60.

¹⁴⁵⁹ J. LADRIÈRE, *L’articulation du sens II*, p. 61.

¹⁴⁶⁰ J. LADRIÈRE, *L’articulation du sens II*, p. 62.

¹⁴⁶¹ Here we should remember the teachings of the Second Vatican Council that affirms Christ’s presence through the minister, the words of the Lord, the people of God and the Eucharist. See SECOND VATICAN COUNCIL, *Sacrosanctum Concilium*, No 7. J. LADRIÈRE, *L’articulation du sens II*, p. 63.

¹⁴⁶² J. LADRIÈRE, *L’articulation du sens II*, p. 64.

¹⁴⁶³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 254.

¹⁴⁶⁴ As we will see, Ladrière considers that the content of faith is the object of theology. For that reason, the symbol of faith is fundamental to the development of theology. See J. LADRIÈRE, *L’articulation du sens III*, p. 88.

¹⁴⁶⁵ J. LADRIÈRE, *L’articulation du sens III*, p. 278.

¹⁴⁶⁶ J. LADRIÈRE, *L’articulation du sens II*, p. 88.

¹⁴⁶⁷ J. LADRIÈRE, *L’articulation du sens II*, p. 284.

¹⁴⁶⁸ J. LADRIÈRE, *L’articulation du sens II*, p. 68.

object of divine [or catholic] faith...”¹⁴⁶⁹. What is the purpose of an official magisterium? Ladrière does not address this question. The American theologian Francis Sullivan affirms that we need and have the duty as a community to profess our common faith. It is the role of the hierarchy to rule on the terminology of the formulas. The mission of theologians is to contribute to the development of better expressions of our faith¹⁴⁷⁰. The operator “*It is the object of divine [or catholic] faith...*” is related to the role of the pastors. From the perspective of believers there is an operator related to the “reception” of a teaching. Believers recognize and receive explicitly the authoritative teaching by the operator: “*I recognize this statement as true and I recognize it as true because it has been revealed by Jesus Christ according to what I receive from the tradition of the Church*”¹⁴⁷¹.

III.4.6 On the use of metaphors and the analogy of faith in first order language

The first order languages of faith are confronted with the difficulty of how to present an invisible reality through the mediation of ordinary language. The solution is to turn to the metaphorical use of language. A term used metaphorically has simultaneously two senses. The first sense is a meaning established, which is a product of history of language. This meaning can serve as a vector to go beyond it to a second meaning. The second sense is a meaning that we superimpose on the first meaning based on certain similitude. For Ladrière, this is the case of religious language. Religious meaning depends on metaphors because it talks of invisible things meanwhile ordinary language talks about visible things. A language of faith considers a meaning

¹⁴⁶⁹ This is the translation of the operator “*De fide*”. With this statement Ladrière gives the impression that there is only one type of magisterial category. Following Sullivan we should distinguish between different categories of Church’s teachings. The first categories used to classify the teachings are primary and secondary doctrines. Primary doctrines are revealed by God, and found in the Scripture and in the Tradition of the Church. Secondary doctrines are intimately connected with revelation and are objects of faith (see p. 13, 15, and 17). There is another necessary distinction between authoritative and infallible teachings (see p. 18-20). An authoritative doctrine occurs when the pastors exercise their authoritative teaching office in areas of faith and morals, not when there is a mere theological opinion of any bishop, including the bishop of Rome. We have to distinguish between competence to speak with authority and the claim to speak infallible. Authoritative teaching is ordinary, authentic, non-definitive and non-irreformable teaching by the pope or by the whole college of bishops in communion with him (see p. 19). This authoritative teaching, also called undefined universal and ordinary magisterium, can be exercised by an ecumenical council, the pope, the Congregation of the Doctrine of Faith, regional councils, by an episcopal conference or by a local bishop (see p. 20). Infallible doctrines are the teachings we refer as dogmas. All dogmas are doctrines of the Church, but not all doctrines of the Church are dogmas. Consequently, there are different operators related to authoritative teachings that Ladrière does not discuss: “we declare ...”, “we affirm...”, “we teach ...”. They have different weights and should not be confused with the operator that declares a dogma. See F. SULLIVAN, S.J., *Creative Fidelity*, p. 13-20.

¹⁴⁷⁰ F. SULLIVAN, S.J., *Creative Fidelity*, p. 37.

¹⁴⁷¹ Again, this operator is related with the dogmatic teaching of the church that requires an irrevocable assent of faith. With respect to ordinary teaching the Second Vatican Council in LG 25 affirms that the church requires “the religious submission of intellect and will”. The Latin for “religious submission” is “*religiosum obsequium*”. According to Sullivan, “assent” implies “either-or” attitude: one accept it or one does not accept it. However, The technical terminology “*religiosum obsequium*” implies a willingness to accept it. However, this willingness accepts a degree or certainty and reception. In other words it requires the attitude of seeking to understand the teaching and to allow that teaching to form our opinions. F. SULLIVAN, S.J., *Creative Fidelity*, p. 24. See also J. LADRIÈRE, *L’articulation du sens III*, p. 69.

already developed in the order of manifestation to suggest a metaphorical meaning in the order of revelation that is beyond the first one. All of this is part of the semantic transgressive capacity of language¹⁴⁷².

A metaphorical use of language is not a speculative representation¹⁴⁷³. According to Ladrière, the use of metaphors in Christian religious languages of faith is grounded in the analogy of faith¹⁴⁷⁴. What does Ladrière mean here? We understand Ladrière's reference to the analogy of faith as follows. First, the metaphorical use of ordinary language is not grounded in an intellectual effort to reach God and to grasp his reality through our ordinary linguistic capacities¹⁴⁷⁵. The metaphorical use is born of faith itself. This metaphorical use of languages of faith is grounded in a multiplicity of theological factors:

(i) Christological argument: God has revealed Himself in the incarnation of Christ. He has assumed our anthropological structures, including our ordinary language. Consequently, God reveals Himself through Christ's words, actions and life. Christ is in himself a metaphor, a visibility that makes present the invisibility of God.

(ii) Scriptural argument: Scriptures already use many metaphors. Consider for example the genre of the parable: "*the Kingdom of God is similar to...*"¹⁴⁷⁶. Scriptures are already part of many languages of faith (e.g., homilies, liturgies, symbol of faith, etc.). Therefore Scriptures provide them its metaphorical character.

(iii) Anthropological argument: If faith as an experience presupposes and assumes the anthropological structures of human apprehension and experience, faith as language with a content presupposes and assumes our ordinary language and its meaning. In order to express the meaning of faith, its content is formulated in a language that uses the resources of ordinary life¹⁴⁷⁷. The transformation of the human language includes its uses of metaphors to express the meaning of invisible realities¹⁴⁷⁸.

¹⁴⁷² J. LADRIÈRE, *L'articulation du sens II*, p. 131. J. LADRIÈRE, *L'articulation du sens III*, p. 298; J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 105-106 and 251. J. LADRIÈRE, *Science et théologie*, p. 19.

¹⁴⁷³ J. LADRIÈRE, *L'articulation du sens II*, p. 131-132.

¹⁴⁷⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 298.

¹⁴⁷⁵ Here, he is influenced by Aquinas' negative theology and by Karl Barth. Barth's understanding of "analogia fidei". We cannot represent God through language. Only God's grace renders possible our knowledge of God. See O. BOULNOIS, *analogie*, in *Dictionnaire critique de la théologie*, p. 51.

¹⁴⁷⁶ For Zumstein the parable's objective is "*to reveal the meaning of a person, an object or an event by putting it in relation, by means of a developed comparison, with another domain of reality*". According to Marguerat, the parable, related to the metaphor, does not receive its force from language, as a known analogy. On the contrary, as the metaphor, it impresses because it surprises. It is unexpected. It is the result of a creation and an innovation. Actually, Jüngel argues the parable makes present to the hearers the reality of the Kingdom of God. It is a good example of a language of faith that enables us to accede the religious reality by its illocutionary force. See J. ZUMSTEIN, *parabole*, in *Dictionnaire critique de la théologie*, p. 1024. D. MARGUERAT, *Parabole*, p. 15. E. Jüngel *Paulus und Jesus*, 1962, p. 138 quoted by D. MARGUERAT, *Parabole*, p. 24.

¹⁴⁷⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 273.

¹⁴⁷⁸ Metaphors already are used to express deep human emotions that are invisible.

III.4.7 Criteria of truth in first order religious language

A criterion of truth enables us to recognize the validity of what is being affirmed¹⁴⁷⁹. But, are there any criteria of truth in faith? According to Ladrière, in faith (experience and language) there is no criterion of truth properly speaking. There is only an acknowledgement and an adhesion to the order of salvation¹⁴⁸⁰. However, the Gospel mentions signs of the arrival of God's Kingdom¹⁴⁸¹. A sign is an event that makes us sensitive to a reality that is not in the domain of the visible. As Ladrière affirms, a sign is not demonstrative. It rather "manifests" or "reveals"¹⁴⁸². The sign-event of God's Kingdom is Christ, his life, words and actions, which does not have the same type of evidence that a manifested reality can have.

Ladrière makes a distinction between rational and reasonable¹⁴⁸³. For Ladrière, "rational" is a concept related to science and technology¹⁴⁸⁴. What is rational follows the scientific method and the technological activity. However, reason cannot be reduced to what is rational. There is another aspect related to reason: what is "reasonable". What is reasonable is always related to human existence, its meaning and its interpretation¹⁴⁸⁵. It is something that is always subject to revision.

The events-signs of faith are reasonable¹⁴⁸⁶. The encounter with Christ as a faith-experience and our participation into the languages of faith are signs-events that provide a motivation strong enough for what is at stake, the acceptance of faith and the adhesion to it¹⁴⁸⁷. Ladrière calls "ratification" this reasonable acknowledgement of the faith experience and faith language¹⁴⁸⁸. This is a **fundamental level of truth: the personal truth that is Christ Himself**¹⁴⁸⁹. Religious truth is a ratification that consists of an acknowledgement and an adhesion to the authority, words and revelation in Christ, witnessed by the apostles in the canonical sources and presented in the

¹⁴⁷⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 126.

¹⁴⁸⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 69 and 73. Mt 11, 3-6.

¹⁴⁸¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 126.

¹⁴⁸² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 127.

¹⁴⁸³ Max Weber has already distinguished between the rational and the reasonable. He uses the term rational for the operative actions that are specific to each rational field. Reasonable is about the finality that orients those operative actions. See B. SAINT-SERNIN, *La raison au XX^e siècle*, p. 298-299.

¹⁴⁸⁴ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 128.

¹⁴⁸⁵ This aspect of reason is justified by the existence of the hermeneutic disciplines and even philosophy. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 129. See also V. SHEN, *Le raisonnable et le rationnel*, p. 247-249.

¹⁴⁸⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 127-128.

¹⁴⁸⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 130.

¹⁴⁸⁸ This resembles the first level of truth according to Zubiri: truth as ratification of a reality present in the fundamental immediate experience. We acknowledge-ratify the presence of a revealed reality as "de suyo". See J. LADRIÈRE, *L'articulation du sens III*, p. 69.

¹⁴⁸⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 71.

performativity of first order language of faith¹⁴⁹⁰. Here truth is not a quality of something but a person: Christ Himself¹⁴⁹¹.

There is a **second level of truth** related to the first order language of faith. Truth in religious language is grounded in an encounter with the personal truth of Christ¹⁴⁹² and assured by the continuity between Christ and the canonical sources (Scriptures) and between the canonical sources and the present community of believers by means of the action of the Holy Spirit through the first order languages of faith¹⁴⁹³. The truth found in the first order languages of faith is related to their performativity and the believer's self-involvement¹⁴⁹⁴. We add that there is a **third level of truth** that belongs to theology and its rationality.

III.5 Ladrière and the rationality of theology

Until now we have discussed Ladrière's analysis of the experience of faith and the first order languages of faith. Now we will expose Ladrière's analysis of Christian theology and its rationality. According to Ladrière, *theology is a discourse that expresses, within a spirit that seeks understanding, the content of faith considered in its internal logic, articulations and implications*¹⁴⁹⁵. The object of theology is the content of Christian faith that refers to the economy of salvation as revealed by the Word of God¹⁴⁹⁶ and expressed in the set of first order languages¹⁴⁹⁷.

III.5.1 Theology as a second order language

According to Ladrière, theology is a second order language of faith. Theology presupposes the first order language of faith that expresses the content of faith and can induce a religious experience¹⁴⁹⁸. There is already a primordial and foundational interpretation of the event of Christ or God's actions in Israel's history in the first order language of faith. This primordial and

¹⁴⁹⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 93.

¹⁴⁹¹ J. LADRIÈRE, *L'articulation du sens III*, p. 72 and 94. Jn 14, 6-9.

¹⁴⁹² J. LADRIÈRE, *L'articulation du sens III*, p. 97.

¹⁴⁹³ Later we will discuss Zubiri's analysis that will make more explicit the continuity between Christ, the canonical sources and its continuity to us. See J. LADRIÈRE, *L'articulation du sens III*, p. 71.

¹⁴⁹⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 68.

¹⁴⁹⁵ In Ladrière own words: "S'il y a une science de la foi, ce ne peut être qu'au sens où il y a un discours qui tente de dire, selon certaines exigences rationnelles, ce qui est effectivement affirmé dans le contenu de la foi, considéré dans son économie interne, en ses articulations et en ses implications, et comment il peut être assumé dans un esprit qui cherche la compréhension". J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 208-209.

¹⁴⁹⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 108, 123-124, 128 and 155.

¹⁴⁹⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 128.

¹⁴⁹⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 214-215.

foundational interpretation is prolonged by theology¹⁴⁹⁹. Theology seeks a systematic understanding of the meaning already present in the content of faith¹⁵⁰⁰. The content of faith has a meaning that is never fully understood. There is always a surplus of meaning that exceeds its linguistic expressions. Consequently, first order languages are always open to a deeper understanding and interpretation through the effort of theology¹⁵⁰¹.

Although there is continuity between first order language and second order language, there is also a difference between them. Theology keeps a methodological distance from faith (as experience and personal acknowledgement)¹⁵⁰². This methodological distance is part of an interpretation movement that seeks the systematic meaning of the content of faith as expressed by first order language of faith¹⁵⁰³. The effort of reason to understand always implies a distance with respect to its object¹⁵⁰⁴. This methodological distance does not imply a suspension of faith. It is a momentary and methodological distance and not a total suspension since the effort of theology remains impelled by religious experiences and the first order languages of faith¹⁵⁰⁵.

Theology is neither a pure speculative theory (as philosophy) nor a discourse of representation (as natural sciences). However, theology is a meditative understanding that uses speculative language to deepen the confession of faith¹⁵⁰⁶. If theology is a meditative understanding of faith, in what sense is there an “understanding” in theology? This is related to another fundamental question: “what is the relation between faith and reason in theology?”

III.5.2 Relation faith – reason in theology

For Ladrière, understanding in theology is not a phenomenological description of events or facts. It is not either a scientific representation of reality¹⁵⁰⁷. The act of understanding in theology is the act of making explicit the meaning of the content of faith. The experience of faith is expressed in words with meaning in the first order languages of faith. The meaning of these

¹⁴⁹⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 133 and 171.

¹⁵⁰⁰ As we explained before, these first order languages of faith are intimately connected with the experience of faith. There is an intimate relation between the subjective appropriation of faith and the content of faith.

¹⁵⁰¹ J. LADRIÈRE, *L'articulation du sens II*, p. 169.

¹⁵⁰² J. LADRIÈRE, *L'articulation du sens II*, p. 171 and 215.

¹⁵⁰³ It is a distance by means of the speculative language that contributes with its own resources and hermeneutical categories. See J. LADRIÈRE, *L'articulation du sens II*, p. 171-172.

¹⁵⁰⁴ For example, the reflection of an experiment in natural sciences implies a distance from what was realized in the laboratory. J. LADRIÈRE, *L'articulation du sens II*, p. 216.

¹⁵⁰⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 130.

¹⁵⁰⁶ This resembles Rahner's meditative theology as discussed in section II.2.2.4. J. LADRIÈRE, *L'articulation du sens II*, p. 116 and 194.

¹⁵⁰⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 117.

words can be understood and interpreted more deeply¹⁵⁰⁸. As we already discussed in the previous chapter, for Ladrière, the project of rationality is to understand all types of experiences and their linguistic expressions¹⁵⁰⁹. This includes the experience of faith and the languages of faith. There are two approaches in the understanding of faith: philosophy of religion and Christian theology.

Philosophy is the self-comprehension of human life and existence in its fundamental structures¹⁵¹⁰. From the perspective of philosophy, reason tries to describe and understand religious beliefs and experiences from the sole standpoint of reason¹⁵¹¹. It analyzes how the human existence is open to an ultimate fundament, which is the source of the person's meaning¹⁵¹². Although this effort is justifiable and even necessary, it is not yet theology¹⁵¹³. Theology is about salvation history grounded in the event of Christ, while philosophy is grounded in personal initiative by which human beings try to provide themselves an authentic life project¹⁵¹⁴. Between philosophy and theology there is at the same time proximity and difference. Philosophy can contribute to theology with its speculative language¹⁵¹⁵, conceptual discourse, its milieu that structures meaning and its capacity of deepening the meaning of things¹⁵¹⁶. The life of faith assumes in itself all aspects and dimensions of life, even the human capacity of reason¹⁵¹⁷. Therefore, in theology faith assumes reason, which includes the contribution of philosophy, but without being reduced to a simple rational analysis or speculative explanation of the human existence¹⁵¹⁸.

We still must analyze the epistemological status of theology. Is it an interpretation, an analysis or a science of faith?

III.5.3 The epistemological status of theology

Ladrière affirms that theology is a rationality characterized by being at the same time scientific, interpretative, systematic and speculative. Let's consider and develop each point.

¹⁵⁰⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 131-132.

¹⁵⁰⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 216.

¹⁵¹⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 272.

¹⁵¹¹ J. LADRIÈRE, *L'articulation du sens III*, p. 185.

¹⁵¹² J. LADRIÈRE, *L'articulation du sens III*, p. 276 and 279.

¹⁵¹³ J. LADRIÈRE, *L'articulation du sens III*, p. 185.

¹⁵¹⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 265.

¹⁵¹⁵ We should remember that a speculative language has the transgressive capacity to go to the invisible foundation of an experience.

¹⁵¹⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 191-192.

¹⁵¹⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 216. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 210.

¹⁵¹⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 212.

III.5.3.1 The scientific character of theology

Scientific knowledge is characterized by being controlled, explanatory, expansive, critical and capable of validating its truth¹⁵¹⁹. The aspect of control comes from research's protocols. The explanatory capacity means that it seeks to know the structure of its objects. Scientific knowledge is expansive because it is a never-ending search to know in depth a reality beyond my apprehension. It is critical in the sense of being aware of its method and limits. Finally, a science validates its truth in a process of testing. This wide concept of science covers at the same time natural sciences, human sciences and speculative philosophy. It also includes theology as faith's self-comprehension¹⁵²⁰. The aspect of control in theology comes from the application of its theological method. It seeks to explain the implicit structure of its object, the content of faith. It is expansive in the sense that it deepens the foundation of religious experiences expressed by the languages of faith. Finally, theology is aware of the limits of its method. It recognizes that it does not have the expertise to analyze the object of natural or hermeneutical sciences. Nevertheless, this does not mean that theology, grounded in its particular method, does not have a word to say about the cosmos, the human person or the social reality.

Although theology is a science it has a singular place among all scientific disciplines. First, it is not a study exterior to religious beliefs as is the case of cultural anthropology and religious psychology¹⁵²¹. Second, theology neither constructs its object nor encounters it by means of an experiment as some sciences. Its object, the content of faith, is grounded in a gift that comes from God¹⁵²².

III.5.3.2 The hermeneutical character of theology

According to Ladrière, hermeneutics is the epistemological situation of theology¹⁵²³. Theology is a hermeneutical science or discipline¹⁵²⁴ that seeks the meaning of its object expressed and transmitted by means of texts. Nevertheless, the object of theology is not an objective cultural phenomenon. It is at the same time subjective and objective. It is subjective in the sense of being a personal experience of faith¹⁵²⁵. It is objective in the sense of belonging to a historical community of believers. Theology is the effort of understanding the meaning of the

¹⁵¹⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 151. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 192-193. J. LADRIÈRE, *Science et théologie*, p. 10.

¹⁵²⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 210.

¹⁵²¹ J. LADRIÈRE, *L'articulation du sens II*, p. 158.

¹⁵²² Here Ladrière assumes Karl Barth's position and contribution with respect to the particularity of theology's object.

¹⁵²³ J. LADRIÈRE, *L'articulation du sens III*, p. 190 and 298. J. LADRIÈRE, *Science et théologie*, p. 14.

¹⁵²⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 190.

¹⁵²⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 160.

content of faith as expressed and transmitted by texts. This effort is characterized by a hermeneutical circle¹⁵²⁶. First, the interpreter is involved personally in his act of understanding. Consequently, the methodological distance between the interpreter and its object is not the same distance of natural sciences' method since the interpreter is involved in a pre-comprehension.

In the case of theology, through their faith theologians are personally involved in their interpretation of texts, traditions or religious rites. The pre-comprehension in theology is the meaning that faith projects into events and realities. Does this imply that theology could be considered as scientific only if theologians abandon their faith in order to perform their hermeneutical activity? We know that in hermeneutical sciences interpreters are personally involved with their own presuppositions. The solution of this "problem" is found in the hermeneutic circle. Interpreters of cultural artifacts, texts, actions and history and theologians should recognize their presuppositions. The hermeneutic circle implies that, in a certain way, the theologian keeps a methodological distance (puts inside brackets) with respect to his personal commitment and confession of faith in order to recover it in a new way after the hermeneutical process¹⁵²⁷. Through the hermeneutic circle the theologian will gain deeper insights that will modify some of his previous presuppositions.

Moreover, this hermeneutics is not philosophical. It is theological hermeneutics according to the nature of its object¹⁵²⁸.

III.5.3.3 Theology as a systematic discipline

Theology seeks the meaning of the first order language of faith. However, the ultimate meaning is not found in texts but in events related to salvation history. The objective of theology is to understand not isolated events but the relational character of multiple events, their meanings and their relation to the event of Christ, the incarnated Word of God. To understand the relation of all these aspects and their foundation in God's self-communication is to understand them systematically¹⁵²⁹. Theology is systematic since it seeks the organic interconnection of all its parts¹⁵³⁰.

III.5.3.4 Theology as a speculative discipline

¹⁵²⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 159.

¹⁵²⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 127.

¹⁵²⁸ This is another point of agreement with Barth. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 133.

¹⁵²⁹ This is Zubiri's notion of respectivity, as we will see below.

¹⁵³⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 133 and 211. J. LADRIÈRE, *Science et théologie*, p. 14.

Finally, Ladrière defines theology as follows: “*theology is the articulation between the formulation of faith and speculative reasoning*”¹⁵³¹. It will help us here to remember what Ladrière means by speculative language. For him, a speculative language is an interpretative and theoretical language that transgresses the frontiers of the empirical experience in order to interpret and understand that which is beyond the possibilities of perception¹⁵³². The transgressive action of the speculative discourse is a movement toward aspects, structures and foundations of realities that are not immediately manifested¹⁵³³: the foundation of all manifested realities. This transgressive movement of speculative reasoning is exemplified by a scientific representation or a metaphysical speculative discourse. Both of them reconstruct the self-constitution of the world by means of a series of linked concepts¹⁵³⁴.

A speculative theological reasoning is a theoretical language that (a) transgresses the visible reality of history to go to the invisible foundations of the history of salvation, (b) interprets the formulation of faith and the praxis of the church and (c) reconstructs in a system the interpretation of the content of faith. Theology seeks the systematization of the first order language by means of a speculative discourse in order to bring more clarity to the content of faith that refers to the invisibility of God’s presence among us¹⁵³⁵.

III.5.4 The plurality of theological disciplines

As there is a plurality of first order languages of faith, there is also a plurality of theological disciplines: biblical exegesis, dogmatic theology, history of dogma, moral theology and spiritual theology¹⁵³⁶. We can add to this list historical theology, history of the church, pastoral theology and fundamental theology. They are related to different first order languages of faith: (i) exegesis with the language of Scriptures; (ii) patristic, history of dogmas and dogmatic theology with the language of tradition, the symbols of faith and church’s magisterium; (iii) moral theology with human actions and texts about them; (iv) spiritual theology with texts written by mystics and (v) practical and pastoral theology with church’s praxis and liturgy. Moreover, historical theology is related with the history of the second order language of faith. Fundamental theology is related with the theological and anthropological foundations of God’s revelation and the human reception of the gift of faith. However, these disciplines do not share the same level of

¹⁵³¹ J. LADRIÈRE, *L’articulation du sens III*, p. 116.

¹⁵³² J. LADRIÈRE, *L’articulation de sens, II*, p. 126.

¹⁵³³ J. LADRIÈRE, *L’articulation de sens, I*, p. 221.

¹⁵³⁴ J. LADRIÈRE, *L’articulation de sens, I*, p. 216.

¹⁵³⁵ J. LADRIÈRE, *L’articulation du sens II*, p. 169 and 285.

¹⁵³⁶ J. LADRIÈRE, *L’articulation du sens III*, p. 63.

importance. Ladrière does not hesitate to affirm that dogmatic theology is the central discipline. Dogmatic theology is an interpretation of the systematic content of Christian faith¹⁵³⁷.

All of them are characterized by being scientific, hermeneutic, systematic and speculative disciplines.

III.5.5 Knowledge in theology and its rational components

In this section we will analyze the rational structure of theology. As we already have mentioned, faith assumes the structure of experience and also language as a milieu of meaning. In addition, faith assumes also the moment of reason. Theology as a rational knowledge includes: an object, a method (system of reference, sketches and testing experience) and a verification process¹⁵³⁸. This is the ground for certain homology between knowledge in the order of manifestation and knowledge in the order of revelation¹⁵³⁹.

III.5.5.1 The object of theology

The object of theology is not a sector of the manifested reality that has been isolated in a process of abstraction¹⁵⁴⁰. The object of theology has its own consistence, intelligibility and internal coherence. The **object** of Christian theology is the *content of the experience of Christian faith*¹⁵⁴¹. This object is expressed in first order languages of faith that affect and transform the believer¹⁵⁴². It is a true content that calls for an understanding.

III.5.5.2 Objective of this hermeneutics of faith

Although Ladrière mentions many objectives, we can summarize them as follows: the objective of theology is to make intelligible¹⁵⁴³ and systematic¹⁵⁴⁴ the meaning of the content of faith as expressed in first order languages¹⁵⁴⁵, and to contribute to its communication¹⁵⁴⁶. In other words, the objective of theology is to make explicit the intrinsic intelligibility already present in

¹⁵³⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 63-64.

¹⁵³⁸ We will follow the structure of reason as uncovered by Ladrière's study of different rationalities and Zubiri's analysis of the act of sentient intelligence.

¹⁵³⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 132.

¹⁵⁴⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 123.

¹⁵⁴¹ J. LADRIÈRE, *L'articulation du sens II*, p. 160 and 285. J. LADRIÈRE, *L'articulation du sens III*, p. 63 and 155.

¹⁵⁴² J. LADRIÈRE, *L'articulation du sens II*, p. 284.

¹⁵⁴³ J. LADRIÈRE, *L'articulation du sens III*, p. 124.

¹⁵⁴⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 105 and 187.

¹⁵⁴⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 123.

¹⁵⁴⁶ This aspect of communication is fundamental. It is originally the sense of transmission. Benoît Bourguin affirms with clarity that theology "reçoit la tâche de rendre culturellement lisible, en un temps et en un lieu, la révélation et l'expérience chrétiennes." B. BOURGUIN, *Que faire des premiers conciles?*, p. 451.

the first order languages of faith¹⁵⁴⁷. However, if there is already an intelligibility present in the first order language of faith, what is the value and justification of a theological rational discourse? Ladrière provides a series of arguments scattered through his three volumes of *L'articulation du Sens* to justify the existence of theology and its objective.

First, there is an argument from Scripture. The Bible, which is a language-source, is already a theological interpretation¹⁵⁴⁸. In it, we can find different layers of interpretation as well as theological reflections on different events. Second, there is a historical argument. The ancient Church developed different dogmatic formulations that required theological reflection and discourse. They were responses to questions, debates and controversies that appeared after the New Testament period. Third, there is an anthropological argument. Faith is not something that is appended to the natural experiences of reason. Faith assumes all human faculties including intelligence as a speculative faculty¹⁵⁴⁹. Faith gives clarity to the spirit and at the same time asks to be understood and communicated to others¹⁵⁵⁰. Fourth, there is an argument grounded in the theology of creation and in Christology. God wants to recapitulate all creation in Christ¹⁵⁵¹, including human intelligence and speculative capacity¹⁵⁵². As a consequence human reason belongs to the plan of salvation, which includes human efforts to understand the experience and the content of faith. We can add some other arguments that are not made explicit in Ladrière but are connected to his thought. Consider an argument based on communication. Faith could hardly be communicated to other cultures or generations without considering theological categories and contexts that are meaningful to the hearers. The effort to consider these categories and mentalities is a task of theology.

III.5.5.3 Method of theology

Theology is faith's assumption of reason's capacity to understand and to deepen what the first order languages of faith express. This in-depth knowledge follows a method, as a way to interpret and then to systematize the content of faith. Theological method has all the structures proper to a rational method: a system of reference, the sketches and the process of testing. Let's consider each methodological element.

¹⁵⁴⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 124.

¹⁵⁴⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 105.

¹⁵⁴⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 216.

¹⁵⁵⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 126.

¹⁵⁵¹ Eph 1, 10.

¹⁵⁵² J. LADRIÈRE, *L'articulation du sens III*, p. 186.

A. System of reference

The system of reference provides a point of departure and a direction to deepen our understanding of an object. Theology's system of reference is the set of first order languages of faith originated in the event of Christ (his words, actions, life, death and resurrection), the preaching of the apostles and the event of Pentecost (the coming of the Holy Spirit and the birth of the Church): Scriptures, Tradition, the historical life of Christian communities, symbols of faith, Councils, dogmas and magisterium's declarations, Christian praxis, liturgy and the witness of saints and doctors of the church¹⁵⁵³. The languages of faith are the system of reference¹⁵⁵⁴ in the sense of being the milieu of meaning where we access Christ and his salvation.

B. Sketches in theology

Method in theology, as all rational methods, seeks to be adequate to the object¹⁵⁵⁵. Moreover, theological method seeks to guarantee the scientific character of this field following the criteria of rigor, internal coherence and hermeneutical fidelity¹⁵⁵⁶. It is a hermeneutics of faith¹⁵⁵⁷ that seeks to interpret the content of faith. The hermeneutic circle is triggered by the believer's experience of faith. This theological hermeneutics should rely on the faith experience that points out how the system of reference, the languages of faith, should be understood¹⁵⁵⁸.

Spiritual experiences and the language of faith are interpreted by means of two instruments: the metaphor and the concept¹⁵⁵⁹. The metaphor produces polysemic effects and renders the human spirit attentive to the multiplicity of meanings. This is the case of many texts written by mystics such as Jean of the Cross, Teresa of Avila and Ignatius of Loyola¹⁵⁶⁰. Meanwhile, the concept is an instrument of clarity that has the capacity to construct a speculative discourse with the coherence of a system. Theology is a speculative language based on speculative concepts¹⁵⁶¹.

¹⁵⁵³ J. LADRIÈRE, *L'articulation du sens II*, p. 285. J. LADRIÈRE, *L'articulation du sens III*, p. 187-188 and 264. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 210-211.

¹⁵⁵⁴ J. LADRIÈRE, *Science et théologie*, p. 13. J. LADRIÈRE, *L'articulation du sens III*, p. 123.

¹⁵⁵⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 155. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 211.

¹⁵⁵⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 155.

¹⁵⁵⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 211.

¹⁵⁵⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 66.

¹⁵⁵⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 66.

¹⁵⁶⁰ An excellent example is found in the written verses from Saint Teresa of Avila full of metaphors that express an understanding of her spiritual experience. Consider the following well known verses:

"Vivo sin vivir en mí

Y tan alta vida espero

Que muero porque no muero."

SANTA TERESA DE AVILA (Saint), *Vivo sin vivir en mí*, in *Obras Completas*, p. 713-714.

¹⁵⁶¹ J. LADRIÈRE, *L'articulation du sens II*, p. 169. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 211.

Theological hermeneutics, based on speculative concepts and discourses, develops two types of sketches. There are commentaries to texts and there are systematic explanations of first order languages that take into consideration our cultural context¹⁵⁶².

B.1 Commentaries on the sources: intratextual interpretation¹⁵⁶³

Commentaries are critical interpretations of the first order language of faith¹⁵⁶⁴. They seek a faithful correspondence, by the use of some rigorous criteria, between the developed interpretations and first order languages¹⁵⁶⁵. We can organize the plurality of commentaries into two major groups: (i) biblical hermeneutics or exegesis and (ii) historical hermeneutics, which is the interpretation of non-biblical texts that belong to the history of the Church. The interpretation of texts should take into consideration the nature of the sources. Biblical hermeneutics or exegesis, is a critical comprehension of the Scriptures. Historical hermeneutics include the interpretation and commentaries of texts from Tradition, e.g., texts from the magisterium, the Councils and from historical theology (texts from the Fathers of the Church, Doctors of the Church, Saints and other theologians).

B.2 Systematic explanations of first order languages of faith in dialogue with the theologian's cultural context¹⁵⁶⁶

These sketches are not a simple translation of first order languages of faith into abstract concepts and discourses. These sketches seek to bring forward in a theological system the intrinsic intelligibility of the mystery of faith¹⁵⁶⁷. This is theology's contribution for the life of faith¹⁵⁶⁸. Historically, theology has borrowed some concepts, forms of language and mode of reasoning from philosophy for the task of understanding the structure of the content of faith¹⁵⁶⁹. There are two reasons for such borrowing. First, philosophy refers to non immediately

¹⁵⁶² Of course, there are sketches that consist of both elements: they are characterized by being commentaries and systems. Consider for example the efforts to comment and systematize the works of some authors. This is the case of some texts that seeks to present the theology of Paul or some other theologian of the ancient world, e.g., James Dunn's *Theology of Saint Paul*, Grand-Rapids, Michigan, Eerdmans Publishing Company, 1997 and Hans Urs von Balthasar's *Parole et Mystère chez Origène*, Paris, Cerf, 1957.

¹⁵⁶³ This is closer to Lindbeck's position of intratextual interpretation. It also corresponds to Lonergan's functional specialty of interpretation.

¹⁵⁶⁴ J. LADRIÈRE, *Science et théologie*, p. 4.

¹⁵⁶⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 155. Here Ladrière is close to Lindbeck's objective of faithful intratextual interpretation.

¹⁵⁶⁶ It corresponds to Lonergan's functional specialty of systematics.

¹⁵⁶⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 187.

¹⁵⁶⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 96.

¹⁵⁶⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 187-188.

apprehended realm of the conditions of the possibility of the cosmic existence and the human experience of it¹⁵⁷⁰. Second, philosophy is elaborated from the horizon of existence and ultimate meaning of existence¹⁵⁷¹. Philosophical concepts capable of carrying existential meaning can help theologians explain the meaning of revelation to us¹⁵⁷². A theologian should be very attentive to the choice of philosophical concepts because not all of them are capable to be used in theology.

However, this borrowing represents a problem: can theology borrow concepts from speculative philosophy without reducing faith to a type of rationalism¹⁵⁷³? Ladrière's solution to this problem is the semantic transgression or transformation.

B.2.1 The elaboration of sketches in theology by means of semantic transgression

When theology uses concepts to express the intelligible form of the content of faith there are two possibilities. The first possibility is that theology uses the categories that are already constituted by another speculative discourse, e.g., philosophy¹⁵⁷⁴. Paul Tillich's theology is an example of this possibility. Another example is Karl Rahner's transcendental theology. This position has the advantage of presenting the gospel in categories developed in a mental horizon closer to our contemporaries. However, some consider that this possibility has the risk of reducing the object of faith to something given by culture or to a philosophy of religion.

There is another position: theology must elaborate new categories adequate for its mission¹⁵⁷⁵. This seems to be exemplified by Karl Barth and George Lindbeck who think that theology should not be associated with a metaphysical or philosophical system. Theology is about the Word of God that became flesh. It is not about a philosophical category constructed by a human being.

Vis-à-vis these two positions, Ladrière proposes a middle way: the semantic transgression. Speculative concepts based on the order of manifestation could be transformed to be used by theology in the order of revelation¹⁵⁷⁶.

(i) Description and conditions for a semantic transgression.

¹⁵⁷⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 298.

¹⁵⁷¹ J. LADRIÈRE, *L'articulation du sens III*, p. 188.

¹⁵⁷² However, Ladrière does not deny the possibility that for certain questions or problems even mathematical languages could provide metaphors that clarify faith. J. LADRIÈRE, *Science et théologie*, p. 19-20.

¹⁵⁷³ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 212.

¹⁵⁷⁴ J. LADRIÈRE, *L'articulation du sens II*, p. 216-217.

¹⁵⁷⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 216.

¹⁵⁷⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 174. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 212.

We already discussed in Chapter 4 the process of semantic transgression. We will briefly summarize here the general aspects of this process. According to Ladrière, the meaning of a predicate (a concept, a sentence or a discourse) is not static and fixed once for all. This meaning has the potential to be transformed according to the historical usage of the predicate¹⁵⁷⁷. Ladrière affirms that we can participate consciously in the process by which the semantic potentiality is actualized. In that case the process is not random, but guided intentionally from an actual meaning to another.

In order to produce a change from one meaning to another, the process of semantic transformation needs to fulfill certain conditions. The first condition is that there should be a correspondence and a relation of analogy between both meanings¹⁵⁷⁸. This condition enables the elaboration of analogies between predicates pertinent to the order of the manifestation and predicates pertinent to the reality of revelation¹⁵⁷⁹. The second condition affirms that the original meaning should have in itself the capacity to go beyond its domain of operation. Ladrière calls this “*the surplus of a concept to go beyond its original horizon of meaning*”¹⁵⁸⁰. This surplus is a semantic potentiality that allows the concept to carry new meanings.

(ii) Semantic transgression as a movement from the speculative horizon of philosophy (*theôria*) to the horizon of faith (*theologia*):

All efforts of understanding are situated within certain perspective and context. A horizon of meaning is that particular perspective and context in which concepts and discourses make sense¹⁵⁸¹. Theology performs an operation of metamorphosis to predicates that correspond to the visible world (order of manifestation). These predicates are transformed in order to become capable to “manifest” the invisible reality of God’s Kingdom¹⁵⁸². Without this transgressive movement theology could not be a meditative understanding of the reality of salvation¹⁵⁸³.

Still, we have to clarify what is the horizon of theology. Ladrière talks about the horizon of faith¹⁵⁸⁴, horizon of religious experience¹⁵⁸⁵, or horizon of faith’s self-understanding¹⁵⁸⁶, which is

¹⁵⁷⁷ J. LADRIÈRE, *L’articulation du sens III*, p. 285-286.

¹⁵⁷⁸ J. LADRIÈRE, *L’articulation du sens III*, p. 111. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 269.

¹⁵⁷⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 273.

¹⁵⁸⁰ “*La deuxième condition, c’est que le concept comporte en lui-même des virtualités capables de le porter au-delà de son propre domaine d’opération. Or on peut voir que le concept comporte en effet cette capacité de déborder son champ originel de signification. C’est ce qu’on pourrait appeler l’excédence du concept*”. J. LADRIÈRE, *L’articulation du sens III*, p. 111-112.

¹⁵⁸¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 133 and 212.

¹⁵⁸² J. LADRIÈRE, *L’articulation du sens II*, p. 189. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 273.

¹⁵⁸³ J. LADRIÈRE, *L’articulation du sens II*, p. 189.

¹⁵⁸⁴ J. LADRIÈRE, *L’articulation du sens III*, p. 92.

¹⁵⁸⁵ J. LADRIÈRE, *L’articulation du sens III*, p. 98.

the horizon of meaning of salvation and the Kingdom of God. It is a horizon of meaning related to God's acts of salvation, i.e., God's actions for Israel, Christ's words and actions and the Holy Spirit's deeds through the Church. We have access to this horizon by means of God's revelation and the gift of faith¹⁵⁸⁷. We will call this horizon of faith's self-understanding *theologia*.

What enables theology to be speculative is the semantic transformation of the meaning of philosophical concepts or discourses from their original speculative horizon (*theôria*¹⁵⁸⁸) to the horizon of faith (*theologia*)¹⁵⁸⁹. It is not a simple transposition of one type of language to another, which could risk a reduction of faith to a philosophy of religion¹⁵⁹⁰. Speculative concepts, elaborated in the horizon of *theôria*, are transformed in the horizon of *theologia* in a way that keeps their initial capacity of understanding¹⁵⁹¹. Theology detaches the concepts from their horizon of *theôria* to put them in the horizon of faith¹⁵⁹² by using other theological concepts that operate as a network of meaning in *theologia*. Once it is transformed, it becomes a theological predicate that preserves the initial power of clarification¹⁵⁹³. Consider the example of Aquinas' transformation of the Aristotelian concept of "virtue" to explain faith, hope and charity as "theological virtues"¹⁵⁹⁴.

¹⁵⁸⁶ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 212.

¹⁵⁸⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 92.

¹⁵⁸⁸ As we clarified already in chapter 4, the horizon of *theôria* is about the structure of existence and the experience of wonder that the human person has when he contemplates the cosmos. It is the domain of the speculative philosophical rationality. Ladrière refers to *theôria* as the viewpoint from which speculative categories are developed in order to understand the cosmic manifestation and self-constitution. See J. LADRIÈRE, *L'articulation du sens III*, p. 95-98. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 242.

¹⁵⁸⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 212 and 242.

¹⁵⁹⁰ Philosophical-speculative language is already born of a transgressive movement. It goes from a visible horizon (aesthetics) to an invisible horizon of *theôria*. The last one is about non-manifested (invisible) principles and foundations, structures and presuppositions and conditions of the possibility of the world's self-constitution. Philosophy interprets cosmic reality using concepts elaborated from the viewpoint of *theôria*. At the same time philosophy refers to the human existence and fulfillment. It is the notion of ethics in Ladrière. Then these philosophical concepts are suitable to serve to theology. Theology has used philosophical concepts because they are elaborated to make reference to a domain of reality that is not directly perceived: the reality beyond our perception that is foundation of the order of manifestation. It is the transgressive capacity of philosophical language. See J. LADRIÈRE, *L'articulation du sens III*, p. 192.

¹⁵⁹¹ According to Ladrière, this movement is due to the "metaphorical" capacity of language to "carry" signification, as we saw in the section of first order language of faith. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 134 and 268.

¹⁵⁹² J. LADRIÈRE, *L'articulation du sens III*, p. 98.

¹⁵⁹³ J. LADRIÈRE, *L'articulation du sens III*, p. 299.

¹⁵⁹⁴ Aquinas uses a text from Scriptures (2 Pet 1, 4) and theological concepts such as "power of God", "partakers of divine nature", "participation in God", "supernatural happiness", "divine assistance", "divine revelation", "God's infused gifts" to transform the original philosophical concept of "virtue" to the theological concept of "theological virtues". See one of Aquinas texts where he explains the concept of theological virtues. "*Man is perfected by virtue, for those actions whereby he is directed to happiness, as was explained above (Q[5], A[7]). Now man's happiness is twofold, as was also stated above (Q[5], A[5]). One is proportionate to human nature, a happiness, to wit, which man can obtain by means of his natural principles. The other is a happiness surpassing man's nature, and which man can obtain by the power of God alone, by a kind of participation of the Godhead, about which it is written (2 Pet. 1, 4) that by Christ we are made "partakers of the Divine nature." And because such happiness surpasses the capacity of human nature, man's natural principles which enable him to act well according to his capacity, do not suffice to direct man to this same happiness. Hence it is necessary for man to receive from God some additional principles, whereby he may be directed to supernatural happiness, even as he is directed to his connatural end, by means of his natural principles, albeit not without Divine assistance. Such like principles are called "theological virtues": first, because their object is God, inasmuch as they direct us aright to God: secondly, because they are infused in us by God alone: thirdly, because*

(iii) Risks of this semantic transgression from *theôria* to *theologia*.

In this movement of semantic transgression there are some risks. One risk is that the predicate could remain in the speculative horizon¹⁵⁹⁵ (*theôria*); i.e., it could reduce theology to a mere philosophy of religion. Another risk is to rationalize the first order language of faith and lose any relation to the experience of faith, which should be inseparable from the original language¹⁵⁹⁶. This would be a reduction to any other rationality, e.g., anthropology, sociology, psychology or metaphysics. This risk is a radicalization of the methodological distance between a theologian and its object¹⁵⁹⁷. To avoid these risks, a theologian must continuously go to its system of reference, the sources of the content of faith¹⁵⁹⁸. These original first order languages of faith through their performative capacities will continuously change and challenge the theologian to avoid the temptation of reductionism.

Moreover, there is another temptation: to merely paraphrase religious language. This “repetition” of what has been already said is not a true interpretation because it does not contribute to a new understanding¹⁵⁹⁹. This temptation is originated in the confusion of theology with mere “preaching” or in the confusion of fidelity with simple repetition.

(iv) Semantic transgression as an analogy

The semantic transgression is Ladrière’s understanding and reformulation of the classical problem of the analogy. For Ladrière, the movement of semantic transgression is the place where the analogy is located¹⁶⁰⁰. According to Ladrière, the semantic transformation from *theôria* to

these virtues are not made known to us, save by Divine revelation, contained in Holy Scriptures.” AQUINAS, *Summa Theologica*, I-IIae, Q. 62. Art. 1.

¹⁵⁹⁵ J. LADRIÈRE, *L’articulation du sens II*, p. 175.

¹⁵⁹⁶ “Mais dans la mesure où il fait appel au langage spéculatif, ne va-t-il pas tendre, par une pente en quelque chose naturelle, à rationaliser le langage religieux originaire, c’est-à-dire à l’interpréter dans le cadre d’un discours dont la raison peut s’assurer entièrement, qui ne devra donc absolument plus rien à l’expérience originaire de la foi dont était inséparable le langage premier, même dans son mode de signification ?” J. LADRIÈRE, *L’articulation du sens II*, p. 176.

¹⁵⁹⁷ J. LADRIÈRE, *L’articulation du sens II*, p. 178.

¹⁵⁹⁸ J. LADRIÈRE, *L’articulation du sens II*, p. 175-176. J. LADRIÈRE, *L’articulation du sens III*, p. 299.

¹⁵⁹⁹ J. LADRIÈRE, *L’articulation du sens II*, p. 177-178. Also Bernard Lonergan criticizes the confusion of mere repetition with the elaboration of systems that express an understanding. For him “to communicate one must understand what one has to communicate. No repetition of formulas can take the place of understanding.” B. LONERGAN, *Method in theology*, p. 351.

¹⁶⁰⁰ “Mais ici aussi ce n’est que par l’analogie que les concepts pourront être utiles. [...]. [Le discours théologique] est donc appelé à effectuer une opération de déplacement du domaine des principes spéculatifs vers le domaine des réalités du salut, visé par le mouvement de la foi [...]. La tâche tout à fait précise du discours théologique sera donc d’ajuster pour ainsi dire le mouvement propre du concept, tel qu’il est fourni par le langage spéculatif, au mouvement original de sens dont le langage religieux l’instruit. Cela est en principe possible parce que, comme on l’a déjà indiqué, le milieu propre du concept est un milieu d’articulation formelle qui, à la condition d’être détaché de la référence à la dimension purement spéculative des fondements, peut servir de support analogique à une sollicitation de sens qui le transcende.” Underlined emphasis is ours. J. LADRIÈRE, *L’articulation du sens II*, p. 192-193. See also J. LADRIÈRE, *L’articulation du sens II*, p. 187. J. LADRIÈRE, *L’articulation du sens III*, p. 92, 112, 276, 281 and 298. J. LADRIÈRE, *Science et théologie* p. 21.

theologia “is done in accordance with the logic of a particular analogy that reflects at the level of speculative language, the analogy of faith. This analogy of faith is in itself grounded by the correlation that faith establishes between its own meaning and the reception in the human soul”¹⁶⁰¹. Although Ladrière does not seem to engage directly with Barth’s theology in his three volumes of *L’articulation du sens*, we will gather a series of argument from the Belgian thinker to show how the notion of semantic transgression answers Barth’s criticism of some uses of philosophical concepts and the *analogia entis* in theology.

Barth reacted against the *analogia entis* and its use in the development of natural theology¹⁶⁰². For him, our faith and theological knowledge of God are not grounded in a philosophical principle outside of theology¹⁶⁰³. According to Barth, the *analogia entis*, which he considered in 1932 in the preface of the first volume of the Church Dogmatics as “the invention of the Antichrist”, put at the same level the being of God and the human being without taking into consideration the abysmal difference between both¹⁶⁰⁴. For him, the concept of being is a concept derived from a finite and relative being. For that reason it should not be applied to God¹⁶⁰⁵.

Barth considered that only from the Word of God comes the knowledge of God, not from a philosophical or any other human concept. The *analogia entis*, used in as the foundation of a natural theology independent of revelation, implies a likeness between God and the fallen creation. A fallen world cannot reveal God and a fallen human being cannot recognize God in his creation. However, there is a sense of *analogia entis* that implicitly Barth recognizes and even uses. According to Balthasar, Barth recognizes and even approves the analogy of being within the context of an overarching analogy of faith¹⁶⁰⁶. This expression of the “analogy of faith”, which has its origin in the Letter to the Romans (Rm 12, 6), means that the only possible interpretation

¹⁶⁰¹ “Cette transmutation se produit conformément à la logique d’une analogie particulière, dans laquelle se reflète, au niveau de ce langage spéculatif, l’analogie originnaire qui est utilisé par le langage de la foi, l’analogie de la foi, fondée à son tour sur le mode de corrélation que la foi établit elle-même entre sa propre signification et la réceptivité constitutive de l’âme humaine.” J. LADRIÈRE, *L’articulation du sens III*, p. 298.

¹⁶⁰² For Aquinas, the use of analogy in theology is grounded in the creation of the human being in the image and likeness of God, which for obvious reasons does not mean equality between God and man. It was Cajetan who developed the metaphysical analogy of being, the *analogia entis*. This *analogia entis* was important for the development of natural theology. By citing the *Theological Declaration of the Synod of Barmen*, Barth criticizes and condemns any attempt to develop a natural theology that is grounded in a philosophical system alongside God’s revelation. “We condemn the false doctrine that the Church can and must recognize as God’s revelation other events and powers, forms and truth, apart and alongside this one Word of God”. Barth criticizes the use of other “sources” in Church’s proclamation “alongside and apart from the one Word of God.” See AQUINAS, *Summa Theologica* Ia, q. 4, art 1. K. BARTH, *Church Dogmatics, Selections*, p. 54 and 64.

¹⁶⁰³ H.-U VON BALTHASAR, *The theology of Karl Barth*, p. 130 and 144.

¹⁶⁰⁴ L. LADARIA, *El Dios vivo y verdadero: el misterio de la Trinidad*, p. 415. H.-U VON BALTHASAR, *The theology of Karl Barth*, p. 162.

¹⁶⁰⁵ H.-U VON BALTHASAR, *The theology of Karl Barth*, p. 162.

¹⁶⁰⁶ H.-U VON BALTHASAR, *The theology of Karl Barth*, p. 164.

of the Word of God comes from the Word of God itself. It is God who can choose and has chosen the words we can use to refer to Him. In Barth's words in 1962:

"The Word is not the only necessary determination of the place of theology, but it is undoubtedly the first. Theology is itself a word, a human response; yet what makes it theology is not its own response but the Word which it hears and to which it responds. Theology stands and falls with the Word of God, for the Word of God precedes all theological words by creating, arousing, and challenging them. Should theology wish to be more or less or anything other than action in response to that Word, its thinking and speaking would be empty, meaningless and futile. [...] Theology is modest because its entire logic can only be a human ana-logy¹⁶⁰⁷ to that Word; analogical thought and speech do not claim to be, to say, or to control the original word. But it gives a reply to it by its attempt to correspond with it; it seeks expressions that resemble the ratio and relations of the Word of God in a proportionate and, as far as feasible, approximate and appropriate way. [...] In short, theology is not a creative act but only a praise of the Creator and of his act of creation –praise that to the greatest possible extent truly responds to the creative act of God. Likewise, theology is free because it is not only summoned but also liberated to such analogy, reflection, and reproduction"¹⁶⁰⁸.

For Barth, there is no continuity between God and the fallen creation. Nevertheless, there is a relation between God and the person who has faith. In faith, a person can recognize God¹⁶⁰⁹. Without faith, the human person's considerations of the world are not sufficient to reach God's reality and truth¹⁶¹⁰. Independently of revelation a human being cannot reach God by the power of his own reason and the use of philosophical categories.

"The idea that an autonomous man should be concerned with the response to the Word and its appropriate interpretation must be completely avoided. [...] Before human thought and speech can respond to God's Word, they have to be summoned into existence and given reality by the creative act of God's Word. Without the precedence of the creative Word, there can be not only no proper theology but, in fact, no evangelical theology at all!"¹⁶¹¹.

Barth proposes the *analogia fidei*, which expresses the following: (i) all knowledge of God comes from revelation; (ii) we gain knowledge from God's revelation by surrendering ourselves and (iii) God's self-revelation must be grasped at its center, Jesus Christ¹⁶¹². The *analogia fidei*

¹⁶⁰⁷ *Ana-logy* is literally proper relation. However *ana* signifies in Greek an upward movement, which imply that *ana-logy* is the human word in response to the Word of God. This is Barth's reinterpretation of the concept of "analogy".

¹⁶⁰⁸ K. BARTH, *Evangelical Theology*, p. 16-17.

¹⁶⁰⁹ L. LADARIA, *El Dios vivo y verdadero: el misterio de la Trinidad*, p. 416. H.-U VON BALTHASAR, *The theology of Karl Barth*, p. 155.

¹⁶¹⁰ H.-U VON BALTHASAR, *The theology of Karl Barth*, p. 144-145.

¹⁶¹¹ K. BARTH, *Evangelical Theology*, p. 18.

¹⁶¹² H.-U VON BALTHASAR, *The theology of Karl Barth*, p. 163.

becomes an analogy of relation between God and human being, while the *analogia entis* is a simple philosophical effort to grasp God, the Holy Other, in simple human categories, which according to Barth is in vain¹⁶¹³. We should add that what Barth criticizes is the extravagance of some natural theologies that are pure philosophical speculations without any connection to God's revelation.

Does the use of philosophical concept proposed by Ladrière fall in what Barth criticize? When Ladrière affirms that the semantic transformation “*is done in accordance with the logic of a particular analogy that reflects at the level of speculative language, the analogy of faith*” we make the hypothesis that he refers to Barth's criticism of the use of philosophical concepts and systems in theology, although he does not mention it or quote Barth explicitly. Here we provide three arguments that explain why Ladrière does not fall into Barth's criticism. First, Ladrière states clearly that theology is not grounded in a speculative reflection independent of faith, as natural theology does. For him, theology has its origin in the Word of God, its internal rationality and the use of the analogy of faith. Theology, as a second level language that corresponds to understanding, remains in the horizon of faith in God's Word. The semantic transformation of philosophical concepts to have meaning in the horizon of *theologia* reflects at the speculative level the analogy of faith¹⁶¹⁴. This is justified on the grounds that creation is a movement toward incarnation, which is the culmination of God's revelation. Consequently, the order of manifestation, which includes the whole cosmos including human language, is a place open to carry on revelation as God's self-communication.

Second, there are examples of semantic transformation found in the Scriptures. Ladrière considers as examples of semantic transformation the reinterpretation of some cosmologies of the ancient world and their integration in the faith of the people of Israel, as witnessed in the first

¹⁶¹³ Here Ladaria asks if Barth really understood the real meaning of analogy in Catholic theology. See L. LADARIA., *El Dios vivo y verdadero: el misterio de la Trinidad*, p. 417.

¹⁶¹⁴ Actually, Karl Barth also transforms philosophical concepts to be used in theology. Consider the example of the concepts “cause” and “concursum” and Barth justification of their use in volume 7 of the *Church Dogmatics*, as cited by Balthasar. “*This concept of ‘cause’ does not stem from the Bible. However, that does not mean that its introduction into the thesaurus of theology’s vocabulary was an error. It can be of real service to theology in its task of unfolding and applying the message for the Bible today... Those who disagree with this view would first have to prove (which in fact cannot be done) that the use of this or a similar concept is avoidable when we talk about God’s activity and that of the creature in their relationship to each other ... [So we must concede that] the concept of ‘concursum’ is logically consistent and quite useful, even in our own time. Because of the introduction of this concept, we have won clarifications of knotty issues that perhaps would never have been won without this use of ‘concursum’ (both in terms of the Bible and of Aristotle!)*.” Barth set down a series of conditions for the right use in theology of the concept of “cause”. This could be generalized for other philosophical concept as well: (i) causality must not be understood as operating mechanically; (ii) there must be no talk of things; (iii) there must be no weaving of an overarching concept of ‘*causa*’ under which God and the creature would be subsumed; (iv) there must be no backsliding to philosophy. We must steadfastly hew to the interpretation of Scripture; (v) the whole matter must be developed from within the first article of the creed. H.-U VON BALTHASAR, *The theology of Karl Barth*, p. 132-133.

chapters of the book of Genesis¹⁶¹⁵. There are many other examples in the Scriptures where concepts were transformed to carry the revealed message: covenant, kingdom, *logos*, wisdom, etc¹⁶¹⁶. Third, Ladrière's proposal is not an *analogia entis* because it is not grounded in metaphysics or a notion of being. He does not talk about the being of God. Ladrière's semantic transgression is an analogy of meaning, a semantic analogy as a correspondence between two elements or two meanings in the same concept.

C. Experience as testing in theology:

Testing in theology consists in the establishment of an agreement between theology and the first order languages of faith¹⁶¹⁷. In theology, the sketches are tested on the system of reference¹⁶¹⁸: the first order language of faith. There are two testing criteria in theology: (i) the increment of our intelligibility of faith (saturation of meaning) and (ii) the fidelity to the original interpretations already present in the first order language of faith¹⁶¹⁹. Due to the inseparability between first order language of faith and the experience of faith, any test includes the theologian's experience of faith.

III.5.5.4 Verification process: truth in theology

Theology is never fully completed and achieved. It is always an open effort of understanding of its object, which cannot be fully comprehended¹⁶²⁰. There is an excess of meaning in the first order languages of faith that requires a constant reinterpretation. Ladrière meditates over the limits of all theological discourses as languages of second order. Theology is conscious after a longtime of its limit¹⁶²¹. God cannot be contained or constrained in any image, metaphors, concept or speculative discourse. There always remains an infinite distance between

¹⁶¹⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 289

¹⁶¹⁶ There is another form of semantic transgression already present in Scriptures. The Septuagint was an effort of translation from Hebrew and Aramean to Greek. This translation is not an objective and passive transmission. It uses concept that were alien to the Hebrew mentality and texts. Pierre Gibert provides an example from the Second Book of the Maccabees. The term "*ex nihilo*" is a transformation to a Greek philosophy mentality of the notion of creation in Genesis born from a mythological mentality. P. GIBERT, *Fondements Bibliques*, p. 37.

¹⁶¹⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 123-124.

¹⁶¹⁸ "Dans la démarche de justification, il y a certes des critères et des procédures qui sont mis en œuvre, mais en définitive il y a un jugement qui s'effectue par référence à une réalité qui est reconnue comme instance ultime. Dans le cas des sciences de la nature, c'est la réalité empirique [...]. Dans le cas de sciences humaines c'est l'univers des signifiants [...]. Et dans le cas de la théologie, c'est la foi en tant qu'elle est reçue dans une pratique collective et portée par une tradition, et la réalité non visible attestée par elle [la foi], qui constituent le champ de référence par rapport auquel se juge la validité des interprétations proposées et sur lequel s'appuie ultimement la justification de la démarche théologique." Underlined emphasis is ours. J. LADRIÈRE, *Science et théologie*, p. 14-15. See also J. LADRIÈRE, *L'articulation du sens II*, p. 118.

¹⁶¹⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 118 and 180.

¹⁶²⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 118 and 191.

¹⁶²¹ J. LADRIÈRE, *L'articulation du sens II*, p. 221

God and the creature¹⁶²². Speculative concepts and discourses are assumed and transformed by theology in a transgressive movement that must deconstruct all false images and representations¹⁶²³.

Theology also depends on the cultural contexts where it was developed and from which it borrows some interpretative categories¹⁶²⁴. Moreover, theology is a historical rational effort in the sense of reassuming and reinterpreting the language of faith in different periods and epochs¹⁶²⁵. In the process of interpretation, all theological commentaries and systems leave behind some aspects of the economy of salvation¹⁶²⁶. Moreover, there is an evolution of categories in every culture. Consequently, there are many possible interpretations due to particular historic-cultural perspectives. Each one can only clarify one aspect, perhaps a limited one¹⁶²⁷. More than talking about incompatibility, we should talk about complementariness¹⁶²⁸. The plurality of perspectives contributes to an increase of understanding¹⁶²⁹. For these reasons, we should not make a particular theological system an absolute or an ultimate truth¹⁶³⁰. All systems of interpretation are insufficient. In that sense all systems must be criticized, elaborate anew¹⁶³¹.

Verification is the process of establishing the continuity (or lack of it) of meaning of all interpretations in theological hermeneutics¹⁶³². A theological discourse is judged according to its fidelity to faith¹⁶³³. Consequently, faith as an experience and as a language of first order is the ultimate criterion of truth¹⁶³⁴.

Here we find the application of Ladrière's three criteria of truth: correspondence, coherence and pragmatism. Correspondence in theology is not the correspondence we found in other rationalities¹⁶³⁵. It is not a correspondence between an empirical fact and a formal object as in empiric-formal sciences. It is not a correspondence between a speculative expression and an ontological condition as in philosophy. It is not the correspondence between an interpretation and an anthropological-cultural artifact or a text as in hermeneutical sciences. Correspondence in theology is the agreement between the theological discourse and the first order language of

¹⁶²² J. LADRIÈRE, *L'articulation du sens II*, p. 222

¹⁶²³ This is the influence of Aquinas' negative theology over Ladrière. J. LADRIÈRE, *L'articulation du sens II*, p. 224

¹⁶²⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 173

¹⁶²⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 221

¹⁶²⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 161

¹⁶²⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 191

¹⁶²⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 163

¹⁶²⁹ J. LADRIÈRE, *L'articulation du sens II*, p. 164

¹⁶³⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 99

¹⁶³¹ J. LADRIÈRE, *L'articulation du sens II*, p. 162.

¹⁶³² J. LADRIÈRE, *L'articulation du sens II*, p. 123

¹⁶³³ J. LADRIÈRE, *Science et théologie*, p. 15.

¹⁶³⁴ J. LADRIÈRE, *Science et théologie*, p. 15.

¹⁶³⁵ J. LADRIÈRE, *L'articulation du sens III*, p. 66

faith¹⁶³⁶. It is the adequacy between what is affirmed in the sources and a commentary or a theological system¹⁶³⁷. This adequacy is approximate¹⁶³⁸.

There is also the criterion of coherence, which is the coherence of the theological system as a global discourse¹⁶³⁹. Finally we can argue for a pragmatic criterion: fidelity to the original languages must be accompanied by the creative possibility of understanding, developing adequate pastoral work and evangelizing people and their cultures.

Ladrière also elaborates a reflection of the verification process in theology and its relationship to the Church's magisterium. For Ladrière, the instance that evaluates theology should be familiar and competent in theology. It must be familiar with the original sources (first order language of faith) and should be able to judge if the original meaning of a text is found in a textual commentary¹⁶⁴⁰. For this reasons it is theology that must judge theology. This evaluation could remain open, because nothing guarantees that a discussion between theologians would resolve all difficulties¹⁶⁴¹. The official magisterium is that authority that is an authentic representative of the tradition and direct witness of the real content of faith¹⁶⁴².

IV. Zubiri and rationality in theology

IV.1 Zubiri's notion of religion and theology

Xavier Zubiri has developed his reflection about the relationship between God and the human person from the double perspective of phenomenology of religion and Christian theology. His writings are found in three volumes: *El hombre y Dios*, *El problema filosófico de la historia de las religiones* and *El problema teologal del hombre: Cristianismo*. There are two possible readings of these three volumes. First, there is a reading from the perspective of phenomenology of religion that unfolds from the first volume, *El hombre y Dios*, to the third, *El problema teologal del hombre: Cristianismo*. This reading seeks the ground of the human experience of God and the history of religions. Even Christianity is analyzed from the point of view of phenomenology and history of religions.

¹⁶³⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 98

¹⁶³⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 67

¹⁶³⁸ J. LADRIÈRE, *L'articulation du sens III*, p. 68

¹⁶³⁹ J. LADRIÈRE, *L'articulation du sens III*, p. 67

¹⁶⁴⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 301

¹⁶⁴¹ J. LADRIÈRE, *L'articulation du sens III*, p. 301

¹⁶⁴² J. LADRIÈRE, *L'articulation du sens III*, p. 301-302

There is another possible reading of these texts from the perspective of Christian theology. Zubiri expresses this orientation in the conclusion of *El Hombre y Dios*¹⁶⁴³. In that text Zubiri makes a distinction between a fundamental theology and what he calls theology *simpliciter*¹⁶⁴⁴. Fundamental theology is not, for Zubiri, a study of the *praeambula fidei*. It is the study of the human reality's foundation where the experience of Christian revelation is "located". It refers to a phenomenological analysis of the whole human person from the perspective of his radical dependence of God¹⁶⁴⁵. This analysis from the perspective of the order of manifestation, prepares the foundation to Christian theology¹⁶⁴⁶.

Christian theology, theology *simpliciter*, is grounded in the revelation that God makes in Christ. This theology, although grounded in the effort of fundamental theology, is considered as autonomous. It is found in the last part of the second volume, *El Problema Filosófico de la Historia de las Religiones*, and in the third volume *El Problema Teologal: Cristianismo*. Zubiri calls his fundamental theology "theological knowledge" and Christian theology "theologic knowledge"¹⁶⁴⁷. This theologic knowledge belongs to the order of revelation.

We make ours this second possible reading. We will start with the theological aspects as a fundamental theology in the sense of expressing the human conditions that make possible God's revelation. This does not mean that revelation depends fundamentally on the human being. It means that God reveals Himself to humanity considering our human structure of apprehension, *logos* and reason. To avoid any confusion we will call theologic knowledge as Christian theology or Christian systematic theology and theological knowledge as fundamental theology.

Our reading takes into consideration the structure of *Inteligencia Sentiente*, as developed in chapter 4. For Zubiri, there are three moments of the intellectual act: primordial apprehension, sentient *logos* and sentient reason. In practice they can be distinguished, as Cabria-Ortega explains it, as two processes: (i) an analysis and description (the primordial apprehension and the *logos*) and (ii) a moment of explanation (reason and comprehension). The first one is related to the analysis of facts (i.e., *epoché*) to what is immediately apprehended by the primordial

¹⁶⁴³ *El Problema Teologal del Hombre, homenaje a Karl Rahner* was originally an independent work developed to be the introduction of a course offered at the Gregorian University in Rome. It was integrated in *El hombre y Dios* as a conclusion by Ignacio Ellacuría, S.J., who was the editor of this text published after Zubiri's death.

¹⁶⁴⁴ X. ZUBIRI, *El hombre y Dios*, p. 383.

¹⁶⁴⁵ The first volume, *El hombre y Dios*, is about this analysis.

¹⁶⁴⁶ This is in agreement with the notion that fundamental theology must justify the fact that we talk of God. It is the effort to ground our words about God. Its task is to clarify the access we have to the object of theology and our capacity to communicate this to others in a particular context. It also seeks to understand the notion of revelation and the human conditions of it. See H. PEUKERT, *Théologie Fondamentale*, p. 735-736.

¹⁶⁴⁷ In Spanish Zubiri makes the distinction between "*teologal*" and "*teología*". However the word *teologal*, which is a neologism, does not exist in English. We agree with Joaquín Redondo who translates *teologal* as *theological* and *teología* as *theologic knowledge*.

apprehension¹⁶⁴⁸. The second is a theoretical process operated by reason to explain the foundations and the structure of reality. Let's start by considering Zubiri's notion of fundamental theology.

IV.2 Fundamental theology in Zubiri: the theological dimension of the human person¹⁶⁴⁹

For Zubiri, fundamental theology is not about the *preambula fidei* that grounds our faith in a *demonstratio religiosa*, a *demonstratio christiana* and a *demonstratio catholica*¹⁶⁵⁰. Fundamental theology starts by an analysis of the human fundamental experience of an ultimate ground of all reality.

IV.2.1 The analysis of the human experience of an ultimate ground¹⁶⁵¹

Zubiri's point of departure is the radical fact that is accessible to the immediate analysis and description¹⁶⁵²: the human reality itself. From here Zubiri asks himself what it is to be a human¹⁶⁵³. Zubiri analyzes this fundamental experience of our own human reality in order to identify the process of human realization¹⁶⁵⁴. In his analysis Zubiri uncovers a fact: the human person has a peculiar mode of independence vis-à-vis the rest of real things. The human person does not belong to other real things as something assimilated, incorporated or subsumed¹⁶⁵⁵. All other non-human realities (e.g., a rock, a plant, a worm, etc.) are integrated to their environment in a way that the human person is not¹⁶⁵⁶. For Zubiri the human person is *ab-solute* in the sense

¹⁶⁴⁸ J.-L. CABRIA-ORTEGA, *Relación teología-filosofía en el pensamiento de Xavier Zubiri*, p. 412-413.

¹⁶⁴⁹ This corresponds to Rahner's first level of reflection, which is about the point of departure of theology. This should not be a surprise due to the fact that Zubiri dedicates the course he has developed at the Gregorien University to Rahner. However, Zubiri wants to elaborate his "first level" or fundamental theology not from Heidegger's ontological categories as Rahner, but from concepts elaborated from his philosophy of reality and sentient intelligence.

¹⁶⁵⁰ H. PEUKERT, *Théologie Fondamentale*, p. 738.

¹⁶⁵¹ Zubiri does not pretend to do a natural theology or a theodicy. His effort is situated in the context of the phenomenology of religion as others of his period such as Rudolf Otto and Martin Heidegger. D. GRACIA, *Zubiri y la experiencia teologal*, p. 251-252.

¹⁶⁵² As Antonio González explains it, Zubiri's method is not a hermeneutical method understood as an interpretation of the religious logos. He seeks to find and describe the ground (as a fact and not as a theory) of religious experiences and languages. It does not deny the values of the analysis of religious languages or theories. On the contrary it is capable of integrating them. In Zubiri's words: "The theological is, consequently, a strictly human structure accessible to immediate analysis. We must attend to this analysis." Underlined emphasis is ours. X. ZUBIRI, *El hombre y Dios*, p. 12. See A. GONZÁLEZ, *Aproximación a la filosofía zubiriana de la religión*, p. 504-505 and 507.

¹⁶⁵³ It is important to realize that this is very similar to Ladrière's notion of ethics as the achievement of the human person and as the "place" where faith is received. We can see in Ladrière some aspects of Heidegger's analysis of the human existence as *dasein* in his book *Being and Time*. See X. ZUBIRI, *El hombre y Dios*, p. 15.

¹⁶⁵⁴ We should not forget that the primordial apprehension is prelinguistic. Once we start to analyse, identify, affirm and judge other facts by means of language we are already in the moment of the sentient logos.

¹⁶⁵⁵ X. ZUBIRI, *El hombre y Dios*, p. 51.

¹⁶⁵⁶ X. ZUBIRI, *Inteligencia y Realidad*, p. 213-214.

of being unattached and independent of his environment¹⁶⁵⁷. However, he is a **relative absolute** because his character of absolute is not a property given and achieved but something acquired through his acts. A human being constructs his person in every act he performs. These acts, even the small ones, define every person's mode of reality¹⁶⁵⁸. The mode of reality expressed by the pronoun "I" is what Zubiri calls personality¹⁶⁵⁹. Personality is acquired, forged and elaborated through a personal history.

The human person is an open essence in the sense that he is not fully predetermined. Our personality is necessarily elaborated and chosen¹⁶⁶⁰. I am an absolute relative because I made my personal life with things and through persons that surround me. In a sense I ground my personal life *in reality*¹⁶⁶¹, which means that the whole of reality is the foundation of the human person¹⁶⁶². This is not difficult to accept if we consider the biological, social, cultural and historical aspects of our lives.

Zubiri continues his analysis of how reality is fundamental to our human personality. For him there are three senses of the term "fundament". First, reality is the fundament of the person as something **ultimate** in my actions¹⁶⁶³. It is the ultimate support of the actions that construct and forge my personality. Second, reality is the fundament of all multiple possibilities the human person could be¹⁶⁶⁴. The human person must choose among these **possibilitating** characters. Finally, reality impels us to act, to become persons and to realize ourselves¹⁶⁶⁵. It is the **impellent** character of reality.

Zubiri calls this fundament of my personality (as ultimate, possibilitating and impellent support) the **power of the real**. This power of the real exercises a power over me as a foundation of my personality¹⁶⁶⁶. The power of the real is a foundation that is not external to myself. It is an

¹⁶⁵⁷ The term *absoluto* in Spanish means originally *suelto* (unattached). It comes from the ancient Spanish *solver* from the Latin *solvere*. It is related to *dissolver* (dissolve) as in dissolving a marriage or a meeting. The term *soltero* (single) was originally related to *suelto*. Then it became non-married as a form of being unattached. J. COROMINAS and J.-A. PASCUAL, *Absolver*, p. 23.

¹⁶⁵⁸ "[...] but is relative because this mode of absolute implantation is an acquired character. In his life, and in the most modest of his actions, man not only realizes a series of personal acts, according to the properties he has and the situations in which he finds himself; but in each one of them the human person defines, in a precise and concrete way, the mode according to which his reality is relatively absolute. Whence comes the seriousness of each act." X. ZUBIRI, *El hombre y Dios*, p. 52.

¹⁶⁵⁹ X. ZUBIRI, *El hombre y Dios*, p. 58.

¹⁶⁶⁰ X. ZUBIRI, *El hombre y Dios*, p. 79.

¹⁶⁶¹ X. ZUBIRI, *El hombre y Dios*, p. 81.

¹⁶⁶² X. ZUBIRI, *El hombre y Dios*, p. 82.

¹⁶⁶³ X. ZUBIRI, *El hombre y Dios*, p. 82.

¹⁶⁶⁴ X. ZUBIRI, *El hombre y Dios*, p. 83.

¹⁶⁶⁵ The original word in Spanish is *impelente*, from the Latin *impellere*. It is an adjective that means at the same time that something set in motion, incite, urge on, encourage and stimulate.

¹⁶⁶⁶ X. ZUBIRI, *El hombre y Dios*, p. 88.

intrinsic moment of my personal realization¹⁶⁶⁷. Without it, we could not constitute ourselves as an absolute relative. This power of the real operates as a ligament, as a force in us that triggers and enables the construction of our personality¹⁶⁶⁸. This ligament or attachment that drives and urges us to construct our personality, is what Zubiri calls *religion*¹⁶⁶⁹. “Religion” is, for Zubiri, a fact derived from the phenomenological analysis of the human reality¹⁶⁷⁰. This religion is something that can be experienced¹⁶⁷¹. However, this experience is not understood as a feeling or as a sensible empirical data. Religion is not a feeling of unconditional dependence, as expressed by Schleiermacher. It is something more radical and anterior to feelings and even to an unconditional dependency¹⁶⁷². Zubiri’s calls **fundamental experience** this experience of religion as the foundation of my personal reality¹⁶⁷³. In Zubiri’s words:

*“The seizing by the power of the real occurs in an experiential form. Religion is, therefore, an experiential march towards the fundament of the power of the real. It is fundamental experience. [...] Man, we said, always accedes religatingly to the fundament of the real. Hence, man always has in his personal realization that fundamental experience. Every act of his, even down to the most common and modest, is in all its dimensions and in an express or muted way, a problematic experience of the fundament of the power of the real.”*¹⁶⁷⁴

This experience of religion is not an experience of a concrete reality among other concrete realities. It is an experience of an absolutely absolute reality. For Zubiri God is the

¹⁶⁶⁷ “This seizure by the power of the real is not a relation into which I, already constituted a reality, enter with respect to the power of the real; but it is an intrinsic and formally constitutive moment of my personal reality.” X. ZUBIRI, *El hombre y Dios*, p. 92.

¹⁶⁶⁸ This is equivalent to the immanent calling or vocation to which Ladrière refers in his analysis of the ethical dimension that grounds human religious experience.

¹⁶⁶⁹ The term “religion” is a neologism invented by Zubiri. “This peculiar ligature is just what I term religion. Religated to the power of the real is how we are sustained on it, in order to be relatively absolute. Put differently, the formal subject of religion is not nature, but the person, or better still, it is personized nature. In itself, religion affects man not as separated from things, but insofar as it affects everything. However, only in man it is formally religion; only in man it is the formal occurrence of fundamentality. A person is not simply linked to things or dependent upon them, but is constitutively and formally religated to the power of the real.” X. ZUBIRI, *El hombre y Dios*, p. 92-93.

¹⁶⁷⁰ As Diego gracia explains, Heidegger influences Zubiri in his analysis of the phenomenon of “religion”. Heidegger develops a concept that is at the background of Zubiri’s religion. It is the concept *Geworfenheit*. *Geworfenheit* means “to throw”. Heidegger uses in the sense that we are thrown or projected. We have a fundamental experience of our existence as projected and that is a manifestation or revelation (*Offenbarung*). According to Heidegger, our existence is a miracle or a gift that we cannot know where it comes from. For Zubiri, religion is a fundamental experience that we cannot control or even provoke. It is given and we only can recognize it. Both, Heidegger and Zubiri, are examples that for phenomenology of religion the foundation is the way of “experience” and not the way of rationality as in natural theology or theodicy. D. GRACIA, *Zubiri y la experiencia teológica*, p. 252-253.

¹⁶⁷¹ X. ZUBIRI, *El hombre y Dios*, p. 95.

¹⁶⁷² Zubiri’s position is more radical than Schleiermacher’s feeling of dependency and Tillich’s ultimate concern. It is previous to these two positions. Nonetheless, it is undeniable the fact the Zubiri searches, as Tillich, for an unconditional ground of everything. See X. ZUBIRI, *El hombre y Dios*, p. 94.

¹⁶⁷³ X. ZUBIRI, *El hombre y Dios*, p. 110.

¹⁶⁷⁴ Underlined emphasis is ours. X. ZUBIRI, *El hombre y Dios*, p. 377-378.

absolutely absolute reality that is absolutely free and independent of things¹⁶⁷⁵. Until now, this is a formal concept without a predetermined content. It is merely an identification: “we call it God”¹⁶⁷⁶. The content, the reality in depth of what Zubiri calls God, is the task of the sentient reason that seeks to explain and comprehend.

IV.2.2. Theoretical explanation and comprehension of the ultimate, possibilitating and impelling reality

This religation as a fundamental experience (or experience of the fundament) in some way hurls the human person toward the intrinsic foundation of his personal life¹⁶⁷⁷. As we already discussed it, sentient reason seeks the foundation of a reality. Here the **object** is the religation to the power of the real¹⁶⁷⁸. Reason seeks the ground-reality, i.e, the reality fundament, of this object. The **method** is forging a way to go from the experience of religation to its fundament-reality¹⁶⁷⁹. According to Zubiri, the way of theism is a sketch that considers God as “*the possibilitating and impelling ultimate fundament of reality*”¹⁶⁸⁰. For theism, God is the reality-fundament of our religation to the power of the real. Again, God is not a reality-object. God is a reality-fundament of our religation to the power of the real¹⁶⁸¹. Moreover, Zubiri affirms that a

¹⁶⁷⁵ “The reality on which this power is founded is not concrete real things. In other words, all things are real, but none is “the” reality. But “the” reality is real because it determines me physically, making me be relatively absolute. Therefore, there is another reality on which “the” reality is founded. And this reality is not one more concrete thing, because it is not “a” reality but the fundament of “the” reality. And as fundament of a power which determines my relatively absolute being, it will be an absolutely absolute reality. This is just what the reality of God is. Only because this reality exists can there be a power of the real which determines me in my relative absolute being.” X. ZUBIRI, *El hombre y Dios*, p. 148.

¹⁶⁷⁶ “I live and am always aware that I live the power of the real problematically, by living in a problematic way my own relatively absolute reality. This problematic is the problem of the power of the real in my religation; it is precisely the problem of God. [...] First of all, in the power of the real as constitutive of my religation, is there that which we call God? The issue is to make us see that His reality is manifested, in some way, in religation, that is, in the constitution of my I as its fundament. Therefore—and this is the second aspect—man has access to that fundament in some form. These are, I repeat, two co-essential aspects of that which we men call “God”; but they have to be examined successively. Consequently, we must first show that there is something in reality which we designate with the name “God”. And second, the mode of access of man to this God has to be detailed precisely.” X. ZUBIRI, *El hombre y Dios*, p. 116. See X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 62 and 293.

¹⁶⁷⁷ X. ZUBIRI, *El hombre y Dios*, p. 375.

¹⁶⁷⁸ We disagree with Cambria-Ortega who seems to argue that there is no object-reality but only fundament-reality. J.-L. CABRIA-ORTEGA, *Relación teología-filosofía en el pensamiento de Xavier Zubiri*, p. 446.

¹⁶⁷⁹ X. ZUBIRI, *Inteligencia y Razón*, p. 205.

¹⁶⁸⁰ Zubiri’s position should not be understood as a **foundationalist position**. Foundationalism is understood as the view that considers that for a belief to be rational it must either be a certain basic belief or be appropriately grounded in a properly self-evident belief. Zubiri does not seek to ground Christian belief in a philosophical basis. For Zubiri what grounds our intellectual acts in what he calls the “primordial apprehension.” Following a phenomenological analysis Zubiri arrives to the power of the real and our religation to it. A theistic sketch explains that this ultimate ground of reality, the fundament-reality is God, which is does not have the self-evidence of the “primordial apprehension”. Moreover, for Zubiri Christian revelation is not grounded in such act but in a gift from God and the free acceptance of the believer. At least Zubiri cannot be characterized as a Cartesian foundationalist who seek an absolute certainty that God exists and to ground with absolute certainty our religious beliefs. As we will see below, for Zubiri religious beliefs are reasonable but not rational in the sense of a full certainty and a complete verification.

¹⁶⁸¹ In the language of *Inteligencia Sentiente* the reality-fundament is called in-depth reality or ground-reality.

theistic sketch requires a nominal definition of what we are seeking. The nominal definition of God is: “*the possibilitating and impelling ultimate fundament of the reality*”¹⁶⁸².

Nevertheless, Zubiri does not deny other possible sketches beside the theistic¹⁶⁸³. According to Zubiri, atheism is also a sketch to explain the power of the real and our religation to it. However, atheism is not the evident primary position. What is primary is our experience of religation to the power of the real¹⁶⁸⁴. An atheist is concerned about the foundation of the power of the real but he remains at the level of the pure facticity of real things that surround him. The atheist affirms a sketch without a divinity¹⁶⁸⁵. As the theistic, the atheist must give reasons for his position. Agnosticism is another possible sketch. The agnostic sketches that reason is not capable to encounter or deny a divinity. Finally, there is the indifferent attitude. The indifferent is unconcerned with the elaboration of a sketch of the fundament of our religation. Agnostics and indifferents must also give reasons for their positions.

In our present work, we will not develop all aspects of Zubiri’s theistic sketch. That would be part of a reading of Zubiri’s works from the point of view of phenomenology of religion¹⁶⁸⁶. However, we present here an outline of Zubiri’s sketch. God as the fundament-reality of our experience of religation to the power of reality is characterized by the following¹⁶⁸⁷:

- God is the foundation of the reality of all things. He is present in all real things and constitutes them as real. Without God things would not be real¹⁶⁸⁸.
- Things and the power of the real are not God but the “seat” (*sede* in Spanish) of the presence and power of God¹⁶⁸⁹. This is Zubiri’s version of **panentheism**, although he does not use the term.
- God as a reality-fundament does not erase the distinction between God and real things or real persons. God makes me as non-God¹⁶⁹⁰. Zubiri’s position is clearly not pantheist.

¹⁶⁸² “In order to pose it adequately we need a nominal definition of that which is sought for; otherwise we would not be able to search for it. What is understood by God, regardless of whether one accepts His reality or not? At the beginning of this investigation we shall call “God” the possibilitating and impelling ultimate fundament of the articulation —let us call it that— of the real things in “the” reality.” X. ZUBIRI, *El hombre y Dios*, p. 111.

¹⁶⁸³ To deepen this topic see J.-J GARCÍA, *Legitimidad de las opciones no teístas en la filosofía de Xavier Zubiri*, p. 47-54.

¹⁶⁸⁴ X. ZUBIRI, *El hombre y Dios*, p. 342.

¹⁶⁸⁵ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 300.

¹⁶⁸⁶ It is fully developed in X. ZUBIRI, *El hombre y Dios*, p. 130-178.

¹⁶⁸⁷ A good summary is the following: “Let us summarize: God qua God is the absolutely absolute reality as ultimateness, possibilitation and impellence, formally present in real things and constituting their reality. That reality is *eo ipso* deity and manifestation of God, not in a general and abstract way, but in all the concretion history reveals to us. Such is the reality of God, justified by the way of religation.” X. ZUBIRI, *El hombre y Dios*, p. 157.

¹⁶⁸⁸ X. ZUBIRI, *El hombre y Dios*, p. 148-149 and 153.

¹⁶⁸⁹ X. ZUBIRI, *El hombre y Dios*, p. 155-156.

¹⁶⁹⁰ X. ZUBIRI, *El hombre y Dios*, p. 161 and 185.

- God is not one possibility among others. He is the absolute source and donor of all possibilities¹⁶⁹¹.
- God absolutely impels my personal reality. He is the firm support that makes me make myself¹⁶⁹². However, his impellence does not destroy my freedom but grounds it.
- God is present in everything as a self-giving fundament of all reality different from him. Everything emerges from this divine self-giving¹⁶⁹³. Although Zubiri does not express it, this is a form of **emergentism**.
- God is absolutely absolute in Himself. He is independent and not relative to real things¹⁶⁹⁴. This is a position different from process philosophy and from Hegel's conception of God.
- God is person in an analogical sense. For Zubiri this analogical sense of person means that God is a reality that fully possesses Himself¹⁶⁹⁵. This is correlated to the idea that God is absolutely absolute.

Following the rational method, this sketch must be tested in an experience¹⁶⁹⁶. It is a test of a theistic sketch of God as the reality-fundament that is ultimate, possibilitating and impellent. This test is not a direct intuition of God or a feeling of his presence¹⁶⁹⁷. It is to insert the theistic sketch in my person, in the construction of my personal life (experience as conformation)¹⁶⁹⁸. This is possible because we can access God. For Zubiri, God is accessible since He is present as the fundament-reality of all real things. If God would be absolutely beyond all what is real in the world, He would not be accessible¹⁶⁹⁹. For Zubiri God is accessible in the following:

- In the power of the real, which is vehicle and seat of God¹⁷⁰⁰.
- In real things since God is personally present as a fundament of all things¹⁷⁰¹. "What God self-gives is reality. Consequently, God is self-giving"¹⁷⁰².

¹⁶⁹¹ X. ZUBIRI, *El hombre y Dios*, p. 153.

¹⁶⁹² X. ZUBIRI, *El hombre y Dios*, p. 161 and 164.

¹⁶⁹³ X. ZUBIRI, *El hombre y Dios*, p. 313.

¹⁶⁹⁴ X. ZUBIRI, *El hombre y Dios*, p. 165-166, 168-169 and 327.

¹⁶⁹⁵ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 69.

¹⁶⁹⁶ We fully agree with Ortega-Cantabria that the term "experience" (*experiencia*) is a polysemic term in Zubiri. Sometimes it means the physical test of the sketch, other times means trials in the sense of trials and errors. It could mean the primordial apprehension. Finally, it could mean the unity of the act of comprehension. J.-L. CABRIA-ORTEGA, *Relación teología-filosofía en el pensamiento de Xavier Zubiri*, p. 463.

¹⁶⁹⁷ J.-L. CABRIA-ORTEGA, *Relación teología-filosofía en el pensamiento de Xavier Zubiri*, p. 459.

¹⁶⁹⁸ "Man addresses himself to reality in order to find a support in it, [...]. The insertion of these possibilities into the realization of my person is the physical testing of reality. Man, through making his own person religiously, is doing the physical testing of what the power of the real is." X. ZUBIRI, *El hombre y Dios*, p. 95.

¹⁶⁹⁹ This is a position totally different from Barth's. The Barth of the period of the *Letter to the Romans* has argued that God is the Hidden God. Even the Barth of the *Church Dogmatics* would not agree that we could access God by another way different from God's Word.

¹⁷⁰⁰ X. ZUBIRI, *El hombre y Dios*, p. 155.

¹⁷⁰¹ X. ZUBIRI, *El hombre y Dios*, p. 185-186.

¹⁷⁰² X. ZUBIRI, *El hombre y Dios*, p. 192.

- In the human person where God is inter-personally present by making the human being a person, a relative absolute¹⁷⁰³.

God's manifestation in the power of the real, in real things and in the human person is not the manifestation of an object among other objects. It is not a phenomenon that can be perceived or apprehended as a scientific object or fact. God manifests Himself as the reality-fundament¹⁷⁰⁴. This divine manifestation is particularly different from others. For Zubiri there are different types of manifestations that are connected to our senses¹⁷⁰⁵. There is the immediate presence of what is in front of my eyes. We have the tendency to reduce all type of manifestation to this immediate presence. Obviously, this does not correspond to God's manifestation and unveiling. Nonetheless, there is also the sense of hearing, where the sound is immediately present but the sonorous thing is not¹⁷⁰⁶. The sound remits us to the sonorous thing, which is not present in the sound but is "noticed"¹⁷⁰⁷. For Zubiri, God manifests Himself in real things in an analogous manner. Real things and the whole cosmos announce God. Although God is not immediately visually perceived in them, He could be "noticed"¹⁷⁰⁸. In addition, there is another mode of manifestation analyzed by Zubiri. It is the mode of touch or probing¹⁷⁰⁹ through which something is immediately present without visual perception. That is analogous to the case of God's presence in human persons. God manifests Himself immediately in the human person but without seeing Him. God's presence is neither re-presented nor noticed but it could be groped¹⁷¹⁰. Finally, God manifests Himself through the voice of conscience. What is fundamental for Zubiri is not the content of

¹⁷⁰³ X. ZUBIRI, *El hombre y Dios*, p. 188 and 315-317.

¹⁷⁰⁴ "The object qua object is mere objectum, something which is "in front" of me as that which it is, in and by itself, and therein exhausts its mode of presence. On the other hand, a fundament is a reality which certainly manifests itself to me, not "in front" of me, but "in" my intelligence, not only insofar as what it is in and by itself, but as far as it is fundamenting my entire life. We shall anchor this difference terminologically with the expressions reality-object and reality-fundament. To be fundament is not a relation extrinsically added to the reality-object. That is to say, it is not the case that something is present as an object in and by itself, and that "later", in addition, it may be something with which I act in my life. No. In the reality-fundament its very way of presence in me is a fundamenting presence; so that fundamentality is an intrinsic moment to the way by which that particular reality is present to me." X. ZUBIRI, *El hombre y Dios*, p. 158-159.

¹⁷⁰⁵ For Zubiri there is a diversity of senses. In *Inteligencia y Realidad* he describes eleven senses: vision, hearing, smell, taste, equilibrium, contact-pressure, heat and cold, pain, kinesthesia (including muscular, tendon, and articular sense), and visceral sensibility. These eleven senses are different not only with respect to the content but also with respect to their formality. These senses are the different forms of apprehending reality. Let's discuss here briefly the senses of sight, hearing and touch. For Zubiri the sense of sight apprehends a real thing as something "in front of me". The sense of hearing apprehends something as a "notifying presentation". The sense of touch apprehends a reality as a "naked presentation". See X. ZUBIRI, *Inteligencia y Realidad*, p. 100.

¹⁷⁰⁶ X. ZUBIRI, *El hombre y Dios*, p. 188. X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 286.

¹⁷⁰⁷ Zubiri used the term *noticia*, to be noticed.

¹⁷⁰⁸ "Now, things are real "in" God, in God as person, and God is in them constituting them formally. But God is "in" them as something transcendent. By virtue of this, He unveils or manifests Himself (in the things in which He is) in a "remitting" way; real things are, qua real, "announcement" of the personal reality of God. God is in things, but without being them themselves: this is what I understand by transcendence of God." X. ZUBIRI, *El hombre y Dios*, p. 189. See also X. ZUBIRI, *El hombre y Dios*, p. 225-226.

¹⁷⁰⁹ The Spanish term used by Zubiri is "*tanteo*". It means probing and also "trials and error". X. ZUBIRI, *El hombre y Dios*, p. 189.

¹⁷¹⁰ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 286.

conscience, but the fact that it tells us something¹⁷¹¹. It is the resonance of the fundament of reality impelling my human spirit¹⁷¹². It is an analogous auditive type of intellection that hurls the human person to seek the fundament of reality that is not immediately present in the content of the “voice”¹⁷¹³.

This analysis and reflection enables Zubiri to affirm that religion is a manifesting experience of God. Nevertheless, this experience is not a direct intuition or feeling of God¹⁷¹⁴. We can access God as a cosmic announcement, notice Him in the voice of our conscience and grope his presence in all human beings¹⁷¹⁵. From this point of view, God manifests Himself to all human persons in all history¹⁷¹⁶. There are three modes of theological experience: individual, social and historical.

The individual mode of theological experience is related to a personal acknowledgement of God’s manifestation. From a simple acknowledgement the human person can go to faith understood as surrender to God¹⁷¹⁷. This faith is not yet a Christian faith. It is an acknowledgment and submission to God as our reality-fundament¹⁷¹⁸. Hence faith is not irrational. It requires the experience of God in the form of cosmic announcement, voice of our consciousness or presence in all other human beings. For Zubiri, faith is not reduced to an intellectual activity. It is also an act of the will since it is a personal adhesion and free option¹⁷¹⁹.

In addition to our individual experience of God there is a social and a historical mode inasmuch as the human person is not an isolated reality¹⁷²⁰. God communicates Himself not only to individuals but also to groups of human persons that constitute themselves societies in history¹⁷²¹. Consequently, there is a social experience of God even in the middle of a society that does not acknowledge Him. God also communicates Himself as a historical experience¹⁷²². For Zubiri, the history of religions is the experience of God that different peoples had through history¹⁷²³. Consequently, the history of religion is an essential place to test our sketch of God as

¹⁷¹¹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 64.

¹⁷¹² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 65, 66, 68 and 303.

¹⁷¹³ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 68.

¹⁷¹⁴ J.-L. CABRIA-ORTEGA, *Relación teología-filosofía en el pensamiento de Xavier Zubiri*, p. 459.

¹⁷¹⁵ X. ZUBIRI, *El hombre y Dios*, p. 190.

¹⁷¹⁶ What is particular of Christian revelation will be discussed below.

¹⁷¹⁷ This is equivalent to Rahner’s position. K. RAHNER, *Foundation of Christian Faith*, p. 6 and 10.

¹⁷¹⁸ X. ZUBIRI, *El hombre y Dios*, p. 214.

¹⁷¹⁹ This freedom is understood not in the sense of being arbitrary, but in the sense of not being forced. See X. ZUBIRI, *El hombre y Dios*, p. 217 and 221.

¹⁷²⁰ X. ZUBIRI, *El hombre y Dios*, p. 62.

¹⁷²¹ X. ZUBIRI, *El hombre y Dios*, p. 321.

¹⁷²² “Contrary to what Kant and Hegel said, history is not the unfolding of reason, of a logos, but it is really the unfolding of an experience of God.” X. ZUBIRI, *El hombre y Dios*, p. 341.

¹⁷²³ X. ZUBIRI, *El hombre y Dios*, p. 302.

reality-fundament¹⁷²⁴. The unity of these three modes of experience (i.e., individual, social and historical) grounds and strengthens the test of the theistic sketch. We can test the theistic sketch because God manifests Himself to every human being, to every society and in every moment in history¹⁷²⁵.

Finally, Zubiri insists that all sketches of God must be tested, i.e., theistic, atheistic, indifferent and agnostic sketches need to be verified.

IV.2.3 Zubiri's fundamental theology vis-à-vis Barth's criticism of natural theology

We already discussed Karl Barth's criticism of all natural theology as a pure human effort to reach God. Does Zubiri's reflections about the experience of religion and God's manifestation escape Barth's criticism? Until now, we should admit that Zubiri's fundamental theology is a simple phenomenological analysis and philosophy of religion whose point of departure is the order of manifestation. Could we go beyond Zubiri's phenomenological analysis and develop a Christian fundamental theology? This Christian fundamental theology could integrate the human structures, as uncovered by Zubiri's philosophical analysis, that makes possible revelation. Actually, we argue that Zubiri's reflection about God's manifestation to all human beings in history is also grounded in the Scriptures. This does not deny Zubiri's phenomenological effort and point of departure from human reality, but confirms it from the standpoint of revelation. To develop our argument we will consider some texts of Saint Paul's *Letter to the Romans* and the *Act of the Apostles'* presentation of Paul. In order to see how some of Zubiri's terms and concept come from Paul and Luke or at least from the Vulgate's translation, we will put them in three columns: Greek, Latin (Vulgate) and English (New Revised Standard Version or NRSV).

Let's start by Rom 1, 19-20. According to Brendan Byrne, the context of this text is Paul's presentation of the human failure to acknowledge God¹⁷²⁶. For Byrne this text affirms that the human being can attain some knowledge of God, the Creator, through the contemplation of the

¹⁷²⁴ This is one of the objectives of the second volume: *Problemas Filosóficos de la Historia de las Religiones*. We will not explore that avenue because it is out of the scope of this work. However, we will like to make a remark. Zubiri's approach to the history of religions as an unfolding of the fundamental experience of God is close to Rahner's categorical thematization of God's Mystery. Nevertheless, there is a difference. For Rahner the fundamental experience is a transcendental experience, meanwhile for Zubiri it is the concrete fundamental experience of religion.

¹⁷²⁵ "Man addresses himself to reality in order to find a support in it, [...]. The insertion of these possibilities into the realization of my person is the physical testing of reality. Man, through making his own person religiously, is doing the physical testing of what the power of the real is." X. ZUBIRI, *El hombre y Dios*, p. 95.

¹⁷²⁶ B. BYRNE, *Romans*, p. 64.

created world¹⁷²⁷. This is a natural revelation or manifestation of God as the word *ephanerosen* (*manifestavit* in Latin) implies.

Table 5.2 Text of Romans 1, 19-20

	Greek	Latin (Vulgate)	English (NRSV)
Announce Rom: 1, 19-20	“διότι τὸ <u>γνωστὸν</u> τοῦ θεοῦ <u>φανερὸν</u> ἐστὶν ἐν αὐτοῖς· ὁ θεὸς γὰρ αὐτοῖς <u>ἐφανερώσεν</u> . τὰ γὰρ ἀόρατα αὐτοῦ ἀπὸ κτίσεως κόσμου τοῖς ποιήμασιν νοούμενα καθορᾶται, ἢ τε αἰδίοις αὐτοῦ δύναμις καὶ θειότης. εἰς τὸ εἶναι αὐτοὺς ἀναπολογήτους.”	“quia quod <u>notum</u> est Dei <u>manifestum</u> est in illis Deus enim illis <u>manifestavit</u> invisibilia enim ipsius a creatura mundi per ea quae facta sunt intellecta conspiciuntur sempiterna quoque eius virtus et divinitas ut sint inexcusabiles”	“For what <u>can be known</u> about God is <u>plain</u> to them, because God has <u>shown</u> it to them. Ever since the creation of the world his eternal power and divine nature, invisible though they are, have been understood and seen through the things he has made. So they are without excuse”

For Simon Légasse, the word *gnôston* (*notum* in Latin) implies a modest and possible knowledge (can be known in the NRSV), although real, when applied to God¹⁷²⁸. God has manifested (*phaneron*) what is unknown. The fact that Paul does not use the term revelation (*apokalyptein*) means that this divine manifestation through created realities is not a supernatural revelation¹⁷²⁹. God, who remains invisible in Himself, makes possible that his invisible attributes be apprehended intellectually (*gnôston*, *gnontes* and *nooumena*) from his creation. However, it is an indirect and limited apprehension (*aorata* and *kathoratai*) because God remains invisible in Himself. Consequently, for Paul the Gentiles do not have the excuse to stop at the meager phenomena of the created world without going beyond to apprehend indirectly their author¹⁷³⁰.

Table 5.3 Text of Romans 1, 28

	Greek	Latin (Vulgate)	English (NRSV)
Test and acknowledge (notice) Rom 1, 28	“Καὶ καθὼς οὐκ <u>ἐδοκίμασαν</u> τὸν θεὸν ἔχειν ἐν <u>ἐπιγνώσει</u> . παρέδωκεν αὐτοὺς ὁ θεὸς εἰς ἀδόκιμον νοῦν, ποιεῖν τὰ μὴ καθήκοντα.”	“et sicut non <u>probaverunt</u> Deum habere in <u>notitia</u> tradidit eos Deus in reprobum sensum ut faciant quae non conveniunt”	“And since they <u>did not see fit</u> to <u>acknowledge</u> God, God gave them up to a debased mind and to things that should not be done.”

According to Byrne the word *edokimasan* (*probaverunt* in Latin) in the text of Rm 1, 28 conveys the sense of testing¹⁷³¹. The verse of Rom 1, 28 implies that the Gentiles “*tried God out and finding the experience unsatisfactory decided to break off relations*”¹⁷³². In other words, the Gentiles refused to acknowledge God after they experience Him. Knowledge (*epignosis* in Greek,

¹⁷²⁷ Here Paul is influenced by the book of Wisdom, in specific Wis 13:1-5. Also Paul operates in the framework of Hellenistic Judaism. Josephus and Philo also developed this subject. B. BYRNE, *Romans*, p. 65.

¹⁷²⁸ S. LÉGASSE, *L'épître de Paul aux Romains*, p. 115-116.

¹⁷²⁹ S. LÉGASSE, *L'épître de Paul aux Romains*, p. 116.

¹⁷³⁰ S. LÉGASSE, *L'épître de Paul aux Romains*, p. 117.

¹⁷³¹ B. BYRNE, *Romans*, p. 71.

¹⁷³² B. BYRNE, *Romans*, p. 71.

notitia in Latin) is here more than simple awareness of God's existence. It is used in the sense of personal knowledge¹⁷³³.

Table 5.4 Text of Acts 17, 27-28

	Greek	Latin (Vulgate)	English (NRSV)
Groping Act 17, 27-28.	“ζητεῖν τὸν θεόν, εἰ ἄρα γε <u>ψηλαφήσειαν</u> αὐτὸν καὶ εὗροιν. καὶ γε οὐ μακρὰν ἀπὸ ἐνὸς ἐκάστου ἡμῶν ὑπάρχοντα. ἐν αὐτῷ γὰρ ζῶμεν καὶ κινούμεθα καὶ ἑσμέν. ὡς καὶ τινες τῶν καθ' ὑμᾶς ποιητῶν εἰρήκασιν· τοῦ γὰρ καὶ γένος ἑσμέν.”	“quaerere Deum si forte adtractent eum aut <u>inveniant</u> quamvis non longe sit ab unoquoque nostrum in ipso enim vivimus et movemur et sumus sicut et quidam vestrum poetarum dixerunt ipsius enim et genus sumus”	“so that they would search for God and perhaps <u>grobe</u> for him and find him—though indeed he is not far from each one of us. For ‘In him we live and move and have our being’”.

According to Dupont the context of Act 17, 27-28 is Paul's affirmation of the resurrection of Christ. The faith in the resurrection of Christ presupposes the faith in God who has resurrected Christ¹⁷³⁴. Paul argues that we are capable of searching God, in a form of groping¹⁷³⁵, because He is radically near us and we are in Him¹⁷³⁶. However, this presence of God cannot be understood as a form of pantheism. Fitzmyer adds that this text argues that the human being is created to search and grope God¹⁷³⁷. This quest for God is not just a search born out of Christian faith. According to Fitzmyer, it is more an instinctive searching of the human mind and heart for God in the traces He has left in creation¹⁷³⁸. Finally for Fitzmyer, the expression that God is near us and that we live, move and have our being in Him means that our reality is radically grounded in God.

The notion of conscience (*syneidesis*) in Rom 2, 14-15 is used, as was common since First Century B.C.E, in the moral sense. It is a moral guide to actions, in the sense of constant evaluation of one's thoughts and behaviors. Behind this conscience's authority stands the authority of God¹⁷³⁹. Légasse compares it with other texts where Paul uses the term as a witness

¹⁷³³ As in Rm 3, 20; 10, 2; Phil 1, 9; Col 1, 9-10; 3, 10.

¹⁷³⁴ J. DUPONT, *Nouvelles études sur les actes des apôtres*, p. 407.

¹⁷³⁵ Acts of the Apostles used the verb to “grobe” (*ψηλαφήσειαν*). This Greek verb means to touch, and can be translated in Spanish as “*tanteo*”, the verb used by Zubiri. Let's consider other New Testament's texts from the Vulgate where the same verb appears. (i) Lc 24:39: “*videte manus meas et pedes quia ipse ego sum palpat et videte quia spiritus carnem et ossa non habet sicut me videtis habere*”. (ii) 1 Jn 1:1-2 “*Quod fuit ab initio quod audivimus quod vidimus oculis nostris quod perspeximus et manus nostrae temptaverunt de verbo vitae et vita manifestata est et vidimus et testamur et adnuntiamus vobis vitam aeternam quae erat apud Patrem et apparuit nobis*”. The NRST translates this last text as follows: “We declare to you what was from the beginning, what we have heard, what we have seen with our eyes, what we have looked at and touched with our hands, concerning the word of life — this life was revealed, and we have seen it and testify to it, and declare to you the eternal life that was with the Father and was revealed to us”.

¹⁷³⁶ J. DUPONT, *Nouvelles études sur les actes des apôtres*, p. 421.

¹⁷³⁷ J. FITZMYER, *Acts of the Apostle*, p. 609.

¹⁷³⁸ J. FITZMYER, *Acts of the Apostle*, p. 610.

¹⁷³⁹ B. BYRNE, *Romans*, p. 94. See also Rom 13, 5.

that Paul's ministry is guided by the action of God and not by human wisdom, e.g., 2 Cor 1, 12-18¹⁷⁴⁰.

Table 5.5 Rom 2, 14-15

	Greek	Latin (Vulgate)	English (NRSV)
Conscience Rom 2, 14-15.	“ὅταν γὰρ ἔθνη τὰ μὴ νόμον ἔχοντα φύσει τὰ τοῦ νόμου ποιῶσιν, οὗτοι νόμον μὴ ἔχοντες ἑαυτοῖς εἰσὶν νόμος· οἵτινες ἐνδείκνυνται τὸ ἔργον τοῦ νόμου γραπτὸν ἐν ταῖς καρδίαις αὐτῶν, συμμαρτυροῦσης αὐτῶν τῆς <u>συνειδήσεως</u> καὶ μεταξὺ ἀλλήλων τῶν λογισμῶν κατηγορούντων ἢ καὶ ἀπολογουμένων.”	“cum enim gentes quae legem non habent naturaliter quae legis sunt faciunt eiusmodi legem non habentes ipsi sibi sunt lex qui ostendunt opus legis scriptum in cordibus suis testimonium reddente illis <u>conscientia</u> ipsorum et inter se invicem cogitationum accusantium aut etiam defendentium”	“When Gentiles, who do not possess the law, do instinctively what the law requires, these, though not having the law, are a law to themselves. They show that what the law requires is written on their hearts, to which their own <u>conscience</u> also bears witness; and their conflicting thoughts will accuse or perhaps excuse them”

We consider it is not an accident that terms in these biblical texts such as “manifestation”, “*notitia*”, “grope”, “test”, “conscience” and “knowledge” coincide with Zubiri’s terminology. It is highly probable that Zubiri was inspired by these biblical texts to develop his philosophy of God’s manifestation in the world. His phenomenological analysis of the act of human intellection and apprehension enables us to better understand the meaning of these texts. If the biblical texts are taken as the point of departure¹⁷⁴¹, then Zubiri’s reflection could not be considered as pure speculative statement in the sense of a natural revelation independent of God’s revelation in Christ. It is a reflection that enables us to better understand Paul’s, Luke’s and John’s texts. Consequently, Zubiri’s thought about God’s manifestation could be reinterpreted and understood as faith seeking understanding. Even Zubiri’s philosophical sketch of God as the ultimate fundament that possibilitates and impels us could be rooted in Paul’s speech that our being is in God, which is not pantheistic but could be understood as panentheistic. Accordingly, Zubiri’s

¹⁷⁴⁰ S. LÉGASSE, *L’épître de Paul aux Romains*, p. 177.

¹⁷⁴¹ There is also a text in the First Vatican Council about the possibility that God can be known in his creatures. The text of Rom 1, 19-20 was used in the dogmatic constitution *On the Catholic Faith* in support of the teaching that God can be known by the natural light of human reason apart from revelation. “*Eadem sancta mater Ecclesia tenet et docet, Deum, rerum omnium principium et finem, naturali humanae rationis lumine e rebus creatis certo cognosci posse; 'invisibilia enim ipsius, a creatura mundi, per ea quae facta sunt, intellecta, conspiciuntur'* (Rom 1, 20): *attamen placuisse eius sapientiae et bonitati, alia eaque supernaturali via se ipsum ac aeterna voluntatis suae decreta humano generi revelare, dicente Apostolo: 'Multifariam multisque modis olim Deus loquens patribus in Prophetis novissime diebus istis locutus est nobis in Filio'* (Hebr 1, 1 s; can. 1).” “*The same Holy mother Church holds and teaches that God, the source and end of all things, can be known with certainty from the consideration of created things, by the natural power of human reason: ever since the creation of the world, his invisible nature has been clearly perceived in the things that have been made (rom 1, 20) 2. It was, however, pleasing to his wisdom and goodness to reveal himself and the eternal laws of his will to the human race by another, and that a supernatural, way. This is how the Apostle puts it: In many and various ways God spoke of old to our fathers by the prophets; but in these last days he has spoken to us by a Son (Heb 1, 1s)*”. H. DENZINGER, P. HÜNERMANN, *Symboles et définitions de la foi catholique*, no. 3004.

reflections do not fall under Barth's criticism on any attempt to develop a natural theology independent of Christian revelation¹⁷⁴².

IV.3 The rationality of Christian theology in Zubiri¹⁷⁴³

Although Zubiri elaborated his notion of Christian theology before he wrote his trilogy of *Inteligencia Sentiente*, we will reinterpret it through the intellectual moments described in his last work: the primordial apprehension, the *logos* and reason. For Zubiri, Christian theology is the effort of sentient reason to search the in-depth foundation of Christian revelation. It is the theoretical explanation, comprehension and systematization of Christian faith as it is expressed in a tradition, which operates as a field of beliefs. These beliefs form a unity, the *depositum fidei*. In that unity each belief should be understood with respect to other beliefs. This is the character of respectivity. In this effort the act of intelligence participates with all its moments. This is clear in Zubiri's words where he affirms the existence of three moments in the intellection of Christian theology: (i) the primordial apprehension of a revelation (Christ the revealing *logos*) that grounds the intellection of faith, (ii) an ostensive *logos*¹⁷⁴⁴ where everything is apprehended with respect to the body (or field) of beliefs and (iii) a scientific theology (reason):

*"The scientific logos, I was saying, rests on an ostensive logos, and is an unfolding of it; now we see that the ostensive logos in turn is resting on the revealing logos, and is an analogical determination of its sense."*¹⁷⁴⁵

This will be explained in the following sections.

IV.3.1 The fundament and condition of the possibility of Christian revelation

Like Ladrière, Zubiri considers that there is a human theological dimension that operates as a condition that renders possible divine revelation and Christian religious experience¹⁷⁴⁶. This

¹⁷⁴² As Balthasar explains it, Barth admits that the human being can get to know God in the world. What Barth denies is that the human being by his own effort can achieve knowledge of God without relying on the Word of God while he is disobediently stuck in the world of finitude and relativity. In the words of Barth quoted by Balthasar: "Whether we are talking more about his perception or his ratiocination, perceiving man is essentially a being who can and does sense God. It is of course true that the other that he perceives is not identical with God, but behind that otherness he also perceives God as the Other. [...] God encounters us there, as a rule not immediately but mediately, through his works, deeds and effects. Behind and through all our acts of sensation, our perception has only one object: the Other who shines through the otherness of things" (p. 153). See H.-U VON BALTHASAR, *The theology of Karl Barth*, p. 152-155.

¹⁷⁴³ In Zubiri the term "theology" has three meanings. Zubiri's concept of fundamental theology is a theory of God as reached by the way of religion. There is also theology in a generic sense: a theology of a particular religion. Finally, there is theology as a theory about the God revealed in Christ. This is properly speaking Christian theology. This Christian theology is developed in *El Problema Teológico el Hombre: Cristianismo*. Moreover, this corresponds to the second level of Rahner's transcendental method.

¹⁷⁴⁴ **Ostensive** comes from the Latin "*ostendere*" that means "to show". The ostensive *logos* is the *logos* that clearly and directly manifests the revealing *logos*.

¹⁷⁴⁵ The underlined emphasis is ours. X. ZUBIRI, *Cristianismo*, p. 33.

dimension is nothing else than the experience of religation, which was already discussed in the previous section about Zubiri's fundamental theology¹⁷⁴⁷. However, Zubiri adds something new, the notion of living-together. For Zubiri the human being elaborates his personal life not alone but through an interpersonal experience that he calls "living-together" (*con-vivencia*¹⁷⁴⁸). Through this experience a human being does not apprehend another person as an object or as mere information¹⁷⁴⁹. Through this act of living together we share something of the other's life that has an impact on our own person. Christ's revelation is rooted in this living-together understood as sharing Christ's life. This experience of living-together is the condition that renders possible Christ's revelation¹⁷⁵⁰.

IV.3.2 The primordial apprehension: Christ as the *Logos* that reveals

The New Testament, in specific the Gospel of John, affirms that Christ is the *Logos* of God¹⁷⁵¹. Christ in Himself is the revealing *logos*. This *logos* is not about theoretical knowledge or a linguistic description. It is an intimate knowledge, not a vague sentimentalism, of the person of Christ¹⁷⁵². Then, the primordial apprehension, the fundamental immediate experience of revelation, is a living apprehension of Christ¹⁷⁵³. Through this living apprehension the human person experiences Christ as the ultimate, possibilitating, and impelling¹⁷⁵⁴ mediator of God the Father¹⁷⁵⁵.

The content of this apprehension is not a series of propositions but a series of actions through which Christ transmits God's life to his immediate disciples¹⁷⁵⁶. This living and primordial apprehension is a vital assimilation of Christ as a principle of life¹⁷⁵⁷. Zubiri calls this immediate intimate knowledge a living-together (*con-vivencia*)¹⁷⁵⁸. It is the intimate knowledge

¹⁷⁴⁶ X. ZUBIRI, *Cristianismo*, p. 35.

¹⁷⁴⁷ Here, Zubiri integrates the anthropological foundations of theology as Tillich, Rahner and Lonergan.

¹⁷⁴⁸ Zubiri clarifies what he means with the concept of "*convivencia*" in some texts from *Sobre el hombre*. *Convivencia* is the fact that the human being is structurally and constitutively urged and even compelled to go out of himself to reach others. Formally speaking, each human person is referred to others. Moreover, there is one type of *convivencia* where two persons can go beyond an aggregate of mere "I" to a "we". That is the meaning of communion. X. Zubiri, *Sobre el hombre*, p. 245-246 and 273-274.

¹⁷⁴⁹ X. ZUBIRI, *Cristianismo*, p. 36.

¹⁷⁵⁰ X. ZUBIRI, *Cristianismo*, p. 37.

¹⁷⁵¹ See Jn 1; 4:39; 10:35; 17:17.

¹⁷⁵² X. ZUBIRI, *Cristianismo*, p. 21.

¹⁷⁵³ "Living apprehension" is a fundamental immediate experience of a reality that is a living reality and not an object. Zubiri uses it in the sense of "living together" (*con-vivencia*) with another person. X. ZUBIRI, *Cristianismo*, p. 33.

¹⁷⁵⁴ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 254.

¹⁷⁵⁵ As Lonergan, Zubiri's notion of religious experience is concrete.

¹⁷⁵⁶ The foundation is not a religious language as in Lindbeck, but Christ's life shared to others. See X. ZUBIRI, *Cristianismo*, p. 34.

¹⁷⁵⁷ X. ZUBIRI, *Cristianismo*, p. 458 and 461.

¹⁷⁵⁸ "Revelation, in the sense we have explained, is the living together (*con-vivencia*) of Christ with men, and therefore, the structure of man belongs essentially, and formally to revelation, to the *logos* that reveals." X. ZUBIRI, *Cristianismo*, p. 34.

of a friendship and not a theoretical or speculative knowledge¹⁷⁵⁹. It is to live with Him, to live like Him, to be like Him¹⁷⁶⁰. This living-together with Christ produces a *morphosis*, a conformation with the truth that Christ is¹⁷⁶¹. This is the transformation to become other christs¹⁷⁶²; the *forma Christi* to which Saint Paul refers in Gal 4, 19.

This living-together was the experience of the apostles and original witnesses. However, after Jesus' resurrection the coming of the Holy Spirit enables others to apprehend the reality of Christ. The Holy Spirit is the sanctifier that engenders in us the divine filiation¹⁷⁶³. Therefore, the mission of the Holy Spirit continues Christ presence in the community of believers¹⁷⁶⁴.

Then, revelation is God's act of self-communication in Christ, who is the supreme manifestation of God in history. This revealed truth is ante-predicative¹⁷⁶⁵ in the sense that it is not identified with propositions or affirmations that express Christian beliefs¹⁷⁶⁶. Finally, revelation is also an act of the Holy Spirit who illuminates us and enables us to apprehend Christ in an intimate experience¹⁷⁶⁷.

IV.3.3. The sentient *logos*: the kerygma and the ostensive *logos*

Revelation is a gift to share and transmit to others¹⁷⁶⁸. When revelation is transmitted to others it becomes *tradere*¹⁷⁶⁹, "tradition". The transmission of revelation is more radical than the simple transmission of formulated truths. It is a transmission to all men and women of a life grounded in Christ¹⁷⁷⁰. Tradition actualizes the initial revelation of Christ to his disciples to other

¹⁷⁵⁹ X. ZUBIRI, *Cristianismo*, p. 455.

¹⁷⁶⁰ "It is nothing but living as He lives, or how He makes me live; to be like the way Christ is in His own I." X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 255. This resembles Saint Paul's expression "I have been crucified with Christ; and it is no longer I who live, but it is Christ who lives in me. And the life I now live in the flesh I live by faith in the Son of God, who loved me and gave himself for me." Gal 2, 19-20.

¹⁷⁶¹ Zubiri uses the text of Rm 2, 20. Unfortunately this is a text of a dispute Paul has with the member of the community. We believe the texts of Galatians 4, 19 and 2 Tim 3, 5 are better texts related to the notion of *forma Christi*.

¹⁷⁶² "It is in this unity of the being of man insofar as man, and the deformation conferred to every one by Christ, where the unity of the theological dimension of man consists, and therefore, it is the precise point where the dialog with modern man must be attempted." X. ZUBIRI, *Cristianismo*, p. 37. See also X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 252.

¹⁷⁶³ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 261-262.

¹⁷⁶⁴ This pneumatic element of the Holy Spirit's mission in revelation and our apprehension is missing in many other theologians, specifically in Lindbeck's notion of religious language and experience. We already saw that Ladrière mentions but do not develop it.

¹⁷⁶⁵ Here ante-predicative means that it is an experience that grounds all linguistic formulations and is not grounded itself in a linguistic expression. Ante-predicative corresponds to Rahner's "unthematic" and "unreflexive" and to Lonergan's "inner word". X. ZUBIRI, *Cristianismo*, p. 492.

¹⁷⁶⁶ X. ZUBIRI, *Cristianismo*, p. 490.

¹⁷⁶⁷ X. ZUBIRI, *Cristianismo*, p. 494.

¹⁷⁶⁸ X. ZUBIRI, *Cristianismo*, p. 463.

¹⁷⁶⁹ The Latin term *tradere* comes from *trans-* 'across' + *dare* 'give.' It means to deliver.

¹⁷⁷⁰ The catechisms of Saint Cyril of Jerusalem remains a beautiful example of this. Let's consider the following texts where Cyril refers to our participation of Christ's life through the mysteries of baptism, chrismation (confirmation) and the eucharist. With respect to baptism Cyril affirms the following: "Ensuite, une fois dévêtus, vous avez été oints d'huile exorcisée, depuis les cheveux du haut de la tête jusqu'au bas du corps, et vous êtes participants de l'olivier franc, Jésus-Christ" (p. 107-109). With respect to the chrismation he argues that "Désormais donc participants du Christ, vous êtes à juste titre appelés 'christ', et de c'est de vous

people at all times by the action of the Holy Spirit. Although revelation is fundamentally a living-together with Christ, it requires the milieu of language to be communicated and transmitted¹⁷⁷¹. According to Zubiri there are three linguistic moments of this tradition: constituting tradition¹⁷⁷², continuing tradition¹⁷⁷³ and pro-gradient tradition¹⁷⁷⁴. Let's consider each one of them.

IV.3.3.1 The constituting tradition: the apostolic preaching (kerygma) in Jewish and Gentile settings and the constitution of the New Testament

Constituting tradition is originally grounded in God's self-communication in Christ to the apostles¹⁷⁷⁵. Initially a *logos* is born of the preaching of Christ¹⁷⁷⁶. The Holy Spirit continues the constitution of tradition through the proclamation of the apostles¹⁷⁷⁷. This is the passage from the revealing *logos* to linguistic words by an act of proclamation, the kerygma¹⁷⁷⁸. This proclamation occurred initially in a liturgical, catechetical or missionary milieu¹⁷⁷⁹. Many passages of the gospels were composed following this initial kerygmatic nucleus.

In a Gentile setting, Saint Paul preaches the gospel and the universality of Christianity¹⁷⁸⁰. His preaching was an articulation between what he experienced and the needs of concrete communities. In his preaching Paul used concepts or discourses that belonged to a horizon outside the Jewish context. Consider for example Acts' presentation of Paul who uses the expression "*for we too are his offspring*" (Act 17, 28). This expression comes from Aratus' *Phaenomena*¹⁷⁸¹. Another expression, "*In him we live and move and have our being*", is from the Cretan poet Epimenides. Saint Paul is presented here as a preacher who sought the enrichment

que Dieu disait : 'Ne touchez pas mes christ.' Or vous êtes devenus des christ, en recevant l'empreinte de l'Esprit Saint, et tout s'est accompli sur vous en image, parce que vous êtes les images du Christ" (p. 121). Finally, Cyril declares this: "C'est donc avec une assurance absolue que nous participons d'une certaine manière au corps et au sang du Christ. Car sous la figure du pain t'est donné le corps et sous la figure du vin t'est donné le sang afin que tu deviennes en ayant participé au corps et au sang du Christ, un seul corps et un seul sang avec le Christ. Ainsi devenons-nous de 'porte-Christ', son corps et son sang se répandant en nos membres" (p. 137). SAINT CYRILLE DE JÉRUSALEM, *Catéchèses Mystagogiques*. See X. ZUBIRI, *Cristianismo*, p. 507 and 510.

¹⁷⁷¹ X. ZUBIRI, *Cristianismo*, p. 493.

¹⁷⁷² X. ZUBIRI, *Cristianismo*, p. 463-464.

¹⁷⁷³ X. ZUBIRI, *Cristianismo*, p. 466.

¹⁷⁷⁴ X. ZUBIRI, *Cristianismo*, p. 467.

¹⁷⁷⁵ X. ZUBIRI, *Cristianismo*, p. 464.

¹⁷⁷⁶ X. ZUBIRI, *Cristianismo*, p. 22.

¹⁷⁷⁷ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 260-261.

¹⁷⁷⁸ This is in agreement with Ladrière for whom the kerygma is the initial language of faith.

¹⁷⁷⁹ Marguerat affirms that the tradition of Jesus is preserved in the life of the initial Christian communities through the cult, the teachings and the proclamation of the prophets. See D. MARGUERAT, *De Jésus aux évangiles*, p. 18-20. X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 262. X. ZUBIRI, *Cristianismo*, p. 527.

¹⁷⁸⁰ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 263.

¹⁷⁸¹ R.J. DILLON, *Acts of the Apostles*, p. 755.

“of the internal possibilities of the preaching of Christ to enlarge the range of the intellection of revelation.”¹⁷⁸²

The New Testament witnesses the original experience of Christ and the historical passage to a written text by the inspiration of the Holy Spirit¹⁷⁸³. The apostles’ preaching of Christ in diverse settings constituted the linguistic body that we call the New Testament. The New Testament is an ecclesiological act that formally constituted a tradition in a written form in order to witness Christ to others¹⁷⁸⁴. The constituting tradition continues Christ’s presence after his death and resurrection by the action of the Holy Spirit. However, things did not end with the final redaction of the New Testament¹⁷⁸⁵. There is another moment, the continuing tradition that depends on the constituting tradition.

IV.3.3.2 The continuing tradition: the *depositum fidei* as a body of truth

Christ’s presence did not cease after the final redaction of the New Testament. The Good News of Christ’s presence among us continues to be proposed to other people in other situations and contexts¹⁷⁸⁶. Again, what is transmitted is more radical than a mere communication of ideas. It is a re-actualization of the initial constituting tradition, the living apprehension of Christ’s principle of life¹⁷⁸⁷ through the action of the Holy Spirit¹⁷⁸⁸.

According to Zubiri, in this process of re-actualization of the constituting tradition, the *logos* of the New Testament was transformed into a body of beliefs. In this body each belief is apprehended with respect to others. In other words, the body of beliefs is conformed as a field¹⁷⁸⁹. For Zubiri, the analogy of faith (Rm 12, 6) refers precisely to this unity of the whole revelation into a body of beliefs. Ana-logy is the unity of what has been revealed¹⁷⁹⁰. Zubiri even points to the historical moment where Christianity realizes this unity: St. Irenaeus of Lyon and his notion of the “body of truth”¹⁷⁹¹. This body of truth is not simply a collection of objects or collection of

¹⁷⁸² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 265.

¹⁷⁸³ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 262. X. ZUBIRI, *Cristianismo*, p. 464 and 514.

¹⁷⁸⁴ X. ZUBIRI, *Cristianismo*, p. 528.

¹⁷⁸⁵ This is confirmed by the fact that the New Testament canon is established much after their final redaction.

¹⁷⁸⁶ X. ZUBIRI, *Cristianismo*, p. 531.

¹⁷⁸⁷ X. ZUBIRI, *Cristianismo*, p. 466.

¹⁷⁸⁸ X. ZUBIRI, *Cristianismo*, p. 467.

¹⁷⁸⁹ “Beliefs constitute a whole and each one has to be taken with its respectivity towards the rest: the *logos* has to be ‘analogical’”. For Zubiri a field of reality is an apprehension of a real thing “with respect to” other things. This “with respect to” is the character of respectivity found in the sentient *logos*. Underlined emphasis is ours. X. ZUBIRI, *Cristianismo*, p. 22. X. ZUBIRI, *Inteligencia y Realidad*, p. 269. X. ZUBIRI, *Inteligencia y Logos*, p. 260.

¹⁷⁹⁰ “That is the analogy of faith. Here analogy refers to faith insofar as a belief. In time, this “analogical” unity acquired an objective or real sense: the unity of the revealed as such.” X. ZUBIRI, *Cristianismo*, p. 22-23.

¹⁷⁹¹ In the *Adversus Hereses* Saint Irenaeus of Lyon mentions the “body of truth” to which every belief should refer. This is Rousseau translation of the text in French: “En remplaçant chacune des paroles dans son contexte et en l’ajustant au corps de la

propositions. More radically, it is a **de-positum**¹⁷⁹² and this deposit is a re-actualization of Christ's presence in the community of believers.

This deposit of faith has a series of characteristics: unity, integrality, conclusiveness and transmission. In terms of unity, the deposit of faith, as a body of truth, becomes an ostensive *logos*¹⁷⁹³. The vulnerability or illumination of one point has an impact on other points of the deposit¹⁷⁹⁴. In terms of integrality, the deposit includes the acts of Christ, the apostolic preaching, the constitution of the New Testament and God's revelation in the history of Israel as witnessed by the Hebrew Bible¹⁷⁹⁵. It is a conclusive deposit because there is no more revelation¹⁷⁹⁶. Finally, it is a deposit that is transmitted in a tradition¹⁷⁹⁷. This means that the transmission of the body of beliefs is not mechanical. This historical dimension is the third moment of tradition: pro-gradient tradition.

IV.3.3.3 The pro-gradient tradition: the deepening of the deposit of faith through dogmatic statements

Although there will not be any new revelation there will be a real progress in the sense of a deeper comprehension of the deposit of faith¹⁷⁹⁸. This progress, in terms of deepening Christian tradition, is due to the effort of sentient reason with the assistance of the Holy Spirit in the Church. The continuing presence of Christ through the action of the Holy Spirit in the Church allows this process of deepening¹⁷⁹⁹.

The pro-gradient tradition is a re-actualization of the ante-predicative intimate knowledge of Christ¹⁸⁰⁰ and a deeper understanding and comprehension of the deposit of faith. The Church submerges herself more and more into the body of revelation¹⁸⁰¹ in different historical and cultural situations. Although the deposit of faith remains the same, the mentality of people

vérité ["soma tes aletheias"], il mettra à nu leur fiction et en démontrera l'inconsistance". S. IRÉNÉE DE LYON, *Contre les Hérésies*, Livre I, Tome II, p. 151.

¹⁷⁹² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 266.

¹⁷⁹³ This ostensive logos shows the characteristics of what Zubiri would call later the sentient *logos* because of the principle of respectivity (each belief is apprehended with respect to the other beliefs). It is characterized by the use of linguistic expressions and by being pre-scientific. See X. ZUBIRI, *Cristianismo*, p. 33. X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 267.

¹⁷⁹⁴ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 311.

¹⁷⁹⁵ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 266-267.

¹⁷⁹⁶ X. ZUBIRI, *Cristianismo*, p. 469.

¹⁷⁹⁷ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 267.

¹⁷⁹⁸ X. ZUBIRI, *Cristianismo*, p. 537.

¹⁷⁹⁹ The following texts witness the continuous presence of Christ in the Church and the role of the Holy Spirit in the process of deepening revelation: Mt 28, 20; Jn 14, 26; 16, 12-14.

¹⁸⁰⁰ X. ZUBIRI, *Cristianismo*, p. 541.

¹⁸⁰¹ X. ZUBIRI, *Cristianismo*, p. 538-539.

changes in time and from place¹⁸⁰². This mental situation definitely influences the comprehension of the deposit. One thing is to interpret the deposit from the situation and context of Greek reason¹⁸⁰³, another would be the interpretation from a modern perspective and another from an Asian cultural horizon.

The pro-gradient tradition is expressed not in a new body of beliefs but in dogmatic definitions. A dogma is not a new revelation¹⁸⁰⁴. “*A dogmatic definition is the declaration of a truth, which is defined as already contained in the revealed deposit*”¹⁸⁰⁵. It is the product of the Church’s effort to understand revelation by the assistance of the Holy Spirit who renders Christ present¹⁸⁰⁶. We should not forget that the effort of deepening a reality, of understanding and comprehending is already part of the moment of sentient reason. Christian theology by means of reason elaborates sketches to deepen and understand revelation. This type of sketch is not an elaborated theological system but a formulation that makes some aspects of the deposit of faith more comprehensible. A dogma is a sketch that is accomplished after being tested with respect to the *deposit of faith*¹⁸⁰⁷. These dogmas are formulated using terms and concepts originated from particular philosophies¹⁸⁰⁸. Examples of concepts borrowed from philosophical traditions are substance, hypostasis and person¹⁸⁰⁹. Through the use of these philosophical concepts the Church does not canonize a particular philosophy¹⁸¹⁰. Moreover, these concepts are never totally adequate to revealed reality. There is a fundamental consequence of this conceptual limitation: although dogmas are true formulas they never exhaust revelation’s richness¹⁸¹¹. This corresponds to Zubiri’s conception of human intelligence where a rational sketch would never exhaust the richness of the primordial apprehension of a real thing.

How does the Church test these sketches? A dogmatic definition is the Church’s affirmation by the assistance of the Holy Spirit that the sketch is fulfilled in the revealed deposit¹⁸¹². This assistance of the Holy Spirit is the ground of the so-called “infallibility of the

¹⁸⁰² X. ZUBIRI, *Cristianismo*, p. 476.

¹⁸⁰³ X. ZUBIRI, *Cristianismo*, p. 475.

¹⁸⁰⁴ X. ZUBIRI, *Cristianismo*, p. 480.

¹⁸⁰⁵ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, 307.

¹⁸⁰⁶ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 308. X. ZUBIRI, *Cristianismo*, p. 480, 481 and 483.

¹⁸⁰⁷ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 316.

¹⁸⁰⁸ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 318-319.

¹⁸⁰⁹ This is Ladrière’s process of semantic transgression.

¹⁸¹⁰ Zubiri provides the following example. “*Even the famous Council of Vienne, which said that the soul is the substantial form of the human body, did not have the least intention to dogmatically define Aristotelian hylomorphism. What it wished to define was, against those who admitted three souls, that there is only one soul. Since it was usually admitted then that the soul was the substantial form of the body, the definition of the Council of Vienne (1311-1312) defended the oneness of the human spirit, but it never referred to the hylomorphic characteristic with which it informs a body.*” X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 319.

¹⁸¹¹ X. ZUBIRI, *Cristianismo*, p. 492.

¹⁸¹² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 316-317.

Church”. Infallibility is an interior illumination of the Holy Spirit to reason in order to confirm the sketch’s fulfillment in the deposit¹⁸¹³. Being an illumination of reason it does not replace the reason’s effort in the elaboration of sketches. The task of scientific theology, to be discussed below, is to assist the Church in the elaboration of sketches and their confrontation with the body of beliefs. Zubiri does not hesitate to affirm that there is only one infallibility of the Church: *credendi* and *docendi*¹⁸¹⁴. The progress of the pro-gradient tradition is assured by the teaching (*docendi*) infallibility and by the believing (*credendi*) infallibility.

The history of dogma is the history of the official declaration of fulfillment of particular sketches elaborated to interpret the deposit of faith¹⁸¹⁵. The history of dogmas is an unfinished affair since dogmas cannot exhaust revelation. Consequently, revelation is concluded but possible intellections and further comprehensions are never exhausted¹⁸¹⁶.

IV.3.4. The sentient reason: the scientific character of Christian systematic theology

The effort of understanding and deepening the deposit of faith is not reduced to dogmatic definitions or official declarations of the Church’s magisterium. There is also the theologian’s effort of unveiling the internal structure of the deposit of faith, making explicit the connections between different points and explaining Christian beliefs in a theological system. This is systematic theology or in Zubiri’s terms theology *simpliciter*. This scientific systematic theology is a human reflection where theologians do not claim a special assistance of God, as the Church does when she defines dogmas¹⁸¹⁷. Due to the scientific character of Christian systematic theology, there is an object, a method and a verification process. Let’s consider each component.

IV.3.4.1 The object of systematic theology

Systematic theology, as an effort of sentient reason, seeks to unravel the internal structure of its object¹⁸¹⁸. The general object of this theology is the system of faith:

*“The scientific logos, actually, has its own object: the system of faith. This system is the internal articulation of the body of truth, and in turn this body of truth belongs to the ostensive logos.”*¹⁸¹⁹

¹⁸¹³ X. ZUBIRI, *Cristianismo*, p. 482.

¹⁸¹⁴ X. ZUBIRI, *Cristianismo*, p. 482.

¹⁸¹⁵ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 318.

¹⁸¹⁶ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 323.

¹⁸¹⁷ X. ZUBIRI, *Cristianismo*, p. 500.

¹⁸¹⁸ X. ZUBIRI, *Cristianismo*, p. 24.

¹⁸¹⁹ X. ZUBIRI, *Cristianismo*, p. 32.

What does Zubiri mean by the “system of faith”? Zubiri explains in *Inteligencia y Realidad* that a system is a unity of a group of properties that makes together an ensemble¹⁸²⁰. This constellation of properties is not a mere aggregate of individual realities¹⁸²¹. Each property is apprehended with respect to the unity of the whole. When Zubiri uses the expression “system of faith” he refers to the “internal articulation” of the deposit of faith and its respectivity proper to the body of truth. It is the sense given by Zubiri to the analogy of faith in Saint Paul¹⁸²².

The objective of Christian scientific theology is the explicit systematization and understanding of the unity of the deposit of faith¹⁸²³, which is already a system¹⁸²⁴. Scientific theology seeks to apprehend the internal coherence of revelation and its articulation with other knowledge of manifested realities¹⁸²⁵. This already implies a dialogue with other sciences and rationalities.

IV.3.4.2 Method in theology

Method in theology, as all rational methods, consists of a system of reference, the elaboration of sketches and experience as testing.

A. The system of reference

The deposit of faith is the system of reference from which theologians develop possible sketches to deepen their understanding of revelation¹⁸²⁶. In Zubiri’s reflection there is another

¹⁸²⁰ For Zubiri a system has three properties: it is a totality, it is coherent and has durability. X. ZUBIRI, *Inteligencia y Realidad*, p. 206, 210.

¹⁸²¹ X. ZUBIRI, *Inteligencia y Realidad*, p. 203.

¹⁸²² “Thus, the unity of this ostensive logos is perceived in the mere start of the effort that constitutes it. It is not a concatenation of reasons more or less general and abstract, but the dynamism of a faith, which encompasses, and expresses the whole ambit of belief, and which when doing so, shows us the more or less precise characteristics of each of its own points. The apprehension of the totality of the ambit of faith has a determining primacy over each one of its own concrete moments. Because of this, the dynamism of this logos is special: it can only apprehend and express each point of belief by referring it to the rest. This is precisely what St. Paul called “ana-logy” (logos referred to another, in respectivity to it). [...] The unity of the ostensive logos is the analogical unity of the sense of revelation. Scientific theology does nothing but conceptualize this sense.” X. ZUBIRI, *Cristianismo*, p. 33.

¹⁸²³ As Zubiri argues in *Inteligencia y Razon*, reason (hence scientific theology) is intrinsically systematic. Consequently, scientific theology is systematic in nature. “That is to say, explanation by its exceeding constitutes [...] a system. Explanation is formally and constitutively systematic. Rational truths as such constitute a system. This means, first of all, that every explanation is sketched based on others. In field intellection we see that each thing is intellectually known based on others. Now, in rational intellection, each explanation is intellectually known based on others. Conversely, every explanation leads, in and by itself, to others, and is only an explanation in unity with them. Therefore every rational intellection leads intrinsically and formally to its own superceding in others.” Underlined emphasis is ours. X. ZUBIRI, *Inteligencia y Razón*, p. 287-288.

¹⁸²⁴ We must distinguish the system of the deposit of faith from the systematization done by theologians. The first is due to the apprehension of each Christian truth with respect to other truths on the deposit of faith. The second system is a construction of theologic reason that seeks to make explicit the first.

¹⁸²⁵ X. ZUBIRI, *Cristianismo*, p. 500.

¹⁸²⁶ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 312 and 315.

concept related to the system of reference: the “concrete mental situation of the theologian”¹⁸²⁷. A mental situation is a concrete point of view in a concrete historical context and place¹⁸²⁸. This concept overlaps Ladrière’s horizon of meaning. A theologian is influenced by his mental situation when he elaborates possible sketches from the system of reference. It is clear that the Fathers of the Church, scholastic theologians and contemporary theologians have different mentalities from which they contemplate the system of reference. This mental situation, as a horizon of meaning, will enable theologians to elaborate concepts, metaphors or systems to understand the *depositum fidei*¹⁸²⁹. What Zubiri calls “*the integral religious situation of the theologian*”¹⁸³⁰, includes the theologian’s intellectual context and tradition, spiritual heritage, and moral situation. Obviously, this mentality is dynamic and contextual in the sense that it evolves during a theologian’s life and it evolves in history¹⁸³¹.

B. The elaboration of sketches in theology

The theologian elaborates sketches in theology as possible explanation of certain points of the deposit of faith or as a systematic comprehension of the whole body of beliefs. As we already explained in chapter 4, the system of reference suggests some elements, models and ideas that could be considered by reason in the elaboration of sketches¹⁸³². A sketch could be in **conformity** with the suggestions of the system of reference¹⁸³³. Consider for example Rahner’s axiom that *theology is eternally an [accomplished] anthropology*¹⁸³⁴. This sketch is in conformity with the deposit of faith because it is suggested by the incarnation of God and the belief that we are created in the image and likeness of God. The sketch may have the character of **contrariety** with respect to the system of reference. A good example is the Gnostic sketch that affirms the evil character of the material world¹⁸³⁵. This sketch is against the first chapter in the book of Genesis that affirms the goodness of creation: “*and God saw that it was good*”. The sketch may be

¹⁸²⁷ See chapter 4, section III.4.3.2, part B.

¹⁸²⁸ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 324.

¹⁸²⁹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 315.

¹⁸³⁰ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 315-316.

¹⁸³¹ Bernard Lonergan is another thinker who has thought about the influence that a particular context has on the theologian. “[...] the religions of mankind stand within a social, cultural, historical context and, by that involvement, generate the problems with which theologians attempt to deal” (p. 344). The multiplicity and perhaps conflicting character of theological systems “may lie in some social, cultural, historical context, in the native endowment or the formation of the given authors, in the presence or absence of intellectual, moral, or religious conversion, in the manner in which the method and task of systematic theology were conceived.” (p. 347). B. LONERGAN, *Method in theology*, p. 344 and 347.

¹⁸³² Although Zubiri develops this idea in *Inteligencia y Razón* he applies it to his analysis of theology.

¹⁸³³ X. ZUBIRI, *Inteligencia y Razón*, p. 245.

¹⁸³⁴ “[...] Christology is the beginning and the end of anthropology, and this anthropology in its most radical actualization is for all eternity theology.” K. RAHNER, *Foundation of Christian Faith*, p. 225. See also K. RAHNER, *On the theology of incarnation*, p. 116.

¹⁸³⁵ This character of contrariety is found in many sketches that have been declared heresies.

diverse in the sense of **mere difference** with respect to the deposit of faith. Compare Israel's notion of God's intervention in history and Paul's notion of God's wrath with posterior sketches of God as an unmoved mover who is impassive. This sketch was elaborated taking into consideration Aristotelian philosophy. Also the sketch might be diverse in the sense of going **beyond the possibilities** of the system of reference. An example of this type of sketch is Teilhard de Chardin's interpretation of our faith using the theory of evolution. Obviously the theory of evolution is not found in theology's system of reference¹⁸³⁶. Many divergences among theologians, even today, are born out of this diversity of relations with the deposit of faith.

Conformity to the deposit of faith predominates in theologians such as Barth, Lindbeck and Ratzinger. Contrariety is an attitude that predominates in those that have been declared heretics. The relation of "mere difference" predominates in those who dare to increase their understanding through speculations about things that are not clear in the deposit or that were possibly misunderstood (e.g., anthropomorphic sketches about God, Moses as the writer of the Pentateuch, etc.). "Beyond the possibilities", is a relation that predominates in speculative theologians who seek to elaborate sketches in dialogue with contemporary mentalities. This includes people who considered natural sciences, social sciences, contemporary philosophy and culture, e.g., Rahner, Tillich, Schillebeeckx, Teilhard de Chardin, Zubiri, etc. Nevertheless, the boundary between these types of relations is ambiguous. This ambiguity is produced by, among other things, the changes operated in theologians' mentality and Christian communities' mentality. For example, many theologians have been accused of developing sketches "contrary" to the deposit of faith when they really were in the type of "mere difference". Some of them afterwards were considered in "conformity" with the deposit, e.g., Thomas Aquinas. Other theologians believe they are fully in "conformity", but they have many aspects that are "beyond the possibilities" of the deposit, e.g., Lindbeck's speculative use of Wittgenstein notion of language. Some use concepts and facts borrowed from outside revelation (i.e., "beyond the possibilities") but that have been transformed in "conformity" with Christian tradition, e.g., Rahner's concept of self-transcendence.

In his thoughts about the elaboration of sketches, Zubiri does not develop the notion of semantic transgression as Ladrière does. However he mentions the use of concepts developed outside revelation. For Zubiri, these concepts are used with the objective of actualizing and unfolding the internal possibilities of Christianity¹⁸³⁷. The adoption of these concepts seeks to

¹⁸³⁶ Lindbeck criticizes this possibility for being something alien to revelation and intratextual interpretation.

¹⁸³⁷ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 264.

unfold new meaning of what is revealed¹⁸³⁸. It is not about syncretism, but about new interpretations that enable a new communication. As Zubiri says, these “*concepts, which the scientific logos is going to use, are human; but are only used with reference to God*”¹⁸³⁹. These concepts enable the elaboration of sketches, which are possibilities of understanding the deposit of faith. During history, theologians have used concepts that belonged to some philosophies. This does not mean that theologians canonize a particular philosophical school or a metaphysical system¹⁸⁴⁰.

The type of concepts we use characterizes the type of scientific theology. For Zubiri there are three types of scientific theologies: biblical theology and exegesis, historical theology and speculative theology¹⁸⁴¹.

B.1 Exegesis and biblical theology

The object of this type of theology is undoubtedly a biblical text¹⁸⁴². In terms of method, it has the scientific structure of a hermeneutical science¹⁸⁴³. We need to interpret because the texts were addressed to communities or persons in a particular mental situation that is not ours. We need to understand the precise meaning given by the author to the texts¹⁸⁴⁴.

The system of reference is the Scriptures as a whole. The sketch is elaborated to interpret the meaning of biblical texts¹⁸⁴⁵. It uses not philosophical but biblical concepts and categories¹⁸⁴⁶. These sketches are elaborated in dialogue with archeology, ancient history, philology and history of religion, among others. Although Zubiri does not elaborate it, he argues that we must distinguish between biblical theology and exegesis¹⁸⁴⁷. In terms of the type of exegesis, Zubiri sustains that exegesis must follow the historical method¹⁸⁴⁸ due to the historical contexts of the texts. The two most important exegetical principles are: *exegesis must follow a historical method*

¹⁸³⁸ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, note 2, p. 264.

¹⁸³⁹ X. ZUBIRI, *Cristianismo*, p. 24.

¹⁸⁴⁰ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 318.

¹⁸⁴¹ This corresponds partially to Barth's division of theology. Nevertheless, Zubiri neglects pastoral theology.

¹⁸⁴² “*In order to understand them it will be necessary to “interpret” the sense of the biblical text*”. X. ZUBIRI, *Cristianismo*, p. 26.

¹⁸⁴³ “*Then, the scientific logos is [...] a hermeneutic logos or an exegetic logos*.” X. ZUBIRI, *Cristianismo*, p. 26.

¹⁸⁴⁴ X. ZUBIRI, *Cristianismo*, p. 529.

¹⁸⁴⁵ This corresponds to biblical commentaries, as explained earlier.

¹⁸⁴⁶ This is clear in the analysis of biblical texts such as the New Testament's letters. However, this is also the case in biblical stories where a conceptual discourse about God is not explicit. A story offers basic materials in the forms of images, actions and words about God but it does not offer any synthesis. It is the task of the reader to make explicit the theology of the text in a hermeneutical process and by means of concepts that respect the biblical story. See A. WÉNIN, *De l'analyse narrative à la théologie*, p. 390-392.

¹⁸⁴⁷ Andre Wenin affirms that the task of biblical theology is to present what the biblical texts say about God in his relationship with human beings. Exegesis's task is to analyse a biblical text, its structure, the sources and the context. See A. WÉNIN, *De l'analyse narrative à la théologie*, p. 385. X. ZUBIRI, *Cristianismo*, p. 26.

¹⁸⁴⁸ The sense of the texts is primarily historical and not allegorical. For him, one thing is the fact that the bible has allegories. Another is the idea that the exegesis must be allegorical. This last statement is false. X. ZUBIRI, *Cristianismo*, p. 529.

and *exegesis must interpret the literal meaning of the texts*. Finally, the sketch is tested in terms of its fidelity to the Holy Scripture.

B.2 Historical theology

The objects of historical theology are dogmatic definitions, texts of the Fathers of the Church, conciliar declarations and systems or commentaries produced by theologians from the past¹⁸⁴⁹. The system of reference is the ostensive *logos*, the unity of the deposit of faith. Theologians in this field elaborate sketches by using concepts from tradition, including Greek and Latin philosophical concepts that have been used in the past¹⁸⁵⁰. A sketch is elaborated to interpret an ancient or past formulation of faith¹⁸⁵¹.

As a matter of fact, there is a plurality of historical theologies, e.g., history of dogmas, patristics, history of councils, among others. The history of dogmas is but one particular field that belongs to historical theology¹⁸⁵². The method of historical theology is at the same time historical and hermeneutical. It dialogues with the discipline of history.

C. Speculative theology

Speculative theology seeks to articulate the internal coherence of revelation with knowledge of other realities. Consequently, it is a dialogue with other rationalities such as natural and social sciences, philosophy and history¹⁸⁵³. It was the first scientific and systematic conceptualization of Christian theology¹⁸⁵⁴. The system of reference is the whole deposit of faith. These sketches are not commentaries about particular texts, which is mostly the task of biblical exegesis and historical theology. They are systems elaborated by means of speculative concepts that show the structures and coherence of the body of beliefs. They also seek to illuminate some points in the deposit that remain obscure to our contemporary mentality. The first speculative efforts originally used speculative concepts from Greek and Latin philosophy, specially metaphysics¹⁸⁵⁵. When Christianity encountered Greek reason, theologians (Fathers of the

¹⁸⁴⁹ X. ZUBIRI, *Cristianismo*, p. 25.

¹⁸⁵⁰ Consider for example the following Greek concepts: *ousia*, *prosopon*, *hypostasis*, *economia*, *pericoreisis*, *arche*, *phusis*, *soma*, *psyche* and *pneuma*. Consider also the Latin concepts of *persona*, *virtus*, *bonum*, *substantia*, *natura*, *anima* and *essentia*, among others.

¹⁸⁵¹ “Therefore, not only Sacred Scripture, but all dogmas need to be historically interpreted.” X. ZUBIRI, *Cristianismo*, p. 29.

¹⁸⁵² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 318.

¹⁸⁵³ X. ZUBIRI, *Cristianismo*, p. 500. For Lonergan this dialogue is part of the functional specialization of communication. See B. LONERGAN, *Method in Theology*, p. 132, 364 and 366.

¹⁸⁵⁴ X. ZUBIRI, *Cristianismo*, p. 24.

¹⁸⁵⁵ Examples of this initial effort of speculative systematization are Origen’s “On First Principles” and Saint Augustin’s *The City of God*. X. ZUBIRI, *Cristianismo*, p. 24-25.

Church) elaborated new sketches that were new possibilities to understand the deposit of faith, in specific some aspects of Christ's reality and God's reality as Trinity¹⁸⁵⁶.

Since the start of Modernity, Christianity is confronted with modern reason, which sometimes considers Christian revelation as something alien to human rational capacities and progress¹⁸⁵⁷. This modern reason has different dimensions; it is a scientific, philosophical and historical reason. Scientific reason is neither religious nor irreligious. It is a-religious. The historical conflict in the Galileo affair was not a collision between the deposit of faith and scientific reason¹⁸⁵⁸. It was a collision between the medieval mentality (or horizon) of some cardinals and Galileo's scientific mentality¹⁸⁵⁹. Although some propose to dissociate theology from scientific reason, Zubiri rejects this position based on a Christological and Trinitarian argument:

*"The second person of the Trinity, the Word, is the subsistent Truth of God, and nothing that is true is alien to the Word. From this stems the principle that must regulate the presence of the Church facing Modern science: the believer not only has the possibility of doing science, i.e., to show that in fact they are not incompatible, but in addition has the strict, and formal obligation of continuing to discover scientific truths, which by the mere fact of being truths are a reflection, and an image of the subsistent Truth of God in the person of the Word."*¹⁸⁶⁰

Christian theology still must encounter modern scientific reason in a dialogue that could be fruitful for both¹⁸⁶¹. The lack of encounter between theology and natural sciences may cause one to think that there is an enormous abyss between Christian beliefs and a scientific worldview.

Modern philosophy has a difficulty with the idea of Christian revelation¹⁸⁶². Modern philosophy conceives revelation as an irrational correlate to a blind sentiment of faith¹⁸⁶³. That mentality only considers true what is rational, i.e., what is rooted in empirical perception or what

¹⁸⁵⁶ "Finally, Greek reason enlightened possibilities for a richer internal intellection of the revealed deposit. Christ revealed God being God. The intellection of the divinity of Christ was, at one and the same time, the intellection of the reality of God. This intellection developed in three phases. With respect to Christ the following were defined: a) His real, and not adoptive filiation; b) His real, physical, and not moral filiation; c) His real physical filiation as personal, and not substantial. With respect to God the definitions were: a) that the Father, the Son, and the Holy Spirit are God *ad intra*, and not only *ad extra*; b) that they are God consubstantially; c) that they are personally different. Christ as Son of God is the very person of the Word insofar as person, but assumes a subsisting integral humanity in the person of the Word." X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 275-276.

¹⁸⁵⁷ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 278.

¹⁸⁵⁸ Some cardinals considered Galileo's scientific sketch as "contrary" to the deposit of faith.

¹⁸⁵⁹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 278.

¹⁸⁶⁰ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 279.

¹⁸⁶¹ This concern is shared by Benoît Bourguine who states that speculative theology must interpret traditional formulas taking into consideration our present scientific mentality and culture. "*L'écart entre ontologie grecque déterminante des formulations conciliaires et culture scientifique contemporaine place la théologie devant un redoutable défi herméneutique.*" B. BOURGUINE, *Que faire des premiers conciles?*, p. 451.

¹⁸⁶² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 280.

¹⁸⁶³ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 281.

is logically demonstrated. Western philosophy is biased in its thought that intelligence is about a re-presentation inspired by an experience almost exclusively visual. Hence, what cannot be re-presented is not rational¹⁸⁶⁴. For Zubiri, fundamental theology must show the limit of such conception of rational truth and reason. Revelation is not rational in the limited sense of empirical perception or logical proofs because revealed truths are not reachable by the unique efforts of reason¹⁸⁶⁵. As we already discussed in the section on fundamental theology, the intellect is not limited to a visual-empirical perception. There are other modes of apprehension that show the complexity of intellectual acts. Among these modes are the modes of hearing and the modes of touching that are more suited to comprehend revelation. Zubiri, as Ladrière, distinguishes between what is reasonable from what is rational. A rational truth happens when a sketch elaborated by reason coincides fully with the real thing. However, a reasonable truth is a truth that does not fully coincide, but it is in a process of convergence¹⁸⁶⁶. A sketch could be reasonable because reality exceeds the power of reason¹⁸⁶⁷. Reasonable is the real that exceeds reason. This happens in theology because the mystery of our religious experiences and beliefs exceeds reason. The task of scientific speculative theology is to dialogue with modern philosophy and take into consideration modern concepts through which the deposit of faith could be systematized and better understood.

The third dimension of modern reason is the historical reason. This does not mean that rational or reasonable truths pertain to history or are reduced to historical conditions¹⁸⁶⁸. It means that historicity is an intrinsic character of truth. Consequently, speculative theology must consider the historicity of the deposit of faith, not as something accidental but as intrinsic to revelation¹⁸⁶⁹. Theology is challenged to show the connection between the evolution of the dogma in a particular historical context and the constituting revelation in Christ.

With respect to modern reason (scientific, philosophical and historical) there are two possible attitudes. The first one, which unfortunately has predominated, is to “defend” our faith from modern reason. Following Zubiri’s philosophy and theological epistemology we can argue

¹⁸⁶⁴ “On this point philosophical tradition has been growing more and more unilateral. It has molded intellection exclusively upon vision, and as a consequence, all other ways of apprehending reality have been disqualified as a non-intellection. This is the source of the idea that to know intellectually is to re-present, and what is not representable is simply unintelligible.” X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 286.

¹⁸⁶⁵ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 282.

¹⁸⁶⁶ See chapter 4, section III.4.3.3. X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 283.

¹⁸⁶⁷ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 284.

¹⁸⁶⁸ X. ZUBIRI, *Inteligencia y Razón*, p. 302

¹⁸⁶⁹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 306.

that this attitude does not really defend Christian faith but a pre-modern “mentality”¹⁸⁷⁰ that still subsists in some circles. Another attitude is to emulate what the Church has done in the past with Greek reason and philosophy: borrow some concepts and forms of thinking that enable the elaboration of new sketches and possibilities of understanding Christian revelation¹⁸⁷¹.

Lastly, there remains the issue of the relationship between these three different forms of scientific theology (biblical, historical and speculative). For Zubiri, they are different and even separable¹⁸⁷². However, they are in a relational unity manifested in the contributions that each scientific theology makes to the other two. Speculative theology depends completely on exegesis, biblical theology and historical theology¹⁸⁷³. Speculative theology could not do its task without the retrieval and understanding of what has been done in the past¹⁸⁷⁴. Furthermore, biblical and historical theologies contribute to speculative theology by showing that Greek metaphysics is one mode, among others, to understand Christian revelation¹⁸⁷⁵. Other concepts, different from Greek metaphysics, could be used to express the same dogma. However, theology will always need a basic metaphysics that enables a contemporary interpretation of revelation¹⁸⁷⁶. All of this implies that theologians should be open to use contemporary philosophies of nature and metaphysics that already initiate a dialogue with natural science.

Biblical theology and exegesis are not simple repetitions of Semitic or Greek concepts¹⁸⁷⁷. Historical theology contributes to view Holy Scriptures and biblical theology as the constituting chapter of theology and not as a frozen body of beliefs that belongs to a remote past. Biblical theology, in order to make sense to contemporary people, is already a speculative theology¹⁸⁷⁸. Being written in another historical mentality, Scriptures require to be interpreted today by means of contemporary concepts¹⁸⁷⁹.

Historical theology includes the history of Scriptures’ interpretation. It depends on the biblical interpretation that belongs to a particular period¹⁸⁸⁰. Most of the Fathers of the Church developed their theologies from their interpretation of biblical texts. At the same time,

¹⁸⁷⁰ Again, “mentality” means here the concrete historical, cultural, sociological, spiritual, psychological and moral situations of theologians in particular and Christians in general.

¹⁸⁷¹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 321.

¹⁸⁷² X. ZUBIRI, *Cristianismo*, p. 27.

¹⁸⁷³ X. ZUBIRI, *Cristianismo*, p. 29.

¹⁸⁷⁴ This is clear in Lonergan’s conception of two phases in theology. See table 5.1.

¹⁸⁷⁵ X. ZUBIRI, *Cristianismo*, p. 28.

¹⁸⁷⁶ Bourguine explains this need of an articulation with metaphysics. For him, this “metaphysical option” corresponds to theology’s claim to say something true. In our words, theology claims to say a truth about reality. All discourses about reality are metaphysical discourses. See B. BOURGUINE, *Que faire des premiers conciles?*, p. 463.

¹⁸⁷⁷ Even inside the Bible there are a multiplicity of concepts and mentalities that evolved with time.

¹⁸⁷⁸ This is in the sense of presupposing a notion of God’s relationship to the human being, to the cosmos and to history.

¹⁸⁷⁹ X. ZUBIRI, *Cristianismo*, p. 29-30.

¹⁸⁸⁰ X. ZUBIRI, *Cristianismo*, p. 30.

speculative theology elaborates a concept of history, a notion of revelation in history and an understanding of a historical evolution of dogma. These concepts are required by historical theology¹⁸⁸¹.

In conclusion, a scientific Christian theology requires these three theologies. Each one is insufficient without the other two. All scientific Christian theologies depend on biblical-exegetical, historical and speculative research and on their unity expressed in their articulations. In concrete, speculative theology should dialogue with modern reason with its scientific, philosophical and historical dimensions. One mode of dialogue is the transformation of modern concepts with the objective of better understanding the deposit of faith.

IV.3.4.3 Experience as test

Sketches elaborated by scientific theologies are tested with respect to their fidelity to the deposit of faith¹⁸⁸². Following Zubiri's category of tests there is an experience as **testing-together** (*com-probación* in Spanish) where we test together a theologic system (or a commentary of a text) and the body of truths present in the deposit of faith¹⁸⁸³. There is also a **conformation** where we experience ourselves as an insertion, into our own reality, of a sketch of possibilities. We experience a theologic sketch as individual believers and also as a community. Finally, there is **compenetration** ("mutual understanding" or "putting yourself in another's shoes") for biblical theology and historical theology to interpret texts written in another mental horizon.

IV.3.4.4. Verification and truth

The verification process seeks the fulfillment of the sketch in the field of reality as system of reference¹⁸⁸⁴. Speculative theology is about sketches that are reasonable, i.e., in a process of convergence, because the mystery of God exceeds the power of reason¹⁸⁸⁵. Sketches elaborated by theologians, in the forms of commentaries or speculative systems, must be always re-elaborated in a process that seeks a better understanding of the deposit of faith. A dialogue with other rationalities (e.g., natural and social sciences, hermeneutic disciplines and philosophy)

¹⁸⁸¹ X. ZUBIRI, *Cristianismo*, p. 31.

¹⁸⁸² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 316.

¹⁸⁸³ X. ZUBIRI, *Inteligencia y Razón*, p. 254.

¹⁸⁸⁴ X. ZUBIRI, *Los problemas fundamentales de la metafísica occidental*, p. 313.

¹⁸⁸⁵ Zubiri here agrees with Aquinas that God's mystery will always surpasses and exceeds human reason. X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 284.

enriches our interpretation of God's revelation. Other cultural perspectives, e.g., Asian culture and religions, should not be seen as a threat to Christian faith, but as a possibility to enrich our comprehension of Christian faith. Consequently, today more than ever a spirit of dialogue and not a spirit of "defense of faith" should mark the theologian's mentality.

Following the insights of Zubiri we distinguish different types or levels of truth in theology. The first level is equivalent to the real truth that consists in ratification. This level is related to the living apprehension of Christ, a living together with the revealing *Logos*¹⁸⁸⁶. Either we have it or we do not have it. This truth is ante-predicative, is the experience of Christ by the action of the Holy Spirit. Then there is a level of truth equivalent to the dual truth in the *logos*. This is the body of truth, the deposit of faith that is transmitted. Finally, there is a reasonable truth that is the encounter between the elaborated theological sketch and the body of truth of the deposit of faith. As we already affirmed, it is a reasonable truth because it is always in a process of convergence. God will always be for us a mystery that surpasses and exceeds our intellect.

V. Conclusion

V.1 Ladrière's and Zubiri's contribution

Ladrière's and Zubiri's reflections are not confined to the false debate between two mutually exclusive positions: religious experience vis-à-vis religious language. Both consider that both the experience of faith and the language of faith imply each other and are necessary in the elaboration of theology. Although Lonergan already mentions the inner word, the outer word and the elaboration of a theory, we believe that the three moments of experience, language and reason are better grounded in Zubiri's and Ladrière's works. Ladrière and Zubiri clarify in what sense theology is a science (hermeneutical, speculative and systematic). The Belgian and Spanish thinker clearly establish the methodological need for theology to dialogue with other rationalities. Although the point of departure is faith (as experience-grace and as encountered with the languages' source), theology as a hermeneutical and speculative science borrows and transforms elements from other rationalities, e.g., philosophy. To avoid this dialogue with contemporary perspective is to risk losing theology's creativity and credibility. Theology would become a mere empty repetition of the past. However, the object of theology should not be treated as other scientific or philosophical objects. It is not something constructed or formalized by a scientist or by a philosopher. It is received as a gift from God's self-communication to humanity. If this is

¹⁸⁸⁶ X. ZUBIRI, *Cristianismo*, p. 33-34.

not taken into consideration we also risk reducing theology to a mere philosophical speculation, a simple historical analysis or no more than a psychological description. Finally, Ladrière and Zubiri coincide in the affirmation that today the place of dialogue and the point of articulation between theology and contemporary mentality is the fulfillment of the human person¹⁸⁸⁷.

Zubiri contributed to clarify the anthropological structure where revelation becomes God's gift and a human dimension: the experience of religation. For him, the experience of faith is not something alien to our human structure that apprehends reality even when it is a gift originated by God. This enables the development of a fundamental theology that could articulate Christian revelation and human philosophical reflection. Zubiri also clarifies the relationship between the Word of God, Scriptures and dogmas as something related to the moments of the primordial apprehension, the sentient *logos* and the sentient reason. The Christological and pneumatic aspects of revelation, faith and theology are well established. Finally, Zubiri also clarifies the status of different scientific theologies (biblical, historical and speculative) and their mutual and necessary relationships. However, Zubiri does not develop the human linguistic capacity to re-actualize faith in believers.

Ladrière contributes to understand the relationship between the sources of faith (first order languages) and Christian theology (second order languages). His linguistic analysis has shown that the languages of faith operate according to the performativity of ordinary languages. This analysis of the languages performativity explains why the languages of faith, with the content of faith, present (not represent) Christ among us. Finally, Ladrière's notion of semantic transgression presents a methodological possibility of dialogue and articulation between Christian theology and other rationalities. This semantic transformation is a semantic analogy that overcomes the conflict between the analogy of faith and the analogy of being in some protestant and catholic theologians. His limit is his lack of development of the Holy Spirit's action through the languages of faith.

In the following sections we will discuss how Zubiri's and Ladrière's works help us justify the three initial hypotheses (the orders of reality, the homologous rational structure and the three inseparable moments to access reality) of this research work.

V.2 Discussion of first hypothesis of the two orders of reality: the order of manifestation and the order of revelation

¹⁸⁸⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 275. X. ZUBIRI, *Cristianismo*, p. 38-39. J.-L. CABRIA-ORTEGA, *Relación teología-filosofía en el pensamiento de Xavier Zubiri*, p. 333.

Hypothesis 1: the orders of reality. *There are two orders of reality, the order of manifestation and the order of revelation. The relationship between these two orders should be understood through the maxim: neither confusion nor separation. They can be neither identified nor separated.*

Now we are in a better position to understand and develop the relation between both orders. This is critical to understand the grounds of a possible relationship between natural sciences that studies the order of manifestation, and Christian theology that studies the order of revelation. We have already seen how some theologians do not distinguish both orders (e.g. Teilhard de Chardin, Peacocke, Polkinghorne, Schonbörm and even Moingt¹⁸⁸⁸) while others consider that *theology and natural sciences refer to distinct realities* (Barth and Ratzinger). As we already discussed, if both orders are identified we risk falling into a type of naturalism, emptying Christianity of its eschatological dimension, of loosing God's otherness and we risk moving too fast to a unified final synthesis without considering the historical dimension of knowledge. On the other hand, if both orders are independent, a dialogue between science and theology is very difficult, pointless or impossible, we risk reducing salvation to life after death without any relation to creation or history, and finally, the event of incarnation (and the sacraments grounded in this event) remains totally obscure.

Let's consider now Zubiri's and Ladrière's contributions to this theological problem. For Zubiri the relationship between both orders is grounded in the fact that there are different degrees of revelation: a manifestation of God in the power of the real, God's revelation to Israel and the culmination of revelation in Christ.

V.2.1 Manifesting experience of God as a reality-fundament of the world

Creation becomes the first act of God's manifestation to us¹⁸⁸⁹. Real things and the whole cosmos announce God, not as something visually perceived but as "noticed"¹⁸⁹⁰. Moreover, God is present in every human being. Through this interpersonal presence, every human person becomes also an act of God's manifestation. Finally, the voice of conscience is the resonance of

¹⁸⁸⁸ In the case of Moingt, this is attenuated. For him theology, philosophy (phenomenology) and science (quantum physics) refer to the same world although with different languages, perspectives and methods.

¹⁸⁸⁹ X. ZUBIRI, *Cristianismo*, p. 456.

¹⁸⁹⁰ "Now, things are real "in" God, in God as person, and God is in them constituting them formally. But God is "in" them as something transcendent. By virtue of this, He unveils or manifests Himself (in the things in which He is) in a "remitting" way; real things are, qua real, "announcement" of the personal reality of God. God is in things, but without being them themselves: this is what I understand by transcendence of God." X. ZUBIRI, *El hombre y Dios*, p. 189. See also X. ZUBIRI, *El hombre y Dios*, p. 225-226.

the fundament of reality in our human spirit¹⁸⁹¹. God's announcement in creation, manifestation of every human person and resonance in our human conscience are not only an individual experience but is also social and historical. As Zubiri argues, the history of religions is the history of the palpitations of the divinity in the human spirit. It is the presence of God buried in the human heart¹⁸⁹². Consequently, the order of manifestation is already a place of God's manifestation to all human beings¹⁸⁹³. Through this order of manifestation we can discover God as the ultimate, possibilitating and impelling reality-fundament. This position is totally shared by Ladrière¹⁸⁹⁴.

V.2.2 Manifestations of God in Israel

The idea of God manifesting Himself to Israel through "natural events" is not alien to the Hebrew Bible. The First Testament mentions theophanies in sacred trees, fountains, oasis, and the high places¹⁸⁹⁵. These natural events become signs that announce God's presence and even intentions. Another form of God's manifestation is the "interior dialogue", the voice of conscience to some biblical character, e.g., Abraham¹⁸⁹⁶. Finally, God manifests Himself through historical experiences and events¹⁸⁹⁷ and through the prophets¹⁸⁹⁸. These manifestations (theophanies, the voice of conscience and historical events) become interior lights to the human intelligence that enables an interpretation. It is a light that enables Israelites to discover God in Israel's history, in universal history and in the whole universe as Creator of all things¹⁸⁹⁹.

God is understood by Israel as Creator, omnipotent-providential and the rock that strengthens the human person. Israel's belief that God is Creator is in continuity with God as the ultimate fundament of all real things¹⁹⁰⁰. The belief that God is omnipotent (related to God's

¹⁸⁹¹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 65, 66, 68 and 303.

¹⁸⁹² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 347.

¹⁸⁹³ Beside the biblical texts already mentioned there are other references in Scripture, i.e., Job 12, 7 and Psalm 19, 1.

¹⁸⁹⁴ "La manifestation c'est l'automonstration de la réalité selon ses dispositions naturelles et constitutives. C'est la manière dont se rend visible à l'esprit la nature, l'homme, son histoire, et d'une certaine façon la réalité tout entière. Envisagée dans la perspective de la pensée de la création, la réalité qui se rend ainsi accessible apparaît comme la trace de l'acte créateur. Et donc il y a déjà une certaine forme de connaissance de Dieu qui peut être atteinte par la réflexion sur la structure de la manifestation. Mais Dieu ne se donne dans la manifestation que de façon indirecte, à travers le miroir du créé, [...]" J. LADRIÈRE, *L'articulation du sens III*, p. 64.

¹⁸⁹⁵ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 208.

¹⁸⁹⁶ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 213.

¹⁸⁹⁷ X. ZUBIRI, *Cristianismo*, p. 456.

¹⁸⁹⁸ X. ZUBIRI, *Cristianismo*, p. 519.

¹⁸⁹⁹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 221-224.

¹⁹⁰⁰ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 241. Just for the sake of giving some examples consider the following list. Pentateuch: Gn 1, 1-27; 2,4; Dt 4, 32. Prophets: Is 17, 7; 27, 11; 43, 15; 51, 13; Jer 31, 22; 33, 25. Psalms: Ps 51, 12; 89, 13; 89, 48; 104, 30. Wisdom literature: Job 36, 3; Qo 12,1; Sg 16, 24; Pr 8, 22.

force) and providential is in continuity with God as possibilitating¹⁹⁰¹. Finally, God as the rock and the strength of the human person is in continuity with God as impelling¹⁹⁰².

V.2.3. God's revelation in Christ

According to the book of Hebrews, there have been different historical forms of revelation that culminate in Christ¹⁹⁰³. The supreme form of revelation, which surpasses all other revealing manifestation, is the *Logos*'s incarnation¹⁹⁰⁴. This is what Zubiri calls "strict revelation"¹⁹⁰⁵. God does not reveal Himself as an abstract rational truth but in the concreteness of Christ¹⁹⁰⁶. Christ is the subsistent truth and the epiphany of truth¹⁹⁰⁷. He is the Word of God, the revealer of the Father. This revelation exceeds the limits of reason (against rationalism)¹⁹⁰⁸. Although human reason has the capacity to know God's existence, it cannot reach by its own forces what is revealed in Christ¹⁹⁰⁹. Nothing in the order of manifestation would have suggested Christian revelation. Through the event of incarnation God makes Himself a historical and worldly moment. Moreover, Christ is the way to the Christian God who is at the same time beyond all what is immanent¹⁹¹⁰. It is a movement that is initiated in the Emmanuel (God among us) and ends in God (the Absolute Other, the unfathomable mystery)¹⁹¹¹.

However, between revelation and manifestation there is neither pure discontinuity nor pure continuity. Although revelation exceeds the limits of reason (against pure continuity), this does not mean that Christian revelation is indifferent to the human intelligence (against fideism). Without the human intelligence faith and revelation would be impossible¹⁹¹². Revelation is an illumination to apprehend God's revelation in the world and in history (against pure discontinuity), which is different from ordinary apprehension by just human means¹⁹¹³. The Holy

¹⁹⁰¹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 242-243. Just for the sake of giving some examples consider the following list. God's force and power: Neh 1, 10; Jud 9, 14; 11, 7, 13, 19; 2 Mac 3, 24; Sg 1, 3, Sir 24, 2; Mi 5, 3; Ps 29, 11, 77, 7, 68, 35, 78, 4; Providence: Job 10, 12; Sg 6, 7; 14, 3; 17, 2. Force that possibilitates and saves: Ex 9, 16; 13, 14; 15, 632, 11; Nb 14, 13; Dt 8, 18; Jug 16, 6; 16, 28; 1 Ch 16, 11; Ps 8, 2; 18, 3; 18, 33; 22, 20; 28, 7; 29, 11; 30, 8; 44, 4; 46, 2, 59, 10; 60, 7

¹⁹⁰² Just for the sake of giving some examples consider the following list. Pentateuch: Dt 32, 4, 32, 18; 32, 31 Prophets: 2 Sam 22, 2-3; 22, 32; 22, 47; 23, 3. Psalms: Ps 18, 2-3; 18, 32; 18, 47; 31, 3; 71, 3; 73, 26. Wisdom literature: Job 6, 12.

¹⁹⁰³ Hb 1, 1-2

¹⁹⁰⁴ For Zubiri revelation reaches an excess or surplus in Christ. X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 237, note 1 in 248 and 260. X. ZUBIRI, *Cristianismo*, p. 507.

¹⁹⁰⁵ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 325.

¹⁹⁰⁶ X. ZUBIRI, *Cristianismo*, p. 507 and 520.

¹⁹⁰⁷ X. ZUBIRI, *Cristianismo*, p. 521.

¹⁹⁰⁸ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 242

¹⁹⁰⁹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 281

¹⁹¹⁰ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 329 and 331.

¹⁹¹¹ These two aspects are found in Karl Rahner: God as remote and God as making himself near. K. RAHNER, *Reflection on methodology in theology*, p. 106.

¹⁹¹² X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 282

¹⁹¹³ X. ZUBIRI, *Cristianismo*, p. 457.

Spirit illuminates the human intellect to apprehend the divine reality that is being manifested¹⁹¹⁴. The Holy Spirit illuminates the apostles and the original witnesses to experience God among us in Christ¹⁹¹⁵. Furthermore, the Holy Spirit inspires the redaction of the Scriptures as a foundational interpretation of the event of Christ¹⁹¹⁶. Therefore, Scriptures and all the first order language of faith not only reflects the original apostolic experience of Christ but also is capable to induce a new experience of faith¹⁹¹⁷. The Holy Spirit is also present in the ecclesial effort to understand and deepen God's revelation.

In conclusion, there are two aspects in the relationship between the order of manifestation and the order of revelation. There is an aspect of continuity: God manifests Himself in history and in the world through our anthropological structures that enables the moments of experience, language and reason. At the same time, there is a surplus in God's self-communication in Christ that exceeds all possibilities of human intellect. God remains as the Absolute Other, the unfathomable mystery¹⁹¹⁸. These two aspects appear in Ladrière's analogy of "emergence" used to think the relationship between faith and raison (revelation and manifestation)¹⁹¹⁹. The principle of emergence expresses that a level of complexity assumes the structures of an inferior level and goes beyond its limits. Something similar occurs with faith that assumes the structures of reason and goes beyond its limits. The order of revelation assumes and transfigures the order of manifestation (cosmos and history) and goes beyond its limits (a surplus). This analogy shows the aspect of continuity (assumption) and the aspects of discontinuity (transfiguration)¹⁹²⁰.

The relationship between the order of manifestation and the order of revelation can be expressed in a negative formulation with the maxim: **neither confusion nor separation**. However, following Ladrière's contributions and words we can also develop a positive formulation: **revelation assumes and transfigures what is manifested**.

V.3 Summary and discussion of the second and third hypotheses: the homologous rational structure and the three inseparable moments to access reality

¹⁹¹⁴ X. ZUBIRI, *Cristianismo*, p. 510 and 514.

¹⁹¹⁵ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 229

¹⁹¹⁶ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 229

¹⁹¹⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 32, 57 and 60. J. LADRIÈRE, *L'articulation du sens III*, p. 185.

¹⁹¹⁸ Again, this is the trace of Aquinas' negative theology.

¹⁹¹⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 213.

¹⁹²⁰ However, there is a limit in Ladrière's analogy. Revelation and faith do not emerge naturally and directly (against naturalism) from a manifestation and from reason. It is an act of God that assumes and transfigures events and human structures of apprehension.

In this section we will discuss the hypotheses of specific rationalities and the three moments to access reality from the standpoint of natural sciences, philosophy and theology. Let's consider first the following hypothesis:

Hypothesis 2: Specific rationalities that share a homologous structure. *Sciences, philosophy and theology have their own distinctive rationalities. Nonetheless, they share a homologous rational structure in the sense that specific objects, methods (i.e., a system of reference, a sketch and an experience as testing), verification processes and notions of truth are attested in each of them. The distinctiveness lies in the fact that each component is specific and particular to each science, philosophy and theology.*

Chapters 3, 4 and 5 have shown that natural (and human) sciences, philosophy and theology share homologous rational structures: object, method and verification process. First of all, each rationality has an **object** with its own characteristics. In formal and natural sciences we have found a wide variety of objects: (i) postulated and constructed objects in mathematics and (ii) a segment of reality (inorganic systems or living organism) partially formalized by means of abstraction and concepts in natural sciences (empirical-formal or biology). There is also a plurality of objects in hermeneutical sciences: texts, cultural objects, historical actions, institutions, social customs and human existence as a whole.

In terms of philosophy there is also a multiplicity of objects. Analytical philosophy studies concepts or categories, propositions, principles and discourses that are essential to the thinking process. Descriptive phenomenology analyzes things-experiences. Finally, speculative philosophy studies reality beyond our perception or apprehension.

The general object of theology is the content of faith found in the deposit of faith. In terms of biblical theology and exegesis the objects are biblical texts. The objects of historical theology are dogmas, texts of the Fathers of the Church, conciliar declarations and systems produced by theologians from the past. The object of speculative theology is the internal relationship, the implicit system, of the totality of beliefs found in the deposit. Although we did not develop it, pastoral theology and moral theology study the morality of personal acts and the praxis of the Church.

Each rational method, which is adequate to its object, consists of a system of reference, a sketch and an experience as testing. In terms of the system of reference of mathematics and natural sciences we have the perceptive field (mathematics) and the setting of observations (physics, chemistry and biology). The system of reference of hermeneutical sciences is the

scientist's pre-comprehension of human reality. Finally, in theology, the system of reference is the set of first order language of faith, including our fundamental experience of Christ.

In all sciences, philosophies and theologies we find the elaboration of sketches that seek to explain a reality. These sketches have different genres: scientific hypothesis (mathematics and natural sciences); sketches that seek to explain the meaning and intention of human actions (hermeneutical sciences); explanations of the meaning of concepts, propositions and discourses (analytic philosophy); descriptions of things-experiences (descriptive philosophy) and philosophical systems (speculative philosophy). Finally in theology the sketches are commentaries of texts (biblical theology and historical theology) or theological systems (speculative theology).

In terms of experience there is testing together (mathematics, analytic philosophy, biblical theology and historical theology); experiments (natural sciences); compenetration (evolutionary biology, psychology, biblical theology and historical theology) and conformation (descriptive phenomenology, speculative philosophy and speculative theology). In terms of the verification process, in all rationalities we have a partial verification. The total correspondence between the sketch and reality is only a remote goal of a never-ending dynamism of the intellect. Consequently, all sketches are structural and gradual approximations to what should be a complete correspondence to reality.

Let's now consider the hypothesis of the three inseparable moments that grounds each rational method.

Hypothesis 3: three moments to access reality. *Each rational method (scientific, philosophical and theological) is grounded in three inseparable moments: (i) a fundamental immediate experience in the sense of an apprehension of reality, (ii) a milieu where we apprehend things in relation to previous knowledge (language and a field of reference) and (iii) an elaboration of theories or sketches. Through experiences one apprehends each real thing as individual. Through the field of references and language one intellectually knows what the real thing is in function of other realities previously apprehended. Elaborated theories or sketches are the methodological explanation of what things are and why they are. Finally, the notion of "reality" is intimately related to these three inseparable moments of the rational method.*

This hypothesis depends closely on chapter 3 and chapter 4. Ladrière's point of departure is an inductive analysis of different historical figures of reason. Meanwhile's Zubiri's point of departure is a phenomenological analysis of the human act of intelligence. Both of them affirm that the act of intelligence consists of three moments: a fundamental immediate experience,

language (or Zubiri's *logos*) and reason. The fundamental experience, primordial experience in Zubiri, is a moment of receptivity, apprehension and productivity¹⁹²¹. It is not a pure passivity where one only receives data or pure facts. This moment is active and is not separable from language or reason. The fundamental immediate experience triggers the moment of language and the moment of reason. Language is the milieu where we apprehend one thing in function of others already apprehended. It is also the milieu of meaning where we apprehend the meaning of things with respect to my own personal existence. Consequently, language is a moment of production of meaning. Finally, reason is the moment where we deepen our knowledge of reality. It is a knowledge that seeks to explain and to comprehend. The first two moments are about reality as apprehended in the fundamental immediate experience. Language seeks to describe, identify and judge this reality as apprehended. Reason is about reality beyond our apprehension. This reality beyond apprehension is the objective of all sciences and philosophy.

These three moments are part of an anthropological structure that enables every human being to apprehend and live in a reality. Revelation as God's self-communication assumes and transfigures this anthropological structure. There is a spiritual experience as an authentic human experience¹⁹²². It is about the reality of the Kingdom as apprehended through the experience of faith. Perhaps, it would be better to say that it is the reality of God's Kingdom as it apprehends us. This experience triggers and becomes a language with content. Ordinary language is transformed (transfigured) to become a language of faith where one makes sense of the spiritual experience. The spiritual experience triggers reason, theological reason as faith seeking understanding of God's revealed reality beyond our apprehension and experiences.

The discovery of these three moments, by means of Ladrière inductive method and Zubiri's phenomenological analysis as explained in chapter 4, results in some benefits for the theological endeavor and its relationship with other disciplines. When we consider these three inseparable moments in theological rationality we surpass the false conflict between those who consider that the ground of theology is a spiritual experience and those who consider it is a religious inspired language. They cannot be detached. Moreover, we surpass the idea that religion is about subjective feelings meanwhile science is an objective rationality. Sciences and theology, as all rationalities, are grounded in a fundamental experience, in language and in reason. They are historical, conditioned by a mental horizon and always open to be surpassed by other sketches. Moreover, in sciences and theology we find three levels of truth that are sometimes confused.

¹⁹²¹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 200. J. LADRIÈRE, *L'articulation du sens III*, p. 269.

¹⁹²² J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 199.

There is a real truth related to the fundamental experience, there is a dual truth related to affirmations and judgments (language and *logos*). Finally, there is the level of rational or reasonable truth related to created models, hypotheses and theories. Neither theology nor sciences are about real immediate divine or worldly truths but rational or reasonable truths that require to be confirmed through experience as testing.

V.4. Grounds of a dialogue and articulation between natural sciences and theology

The first three hypotheses (the orders of reality, the homologous rational structure and the three inseparable moments to access reality), discussed in chapters 2, 3, 4 and 5, ground the possibility of a dialogue and articulation between natural sciences and Christian theology. The order of manifestation (studied by natural sciences) is assumed and transfigured by the order of revelation (studied by theology). Some metaphors or formulations that affirm that the world is a subset of God (i.e., Arthur Peacocke's image about the relationship between God and the world) do not do justice to these assumptions and transfigurations. We already mentioned that the incarnated *Logos* is the subsistent truth of the cosmos and of revelation. This implies that rational truths found by natural (or social) sciences and philosophy are not alien to theology. They can enter into a dialogue because they share a homologous rational structure. If religion in general and Christianity in particular were about mere "feelings" and natural sciences about theoretical reason, the dialogue would be impossible. However, we have shown that that is not the case. The homologous structure and the three moments of fundamental immediate experience, language and reason render possible a dialogue and an articulation between these rationalities¹⁹²³.

The following chapter will go beyond the ground of a dialogue to a method of articulation. It will discuss and explain the foundation of our fundamental hypothesis:

Fundamental hypothesis: *An articulation of scientific worldviews in systematic theology is possible through the mediation of philosophy. In this articulation, philosophy enables us to transform the semantics of scientific worldviews, to be used in theology.*

¹⁹²³ In Bourguine's words: "En offrant à l'expérience chrétienne un accès à l'expression rationnelle, la théologie rend possible un dialogue avec la philosophie, les sciences, la culture, avec l'instance politique et économique, comme avec les autres religions, sagesses et convitions." B. BOURGINE, *Que faire des premiers conciles?*, p. 473.

Chapter 6. The articulation between natural sciences and theology through the mediation of philosophy

I. Introduction

I.1 Specific objective and hypothesis of this chapter

The present chapter seeks to render explicit a method that integrates scientific worldviews, which include well-known and accepted scientific facts, into systematic theology. This chapter will elucidate the fundamental hypothesis of this present work:

Fundamental Hypothesis: *An articulation of scientific worldviews in systematic theology is possible through the mediation of philosophy. In this articulation, philosophy enables us to transform the semantics of scientific worldviews, born within some horizons of meaning related to the order of manifestation (nature, human action and human perception) to a horizon related to the order of revelation.*

We have concluded in previous chapter that there are two grounds that render possible an articulation between natural sciences and theology. There is a theological ground: the assumption and transfiguration of the order of manifestation by the order of revelation. In addition, there is an epistemological and an anthropological ground: the homologous rational structure of each rational field (sciences, philosophy and theology) grounded in the three moments: a fundamental immediate experience, the *logos* and reason.

For Ladrière, a dialogue between natural sciences and theology is possible although not necessary. Both fields of knowledge are autonomous with their own objects and methods. A dialogue is born of a free decision¹⁹²⁴. At this moment the reader may ask, why should theology consider the results of natural sciences? If the theological method is already complicated why should we impose now an interdisciplinary dialogue? In reality, based on what we have already argued in previous chapters, there is a plurality of justifications for such interdisciplinary dialogue. These motives are presented now.

Finally, in this chapter we will propose a theological method that articulates scientific worldviews through the mediation of philosophy. We will propose a series of philosophical mediations: epistemology, natural philosophy, ethics and philosophy of the ultimate meaning of human life and cosmic existence. Following these mediations, especially the last three, we will elaborate three examples of systematic theology that articulates scientific worldviews through the

¹⁹²⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 283.

mediation of philosophy. These examples are: (i) a reinterpretation of the theological concept of “creation”, (ii) a theology of human action and (iii) a spiritual theology of the contemplation of God’s creation.

Let’s start with the motives for an interdisciplinary dialogue between sciences and theology.

I.2 Theology should take into consideration natural (and human) sciences for the following reasons:

I.2.1 Theology’s mission

Theology seeks to understand and communicates the meaning of revelation in a particular and concrete cultural context, i.e., a mental horizon. Our context is shaped by natural sciences, which produce an enormous impact in our image of the world¹⁹²⁵. Some limit questions are being elaborated and addressed to believers¹⁹²⁶. These questions are related to the specificity of the human being in the cosmos, the sense of cosmic and biological evolution, the possibility of freedom vis-à-vis current research in neurosciences and the ultimate meaning of human existence. Believers must address these existential questions. We cannot be satisfied with a simple repetition of formulas from the past that were born in other mental horizons.

In order to address our culture being shape by sciences, Christian theology must encounter modern scientific reason in a dialogue that could be fruitful for both. The lack of encounter between theology and natural sciences may cause one to think that there is an enormous abyss between Christian beliefs and scientific worldview.

I.2.2 Methodology

As we have mentioned already in previous chapters, speculative theology seeks to articulate the internal coherence of revelation with knowledge of other realities. A dialogue with other rationalities (e.g., natural and social sciences, philosophy and history) is inherent to theology¹⁹²⁷. The first speculative efforts used speculative concepts from Greek and Latin philosophy, specially metaphysics¹⁹²⁸, to understand the deposit of faith¹⁹²⁹.

¹⁹²⁵ J. LADRIÈRE, *L’articulation du sens III*, p. 283.

¹⁹²⁶ J. LADRIÈRE, *L’articulation du sens III*, p. 284.

¹⁹²⁷ For Lonergan this dialogue is part of the functional specialization of communication. See chapter 5, section II.2.3.3. See also X. ZUBIRI, *Cristianismo*, p. 500.

¹⁹²⁸ Examples of this initial effort of speculative systematization are Origen’s “*On First Principles*” and Saint Augustin’s *The City of God*. X. ZUBIRI, *Cristianismo*, p. 24-25.

Some contemporary scientific views can suggest new metaphors and concepts that could help theology better understand the content of faith¹⁹³⁰. Science can contribute to theology with its particular way of seeing the world, e.g., its knowledge of the different modes of reality in which creation unfolds.

I.2.3. God's presence in the world

We already mentioned that God is present in everything and in everybody. This presence of God reaches its climax in the incarnation of the *Logos*. The *Logos* becomes one with the cosmos and with history. As a consequence, our world is the House of God's subsistent truth. God's presence in everything and God's incarnation grounds the assumption of the order of manifestation and self-constitution by the order to revelation and salvation. This implies that there are no rational truths found by natural (or social) sciences and philosophy that are alien or indifferent to theology. What scientists discover says something, at least indirectly, about God's will and action in the world. Karl Rahner affirmed this in a speech presented shortly before his death. There he affirmed that through natural sciences (and through artistic expressions) we find God's action in the world:

*"If as a theologian I inquire not about an abstract concept of God, but wish to approach God directly, then absolutely nothing of what God has revealed as Creator of the world, as Lord of history, should be uninteresting to me. [...] Rather, everything through which God permits God's very self to be perceived in this creaturely world will be of interest to me. [...] Although I would like to know more about the variety of human experiences as explored in the sciences, the arts, and historical events, I am quite ignorant of much of this. For the theologian all these human experiences speak of God even if the individual theologian knows very little about them."*¹⁹³¹

I.2.4. Relationship between creation and salvation

Salvation is not reduced to life after death without any relation to creation or history. Creation is the place of revelation and salvation. We can consider the sacraments as examples of the value that creation has for salvation. Creation is already a moment of salvation and not something alien to God's self-communication. Natural sciences are rationalities that study this world created by God.

¹⁹²⁹ X. ZUBIRI, *Problema filosófico de la historia de las religiones*, p. 275-276.

¹⁹³⁰ J. LADRIÈRE, *L'articulation du sens III*, p. 283.

¹⁹³¹ K. RAHNER, *Experiences of a Catholic theologian*, p. 12.

I.2.5. Salvation of the whole human person

Theology is about salvation as divine fulfillment of all dimensions of the human person. This includes human capacities for theoretical knowledge and for concrete actions. Natural sciences are part of human theoretical knowledge that has strong consequences for human actions, i.e., applied sciences and technological development. Theology must consider these aspects, which are and should be affected by God's act of salvation.

I.3 Difficulties in the articulation of science into systematic theology

I.3.1 Temptation to reductionism

However, as we have seen in our analysis of natural sciences, there is always a need of a methodological reductionism, i.e., scientific objects are reduced to observable interactions between them¹⁹³². However, there is a temptation to go from a methodological reductionism to a metaphysical reductionism¹⁹³³ or to a theory reductionism. This last reductionism is the attitude to interpret another field of research as a special case that belongs to a major and more relevant scientific discipline. This attitude becomes an obstacle to discover other fields' novelty in terms of object and method¹⁹³⁴. We have seen many attempts to reduce one field into another: biology reduced to physico-chemistry; philosophy reduced to psychology; evolutionary biology reduced to functional biology; human sciences reduced to philosophy; theology reduced to philosophy of religion or religious science; ethics and religion reduced to evolutionary biology, etc. These attitudes render difficult a dialogue among scientists and theologians.

I.3.2 Sciences' temptation to self-sufficiency

There is in science a fair claim for autonomy¹⁹³⁵. However, this claim sometimes has led scientists to a belief, still persistent today, that science will explain all reality, will lead us to all forms of truth, will unveil all mysteries, will solve all problems and will render us happy¹⁹³⁶. This attitude hinders the human person from being open to faith¹⁹³⁷.

¹⁹³² See chapter 2, section III.5.1.

¹⁹³³ This type of reductionism claims that in order to understand the whole we have to dissect it into its components, and again these components into theirs, until we arrive to the lowest hierarchical level.

¹⁹³⁴ J. LADRIÈRE, *L'articulation du sens III*, p. 287.

¹⁹³⁵ This is the principle of self-sufficiency. See chapter 2, section I.3.f. See J. LADRIÈRE, *Approches philosophiques de la création*, p. 15-16. J. LADRIÈRE, *Foi chrétienne et le destin de la raison*, p. 202.

¹⁹³⁶ Consider for example the following thesis of Richard Dawkins: "Why are scientists so cravenly respectful toward the ambitions of theologians, over questions that theologians are certainly no more qualified to answer than scientists themselves". "Perhaps there are some genuinely profound and meaningful question that are forever beyond the reach of science. Maybe

However, history and philosophy of science during the 20th century have shown the limits of science. A scientific proposition is always provisional¹⁹³⁸. It is always a process to advance in our knowledge of things as all rational knowledge. As we have discussed, it is impossible for natural sciences to justify themselves. Their justification is beyond the object and method of natural sciences. Only a philosophical meta-science can justify and ground natural sciences¹⁹³⁹.

These aspects should render natural sciences open to other rationalities. Scientists should consider other non-scientific knowledge when they are confronted with some existential questions and some metaphysical consequences that emerge from scientific worldviews. As we already discussed, there are questions about reality and meaning that are triggered by some scientific representations. Limit-questions are ultimate questions and issues that are at the innermost core of our search for meaning because their answers are fundamental for what we are and do. These questions are born inside scientific research, but they are beyond the limits of scientific methods of inquiry and validation. Consider quantum mechanics and evolutionary biology that triggered the question about the role of chance in physical reality and in life. Neurosciences pose some questions about the relationship between mind and body. Cosmology and evolutionary biology raise questions about the interaction of the human being and the cosmos. These questions are already about the meaning of the cosmos and the meaning of human existence. These are questions that natural sciences cannot answer in principle because they are not part of the scientific method.

II. The place of mediation between science and theology

After discussing the possibility, convenience and difficulty for theology to dialogue with natural sciences, we should raise another question. When theologians try to articulate scientific worldviews into systematic theology, can they borrow concepts directly from science to interpret Christian revelation and tradition?

II.1 On the difficulties of borrowing scientific concepts to be used immediately in systematic theology

*quantum theory is already knocking on the door of the unfathomable. But if science cannot answer some ultimate question, what makes anybody think that religion can?" "Like nothing else, evolution really does provide an explanation for the existence of entities whose improbability would otherwise, for practical purposes, rule them out. And the conclusion of the argument [...] is close to being terminally fatal to the God hypothesis". R. DAWKINS, *The God Delusion*, p. 80 and 85.*

¹⁹³⁷ J. LADRIÈRE, *Foi chrétienne et le destin de la raison*, p. 204.

¹⁹³⁸ J. LADRIÈRE, *Science et théologie*, p. 3.

¹⁹³⁹ This has been the objectives of Husserl's phenomenology, of Ladrière's analysis of concrete rationalities and of Zubiri's analysis of the act of intelligence.

Ladrière affirms that there is a need of mediation between natural sciences and theology that renders possible a dialogue¹⁹⁴⁰. This mediation should participate at the same time of both perspectives. But, what is that mediation? In one text Ladrière implies that the idea of rationality itself is the necessary mediation that provides the terrain of an encounter between sciences and theology¹⁹⁴¹. If the idea of rationality is the necessary and sufficient mediation, then we can use scientific concepts produced by scientific rationality immediately in the theological rationality. This is what some theologians do, which we have studied in the first chapter¹⁹⁴². They borrow concepts from astronomy, quantum theory, evolutionary biology and neurosciences to be used in their systematic theologies. We find this at least problematic.

There are three arguments against this. The first argument is based on the relationship between the two orders of manifestation and revelation. Following Ladrière, there is a continuity-discontinuity between the order of manifestation and the order of revelation. Using directly scientific concepts into systematic theology “con-fuses” both orders. One is reduced to the other! When the order of revelation assumes the order of manifestation the first order does not annihilate the autonomy and self-sufficiency of the second order. This is analogous to the Christian belief that Christ’s divinity does not annihilate his humanity. There is an assumption without confusion.

A second argument is based on the differences found in the three moments of the intellectual act in sciences and theology. There is a difference at the level of the fundamental immediate experience: different events trigger the fundamental experiences (manifestation of a real thing vis-à-vis God’s self-communication). Scientific language (speculative and formal) and religious language (performative) cannot be reduced one into the other. In terms of reason, natural sciences and theology have different systems of references (the perceptive field of reality vis-à-vis the deposit of faith), different type of sketches (models, hypothesis and scientific theories vis-à-vis interpretative commentaries and theological systems) and finally different types of testing (laboratory testing vis-à-vis testing the fidelity to the sources).

Third, there is an argument based on *a priori* methodological principles that guide scientific research, which we have already discussed¹⁹⁴³. The principle of empirical reduction implies that

¹⁹⁴⁰ J. LADRIÈRE, *Science et théologie*, p. 7.

¹⁹⁴¹ “L’instance médiatrice recherchée doit pouvoir intervenir dans les deux cas et elle doit donc avoir elle-même un caractère suffisamment général pour être en mesure de fournir un terrain de rencontre à la fois à la science, à la théologie et à la philosophie. L’hypothèse que l’on proposera ici est que cette instance médiatrice pourrait être l’idée de rationalité.” J. LADRIÈRE, *Science et théologie*, p. 8.

¹⁹⁴² We refer to the “Christian naturalistic theology” or the “naturalistic understanding of Christian faith” as discussed in chapter 1, section III.1.1.

¹⁹⁴³ See chapter 2, section I.3.f. See also J. LADRIÈRE, *Approches philosophiques de la création*, p. 15-16.

objects of a particular science are reduced to observable interactions among them. The principle of self-sufficiency implies that natural sciences should explain all phenomena from other phenomena in the cosmos. Sciences must not go outside cosmic or human reality, for example to a transcendental realm, in order to explain the structure of a phenomenon. This means that a scientific field is autonomous and contains all necessary principles of intelligibility to explain the structures and interactions of natural phenomena¹⁹⁴⁴. Consequently, scientific concepts have not been elaborated to be used beyond the autonomous realm of the perceptible cosmos.

These arguments render problematic the direct and immediate use of scientific concepts in theology¹⁹⁴⁵. The following is our interpretation of Ladrière's text where he mentions that the idea of rationality is the mediation between natural sciences and theology:

The idea of rationality is a mediation in the sense of being a condition of the possibility of an articulation between natural sciences and theology. This condition of the possibility is the homologous rational structure shared by scientific and theological disciplines.

In other words, the idea of rationality, in the sense of the homologous rational structure, is a necessary but not sufficient condition for an articulation. This means that although we should avoid the immediate use of scientific concepts in theology, there are other types of articulations. This is an issue to be discussed in the following section.

II.2 The place of a methodological mediation between science and theology: the human quest for meaning

Although natural sciences and theology do not share the same system of reference, type of sketches and testing, they can be articulate from the perspective of their contribution to the life of meaning¹⁹⁴⁶. Human life is immersed in a flux of particular meanings that constitute, as a whole, the possibility of making sense of human existence. Here meaning designates a horizon from which a language, an action, an encounter, a thought, a desire and affection are understood. In other words, meaning is a horizon from which different aspects of human existence and the cosmos "make sense". Through meaning we seek to provide a structure and consistency to our

¹⁹⁴⁴ J. LADRIÈRE, *Science et théologie*, p. 8.

¹⁹⁴⁵ James Pambrun arrives to the same conclusion when he analyses Ladrière's contributions to the dialogue between natural sciences and theology. For Pambrun "there is no direct route between science and theology. Efforts within existing dialogues which attempt to bring the finding of science too quickly to the threshold of theology not only frustrate the long term solutions to the challenges encountered by faith in its own dialogue with modern culture, but also generate a situation in which is impossible for science not to feel perplexed by the response of theologians and their appeal to notions such as creation, providence, divine initiative, etc." See J.-R. PAMBRUN, *Theology, Modern Science and the Mediation of Meaning. A Reflection on the Contribution of Jean Ladrière*, p. 485.

¹⁹⁴⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 306-307.

human life. In other words, human persons need and require meaning to configure and achieve their life.

Human persons encounter meaning for their existence in the human environment surrounded by language, symbols, art, rites and tradition. All of these compose what we call culture. Here culture is the milieu, a symbolic universe, from which we formulate the meaning of human existence¹⁹⁴⁷. Therefore, it is evident that reason is not only scientific reason. Reason is also a modality of human self-understanding¹⁹⁴⁸ that includes the human quest for meaning. It also involves actions and personal projects that mediate the construction of our personal life.

What are the contributions of natural sciences to this quest for meaning? Although natural sciences are not about the meaning of our lives, they produce an image of the cosmos that has an impact in our self-interpretation. A person, by wondering about the existence of the cosmos, then by reflecting on it, poses questions about the existence of the cosmos and the mystery of human life. What are the contributions of theology to our quest for meaning? Theology contributes by being about God as the ultimate reality that creates us, reveals Himself to us, and calls us to achieve our personal reality in Christ.

Natural sciences and theology contribute to this quest for meaning from the perspective of two horizons of meaning. Although we can distinguish these horizons, they are not fully separated and can be articulated. A possible and provisional articulation between both horizons is grounded in the unity of the human person: it is the human being who has a homologous structure of the intelligent act; the world manifests itself to the human person (the foundation of natural sciences); God reveals Himself to the human person (the foundation of theology) and it is the human person who is in a quest for meaning to construct and achieve his existence.

The human quest for meaning is the place of a possible articulation between natural sciences and theology.

We have clarified the place of a possible articulation. Let's now consider the mediator.

III. Philosophy as a hermeneutical mediation between natural sciences and theology

Between science and theology there is a need of a mediator that in some way participates of both perspectives¹⁹⁴⁹. At the same time it should respect the autonomy of each field and recognize what separates them. In addition, this mediator should be in direct relationship with

¹⁹⁴⁷ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 50.

¹⁹⁴⁸ J. LADRIÈRE, *L'articulation de sens III*, p. 109-110.

¹⁹⁴⁹ J. LADRIÈRE, *Science et théologie*, p. 7.

that quest for meaning that characterizes the human being. For multiple reasons philosophy is that rationality that operates as a bridge between natural sciences and Christian theology¹⁹⁵⁰. The following is a non-exhaustive list of reasons that justifies the mediating role of philosophy. This list corresponds to Ladrière's concept and type of philosophy¹⁹⁵¹.

III.1 *Philosophy as a critical rational knowledge of the conditions of the human being's experience, language and reason*

Phenomenology seeks to apprehend and understand principles and conditions of the human experience that grounds all rational knowledge¹⁹⁵². These principles, that are conditions of the possibility of all rational knowledge (including scientific, philosophical and theological knowledge), are discovered by means of a phenomenological reduction¹⁹⁵³. Consequently, phenomenology can be defined as the self-understanding of experience¹⁹⁵⁴, its conditions of possibility and its different modalities¹⁹⁵⁵.

Philosophy can be a mediator because it makes explicit the ground and the presuppositions of natural sciences and theology. By means of the category of experience, philosophy, at least phenomenology, goes beyond the false opposition subject – object. Phenomenology has shown that there is a fundamental correlation between the accessible world (sense) and its comprehension (intelligibility)¹⁹⁵⁶. Consequently, the couple experience-intelligibility cannot be separated as explained by Ladrière and Zubiri¹⁹⁵⁷. This is the ground that justifies natural sciences within the order of manifestation.

Phenomenology also shows the possibility of religious experience from an anthropological point of view¹⁹⁵⁸. Philosophy shows that theology is grounded, at least from the human perspective, in the anthropological structure of experience-language-reason. This shows that theology is not meaningless¹⁹⁵⁹, but reasonable. This is the ground of theology within the order of revelation.

¹⁹⁵⁰ J. LADRIÈRE, *L'articulation de sens III*, p. 18 and 288-289. This is also the position of Dominique Lambert for whom we cannot go directly from an observation of a material world's phenomenon to theological considerations. D. LAMBERT, *Une articulation des sciences et de la théologie est-elle légitime ?*, p. 524, 534 and 536. See also J.-R. PAMBRUN, *Theology, Modern Science and the Mediation of Meaning. A Reflection on the Contribution of Jean Ladrière*, p. 469-470 and 491.

¹⁹⁵¹ Ladrière's concept and discussion about the different types of philosophy were discussed in chapter 4, section II.4.

¹⁹⁵² J. LADRIÈRE, *L'articulation de sens III*, p. 271.

¹⁹⁵³ J. LADRIÈRE, *L'articulation de sens III*, p. 271.

¹⁹⁵⁴ J. LADRIÈRE, *L'articulation de sens III*, p. 294.

¹⁹⁵⁵ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 188

¹⁹⁵⁶ J. LADRIÈRE, *L'articulation de sens III*, p. 295.

¹⁹⁵⁷ See chapter 4, sections II.3.1 and III.2.

¹⁹⁵⁸ J. LADRIÈRE, *L'articulation de sens III*, p. 295.

¹⁹⁵⁹ J. LADRIÈRE, *L'articulation de sens III*, p. 305.

In addition to a reflection and clarification about all types of “experiences”, philosophy also clarifies the role of all forms of human languages in our effort to understand and make sense of the world and ourselves. Natural sciences are speculative languages in the sense of going from the experience (as observation) to models or theories that “represent” the invisible structure of real things. Theology is a discourse about the invisible Kingdom of God that is revealed to us. This discourse seeks to uncover the systematic structure of the revealed deposit of faith. Philosophy could be a mediator because it is a speculative language that goes from the visible to the invisible realm of the ultimate condition of the manifestation and the cosmos self-constitution¹⁹⁶⁰. The objective of the speculative philosophical language is to describe, interpret and understand reality as it becomes self-constituted and manifested¹⁹⁶¹. For that reason it can become a mediator between scientific languages and theological speculative language. It shares with natural languages and theology the speculative-transgressive movement from the visible to the invisible. Philosophy as a critical analysis of human knowledge can become a mediation between natural sciences and the field of fundamental theology.

III.2 *Philosophy as a hermeneutics of nature and the whole of reality*

Natural sciences seek to understand the structure of the cosmos and its constitution. However, a sole scientific perspective of the cosmos is not complete¹⁹⁶². It misses the ultimate meaning of the cosmos that natural sciences cannot provide. The objective of philosophy as a hermeneutics of nature is not to develop a scientific theory, but to understand the ultimate foundation of reality’s self-constitution¹⁹⁶³. It is the effort to go beyond the phenomenal realm to arrive at the primordial foundation from where everything emerges¹⁹⁶⁴. Philosophy aims to understand reality as such, its unfolding, its foundation and our experience of it¹⁹⁶⁵. It seeks to understand the different modes of reality: matter, life and conscience¹⁹⁶⁶. Philosophy also seeks the ultimate absolute foundation of all reality. This ultimate foundation is what Christian believers call “God”. Consequently, a philosophy of nature can be a bridge between scientific worldviews and some of theology’s fields (e.g., creation theology and theological anthropology).

¹⁹⁶⁰ J. LADRIÈRE, *Approches philosophiques de la création*, p. 15.

¹⁹⁶¹ J. LADRIÈRE, *L’articulation de sens II*, p. 129.

¹⁹⁶² J. LADRIÈRE, *Science et théologie*, p. 22.

¹⁹⁶³ LADRIÈRE, J., *L’articulation de sens III*, p. 267.

¹⁹⁶⁴ LADRIÈRE, J., *L’articulation de sens III*, p. 270.

¹⁹⁶⁵ J. LADRIÈRE, *L’articulation de sens III*, p. 291-292 and 302.

¹⁹⁶⁶ See X. ZUBIRI, *Inteligencia y Realidad*, p. 213-214.

III.3 *Philosophy as a hermeneutics of human action*

Natural sciences and Christian theology are products of theoretical reason. However, following Kant's philosophy, Ladrière affirms that reason is not only the effort to understand reality as a whole. Besides theoretical reason there is practical reason, which is a reflection about different aspects of human action. Theoretical and practical reason are not independent of each other. On the contrary there is a relation between them. This is obvious in the connection between natural sciences (theoretical reason) and applied sciences or technology (practical reason). Technology is necessary for the development of theoretical sciences. At the same time theoretical sciences enable the development of technologies. Similarly, there is a relation between speculative (theoretical) and pastoral theology (practical). Faith is not disconnected from practice and charity.

Philosophy is also an interpretation of human action. Human actions are not meaningless. Actions emerge from interpretations of the meaning of particular events and the meaning of human existence as a whole. For Ladrière, ethical analysis and discourse is about the conditions and ultimate orientation of reasonable actions¹⁹⁶⁷ grounded in the interpretation of human existence¹⁹⁶⁸ and the calling to its fulfillment. Ethics is related to judgments, rules and norms related to the path that the human person should follow in order to fulfill himself¹⁹⁶⁹.

Ethics can be a mediator between applied sciences and technology (lumped together in the concept of techno-sciences) and some fields of Christian theology (theological anthropology, moral theology and practical theology).

III.4 *Philosophy as hermeneutics of the ultimate meaning of the human existence*

Natural sciences produce an image of the cosmos that has an impact on our interpretation of the meaning of the cosmos and human existence. Christian systematic theology contributes to the quest for meaning by presenting Christ's revelation as the ultimate meaning of creation and the human person. Speculative philosophy as hermeneutics of the human existence is an interpretation of the human life. This is the idea of philosophy as a self-understanding of life in a conceptual system¹⁹⁷⁰. It starts by opening the radical questions about the meaning of human existence and its ultimate foundation¹⁹⁷¹: Who am I? Where do I come from? Where am I going?

¹⁹⁶⁷ J. LADRIÈRE, *L'articulation du sens III*, p. 178. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 43.

¹⁹⁶⁸ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 32.

¹⁹⁶⁹ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 53.

¹⁹⁷⁰ J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 57. J. LADRIÈRE, *Vie sociale et destinée*, p. 21.

¹⁹⁷¹ In that sense, everybody who searches for meaning has at least an implicit philosophy.

Is there any meaning in life, in the cosmos and in our society? Philosophy tries to find the ultimate foundation to an authentic life project that brings sense to human existence and its unfolding in relation to the cosmos. For this reason philosophy is a mediator between the contributions of natural sciences and Christian theology to the human quest for meaning¹⁹⁷².

IV. The articulation of meaning through the mediation of philosophy in a double movement of semantic transgression

As we have indicated, the place of methodological mediation between natural sciences and theology is the human quest for meaning and the mediator is philosophy. Following our previous list of reasons that justify the mediation of philosophy we will develop four non-exhaustive¹⁹⁷³ forms of articulation between natural sciences and theology: (i) epistemological mediation, (ii) metaphysical or philosophy of nature's mediation, (iii) ethical mediation and (iv) the ultimate meaning's mediation.

IV.1 Epistemological mediation

One concrete form of this mediation is the clarification of the objects and methods of natural sciences and Christian theology. This mediation is a form of dialogue that clarifies the epistemological grounds, boundaries and presuppositions of each field of knowledge. Theology benefits from this dialogue by clarifying in what sense its method is rational and scientific. It clarifies theology's object and method. In addition, natural sciences benefit by realizing that their scientific methods are limited and cannot be self-justified. Natural sciences require a meta-science in order to justify their methods and axioms (presuppositions).

This dialogue is between natural sciences methodologies or meta-sciences and fundamental theology, which has the objective to ground the act of faith and to clarify theology's object and method. This research work as a whole is our modest contribution to this epistemological clarification. For that reason we will not develop further this topic¹⁹⁷⁴.

In addition to this epistemological clarification, there are other possible avenues to articulate the meaning of concepts and discourses across different horizons of signification in

¹⁹⁷² According to Lambert, "*l'articulation entre les sciences et la théologie se réalise au niveau d'un débat herméneutique, autrement dit au niveau d'une recherche de sens*". D. LAMBERT, *Une articulation des sciences et de la théologie est-elle légitime ?*, p. 526.

¹⁹⁷³ They are non-exhaustive because we do not pretend that they are the only ones.

¹⁹⁷⁴ Some well-developed works that follow this epistemological mediation are: Dominique LAMBERT, *Sciences et théologie. Les figures d'un dialogue*; Bernard LONERGAN, *Method in Theology*; Wolfhart PANNENBERG, *Theology and the Philosophy of Science* and Philip LUSCOMBE, *Groundwork of Science and Religion*.

which each field of knowledge is established. That is the objective of the other three modalities of mediation.

IV.2 Metaphysical or philosophy of nature's mediation

In this mediation philosophy takes the form of a philosophy of nature or metaphysics. A philosophy of nature seeks to interpret the implicit meaning of some relevant scientific results and worldviews¹⁹⁷⁵. According to Ladrière, there are two movements, or two semantic transgressions: from scientific representations to a speculative (philosophical) discourse and from the speculative discourse to faith seeking understanding¹⁹⁷⁶.

IV.2.1 A semantic transgression from *phusis* to *theôria*: a philosophical hermeneutics of nature¹⁹⁷⁷

We have already discussed the movement from *phusis* to *theôria*¹⁹⁷⁸. *Phusis* is the horizon of meaning related to the structure of the cosmos. It seeks to understand the structures of phenomena that belong to the order of manifestation¹⁹⁷⁹. However, according to Ladrière what natural sciences seek is beyond the understanding of a particular phenomenon. It is to construct a coherent image of reality or a scientific worldview. What scientists want is to understand the world.

Theôria is the horizon from which we elaborate philosophical speculations. The speculative way of thinking is different from the scientific way. Philosophy does not seek to develop another type of representations that compete with natural sciences¹⁹⁸⁰. Here philosophy is a semantic transformation that becomes a hermeneutic of nature¹⁹⁸¹. It interprets the results of sciences and their image of the world¹⁹⁸². In other words, philosophy develops a hermeneutics of the scientific image of the world to elaborate a speculative reflection about the meaning of the cosmos' self-

¹⁹⁷⁵ J. LADRIÈRE, *Science et théologie*, p. 8.

¹⁹⁷⁶ "[...] comment ces représentations [scientifiques] pourraient-elles être reprises dans un discours spéculatif, et comment un tel discours pourrait-il s'assurer de faire droit à la visée de la foi ?" J. LADRIÈRE, *L'articulation de sens II*, p. 290.

¹⁹⁷⁷ Here we take nature in two senses as Kant did: nature in the material sense of that word as the totality of appearances and nature in the formal sense, the totality of rules that must be applied to all appearances if they are to be connected by thought in an experience. Ladrière also makes a distinction between nature as the domain of "visible things" and nature as that which is accessible through a direct investigation. See I. KANT, *Prolegomena*, §36. J. LADRIÈRE, *L'articulation de sens II*, p. 289. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 198.

¹⁹⁷⁸ See chapter 4, section II.4.2.2.

¹⁹⁷⁹ J. LADRIÈRE, *Approches philosophiques de la création*, p. 14.

¹⁹⁸⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 295.

¹⁹⁸¹ J. LADRIÈRE, *L'articulation du sens II*, p. 295-296, 305. The expression "hermeneutics of nature" is also used by Dominique Lambert as equivalent to philosophy of nature or metaphysics. See Dominique LAMBERT, *Une articulation des sciences et de la théologie est-elle légitime ?*, p. 521 and 525.

¹⁹⁸² J. LADRIÈRE, *L'articulation du sens II*, p. 294.

constitution. Consider the following examples where the apprehension of contemporary scientific views evokes philosophical reflections and debates: (i) the role of chance and determinism, (ii) the role of complexity, (iii) the appearance of life and human conscience and the (iv) philosophical interpretation of the process of becoming. The philosophical questions and debates that emerge from the interpretation of some scientific representations or views imply theological questions and debates as well.

IV.2.2 A semantic transgression from *theôria* to *theologia*: a theological hermeneutics of the world

We already discussed the movement of semantic transgression from *theôria* to *theologia*¹⁹⁸³. It does not seek to develop a religious worldview in competition with scientific worldviews. This movement is a transformation of some philosophical concepts and discourses from the perspective of revelation. This enables a re-interpretation of scientific worldviews through the mediation of philosophy. Theology thinks about the cosmos and its self-constitution from the perspective of God's act of creation, God's self-communication and the final eschatological recapitulation, assumption and transformation of the whole in the event of Christ.

However, not all philosophical concepts or discourses are capable of being assumed and transformed by theology. There are philosophies of nature that clearly oppose the Christian message. They are not sciences although some authors try to propose their interpretation as scientific. Consider for example Herbert Spencer's Social Darwinism. For Spencer evolution is a global idea that can be applied to human societies. Spencer's hermeneutics of the Darwinian view of evolution proposes that the individual is the true social entity¹⁹⁸⁴ and that the strongest individuals emerge from the competition with other individuals, eliminating the maladjusted. According to this interpretation, social laws that protect weak and maladjusted individuals operate against the natural social progress¹⁹⁸⁵. For obvious reasons this interpretation is contrary to the Christian message.

IV.3 Ethical mediation

Ladrière develops the epistemological mediation in his three volumes of *L'articulation du sens*. In the second volume he leaves an outlined example of a mediation by means of a

¹⁹⁸³ See chapter 5, section III.5.5.3.

¹⁹⁸⁴ F. EUVÉ, *Darwin et le christianisme*, p. 87.

¹⁹⁸⁵ F. EUVÉ, *Darwin et le christianisme*, p. 88.

philosophy (hermeneutics) of nature¹⁹⁸⁶. In terms of the ethical mediation, he develops the subject of the relation between “nature” and “ethics” in many publications¹⁹⁸⁷. Moreover, he suggests an ethical mediation between theology and scientific and technological actions¹⁹⁸⁸.

Sciences are not only about theoretical knowledge. Scientific knowledge has an impact on human actions. Human actions enhanced by techno-sciences could be seen from the perspective of ethics or from the perspective of Christian faith. Here ethics mediates between techno-sciences and some fields of theology related to human action. We propose in the ethical mediation two semantic transgressions as in philosophy of nature’s mediation: from the horizon of meaning of *techne* to the horizon of *ethikos* and from *ethikos* to the horizon of *agape*.

IV.3.1 A semantic transgression from *techne* to *ethikos*: a philosophical deliberation over human action and achievement

We call *techne* the horizon of meaning of human action from which we elaborate what we call techno-sciences (natural sciences, applied sciences and technology). The term *techne* had two senses in the ancient Greek world. First, it meant the transformation of nature to produce an oeuvre of art. Second, it also meant the professions that apply general knowledge to particular cases, e.g., medicine or the fabrication of things. This last sense joins capacity (e.g., the capacity of a physician) and the art of transformation of matter (e.g., the action of a craftsman)¹⁹⁸⁹. We use the term *techne* considering this second meaning of the term. It is important to realize that this horizon is not independent of the horizon of *phusis*. These two horizons are intimately connected as theoretical sciences and applied sciences (or technology) are related.

Ethikos is the horizon of meaning from which we develop not theoretical knowledge exterior to the agent but knowledge to be applied to particular cases and the capacity to act in concrete situations. As Ladrière affirms it, ethics is above all a practice, which means that philosophical reflection is necessarily a second moment with respect to this practice¹⁹⁹⁰. For

¹⁹⁸⁶ See J. LADRIÈRE, *L’articulation du sens II*, p. 289-308. However, the brief outlined example should not be considered Ladrière’s final and definitive philosophy of nature. He has taught ten courses of philosophy of nature and his notes are still unpublished. The courses were taught in the years 1962, 1963, 1965, 1968, 1969, 1970, 1972 and 1983. See J. LADRIÈRE, *Bibliographie de Jean Ladrière*, p. 8-10.

¹⁹⁸⁷ For some examples see the n° 295, 454, 584 and 601 in his bibliography. J. LADRIÈRE, *Bibliographie de Jean Ladrière*, p. 49, 72, 92 and 94.

¹⁹⁸⁸ Ladrière develops an ethical mediation between politics and religion in J. LADRIÈRE, *L’éthique dans l’univers de la rationalité*, p. 197-211. Moreover, he suggests an ethical mediation between human action (technology and medicine) and theology in bioethical problems. See J. LADRIÈRE, *L’éthique dans l’univers de la rationalité*, p. 303.

¹⁹⁸⁹ I. GOBRY, *Le vocabulaire grec de la philosophie*, p. 197-199.

¹⁹⁹⁰ J. LADRIÈRE, *L’éthique dans l’univers de la rationalité*, p. 229.

Aristotle ethics is a practical science about human action (*praxis*)¹⁹⁹¹. However, this horizon is not independent of the horizon of *theôria*, which is related to a philosophical theoretical reflection. There is an ethical speculation or theoretical discourse in ethics necessary in the moment of deliberation or evaluation of human actions and their consequences. Knowledge without application is not practical (in the sense of *praxis*) and deliberation requires general principles or norms that have universal pretensions, which are the result of a theoretical ethics.

Not long time ago, technology was thought to be a field neutral from the perspective of ethics. Ethical evaluation was conceived as part of the technology's use or as part of the finality of a developed technology. According to this model, ethics only appears at the end of the whole process of technological development to illuminate the uses of a particular technology. In other words, ethics is absent from the process of research, design and manufacturing. However, as Ladrière clarifies us, technology imposes specific finalities to human actions. The choice of human actions and their ends (in the sense of *telos*) is already determined by available techniques¹⁹⁹². As Ladrière affirms:

*“Technology includes in itself ethical issues that are not merely added through users’ intentions. These ethical issues belong intrinsically to the constitution of the technological endeavor.”*¹⁹⁹³

Consequently, the relationship between technology and ethics should be reframed differently. Today technology has become a horizon of meaning with its own autonomy, values, modes of development and with its own finalities. The horizon of *techne* should be seen as one dimension of human action besides other dimensions such as aesthetics creations, politics and economics¹⁹⁹⁴.

For Ladrière, ethics is inscribed in the structure of the human existence and its achievement¹⁹⁹⁵. The objective of ethics is the construction of a world authentically human and reasonable¹⁹⁹⁶. Consequently, it is a form of life that seeks to achieve human existence through concrete actions in concrete situations with norms that have universal pretension. As a

¹⁹⁹¹ M. CRUBELLIER and P. PELLEGRIN, *Aristote*, p. 153.

¹⁹⁹² J. LADRIÈRE, *Préface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 9.

¹⁹⁹³ “... la technique comporte en elle-même des enjeux éthiques, qui ne lui sont nullement surajoutées par les intentions mais qui appartiennent à sa constitution intrinsèque”. J. LADRIÈRE, *Préface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 10.

¹⁹⁹⁴ J. LADRIÈRE, *Préface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 10.

¹⁹⁹⁵ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 13-14 and 24. J. LADRIÈRE, *La foi chrétienne et le destin de la raison*, p. 116 and 203.

¹⁹⁹⁶ J. LADRIÈRE, *L'articulation du sens III*, p. 179.

consequence, ethics is not added as something exterior to technology. Ethics' objective provides the values and the meaning of technological development¹⁹⁹⁷.

There are ethical issues and problems because human persons are capable of having an effect on themselves by their own free initiative. At the same time, free initiative, which is nothing less than human freedom, becomes effective through human action¹⁹⁹⁸. The most determinant moment of human action is the moment of a free decision that carries values and the human personal project. Human decision is a personal self-involvement in a concrete action that achieves (or denies) these values and personal project. In that sense, human decisions manifest the agent's interpretation of human life's meaning. This explains why a human decision requires (or at least should require) a deliberation process, which prepares a decision through a judgment of a concrete situation and an evaluation of possible courses of actions¹⁹⁹⁹. An ethical judgment of a concrete situation of technological development and possible set of actions, in conformity with ethical norms, is already an articulation between technological actions and ethics.

However, this deliberation and ethical judgment is not performed in abstraction. It is influenced by interior motives such as personal bias, predetermined ideas, feelings and personal experiences. There are as well exterior influences that have an effect on the deliberative process: a mental horizon as a certain comprehension of the human condition and meaning of life as inherited from the cultural-historical context and the affiliation to communities²⁰⁰⁰. This comprehension of the meaning of life is what Ladrière calls the worldview²⁰⁰¹. This worldview is a universe of values and meaning that inspires human actions. This is precisely the horizon of *ethikos* from which we evaluate and interpret human actions, including technological actions, and from which we operate our deliberation to make decisions. This worldview gives a concrete form to ethical objectives²⁰⁰². It includes values as principles of orientation and evaluation of decisions and actions²⁰⁰³.

Ethics is an intrinsic part of the technological practice. Ethical questions about values and finality of technological development emerge precisely from technological actions. Technical actions, as all human actions, are inseparable from a complex network of meanings constituted by personal motivations, finalities, relations to social life, political and economical institutions. This

¹⁹⁹⁷ Clearly there is a relation between the technological dimension and other dimensions of human actions such as the political and the economical aspects. J. LADRIÈRE, *Preface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 11.

¹⁹⁹⁸ J. LADRIÈRE, *Préface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 12.

¹⁹⁹⁹ J. LADRIÈRE, *Préface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 12.

²⁰⁰⁰ The mental horizon was explained in chapter 4, section III.4.3.2.

²⁰⁰¹ J. LADRIÈRE, *Préface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 13.

²⁰⁰² J. LADRIÈRE, *Préface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 14.

²⁰⁰³ J. LADRIÈRE, *Préface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 15.

network of meaning conforms to the horizon of *ethikos*. However, there will always be a temptation to reduce the meaning of technological action to its technical efficiency leaving aside the ethical horizon²⁰⁰⁴.

IV.3.2 A semantic transgression from *ethikos* to *agape*: a theological discernment of human action and achievement

We call *agape* the horizon of meaning of human action which is seen from the perspective of revelation. Human achievement through actions is seeing from God's revelation and self-communication in Christ as witnessed by Scriptures and Tradition. The horizon of *agape* is not independent from the horizon of *theologia*. A Christian anthropological and moral reflection on human actions, norms and values is in relation to the horizon of *theologia*. Nonetheless, *theologia* is a speculative-theoretical horizon of faith while *agape* is a horizon about human praxis' meaning from the perspective of evangelical values and discernment.

If ethical deliberation is done from the perspective of a philosophical worldview as a universe of values and meaning, a theological discernment is done from the perspective of God's Kingdom and its values that inspire an evangelical praxis. The objective of a theology done from the perspective of *agape* is to develop a theological discernment of a concrete situation and ethical problem that includes techno-scientific actions. This theological discernment, done from the perspective of salvation and liberation, has the objective of illuminating the decision process according to God's will. The Kingdom of God includes criteria and values that orientate actions. Consider for example the criterion of our human dignity as God's sons and daughters and the evangelical values of justice, fraternity, solidarity, charity, service, peace and the promotion of every human being, especially those in a weak position.

In the horizon of *agape* there are theological fields that think human action, propose norms to discern human actions and reflect about communities' actions in our societies: these are theological anthropology, moral theology (or Christian ethics) and practical theology. They are grounded in the system of reference of first order language of faith (Scriptures and Tradition) and they elaborate reflections to enlighten Christian action.

IV.4 The mediation of the ultimate's meaning

²⁰⁰⁴ J. LADRIÈRE, *Préface*, in B.-H. DUBREUIL, *Imaginaire technique et éthique sociale*, p. 18.

This mediation is about the search of the ultimate meaning of human life and cosmic existence. It is the search for an ultimate foundation of the cosmos and the human existence that grounds an authentic life project in relation to other human beings and to the universe. In a sense it lumps together all other mediations: it is the final and formal goal of all rational efforts: the ultimate meaning of the whole as reached by theoretical rationalities and their methods (epistemological mediation), the ultimate foundation of the whole cosmos (philosophy of nature's mediation) and the ultimate foundation of human actions and personal projects (ethical mediation). Although it assumes all three, this mediation goes beyond them: it is about God's presence and action in the whole as the absolute foundation of all reality and the ultimate meaning of the human existence.

We propose, following our previous discussion about the philosophy of nature's mediation and the ethical mediation, two semantic transgression movements where philosophy acts as a mediator: from the horizon of meaning of *aisthesis* to the horizon of *sophia* and from *sophia* to the horizon of *mysterion*.

IV.4.1 A semantic transgression from *aisthesis* to *sophia*: a philosophical meditation on the ultimate foundation of all reality

The horizon of meaning of *aisthesis* is related to the horizon of *phusis* and the horizon of *techne*. *Aisthesis* is the horizon of perception or sense. As we already discussed, for Ladrière and Zubiri sense and intelligence are not two distinct acts, but one act that grounds all knowledge, including natural sciences²⁰⁰⁵. However, this act is not reduced to scientific rational knowledge. Our reality is affected continuously by the manifestation of things in the cosmos. This fundamental immediate experience of nature, art and other human persons may cause an existential experience of wonder and respect. The horizon of *aisthesis* is the horizon of the existential experience of wonderment. When human beings contemplate in silence a view of the cosmos, an œuvre of art or contemplate other fellow humans, they are capable of "hearing" and even "touching" something that is beyond them and their understanding²⁰⁰⁶.

The horizon of *sophia* is about the search for the source of this experience of wonderment and the source of human actions and freedom²⁰⁰⁷. For Aristotle the *sophos* is he who

²⁰⁰⁵ See chapter 4, sections II.3.1 and III.2.

²⁰⁰⁶ Touching and hearing in the sense of Zubiri. See chapter 5, section IV.2.2.

²⁰⁰⁷ I. GOBRY, *Le vocabulaire grec de la philosophie*, p. 185.

contemplates the “principles” of all knowledge²⁰⁰⁸. *Sophia* is the knowledge of *being qua being*²⁰⁰⁹. As a consequence, *sophia* is the highest and most universal science of the whole reality. The wise man, the *sophos*, lives for this contemplative life, the *bios theoretikos*. This horizon, although it assumes the horizon of *theôria*, goes beyond a mere speculative effort. As Zubiri affirms:

*“But if, by a supreme effort, man is able to fall back upon himself, he will sense the ultimate questions of existence pass by his unfathomable depth like umbrae silentes. The questions of being, of the world, and of truth echo in the depths of his person. Imprisoned in this new sonorous solitude, we find ourselves situated beyond the totality of what merely is, in a type of transreal situation, a situation which is strictly transphysical; it is in fact metaphysical. Its intellectual formula is precisely the problem of contemporary philosophy.”*²⁰¹⁰

This sonorous solitude is the attitude of the *sophos* who contemplates in a new way the whole of reality and who seeks the ultimate absolute foundation of all.

IV.4.2 A semantic transgression from *sophia* to *mysterion*: a spiritual contemplation of God’s presence in the world

The horizon of *mysterion* is the horizon of the human openness to welcome and receive God’s incomprehensible reality presents in all created reality. God’s self-communication is “contemplated” neither as a sensorial vision nor as a speculative discourse but as a spiritual experience produced by grace that affects all human dimensions: affective, intellectual, volitional, relational and moral. *Mysterion* is a spiritual horizon that subsumes all other theological horizons: *theologia* and *agape*.

There is a theological field that belongs to this horizon: spiritual theology. Spiritual theology is a theological reflection on this spiritual contemplation of God’s presence and God’s self-communication to the human being through creation, the sacraments, human actions and spiritual practices. As a theological reflection it requires speculative concepts of God’s presence in created things. For that reason it borrows concepts and discourses from the horizon of *sophia*. These concepts and discourses from the horizon of *sophia* are transformed following a semantic

²⁰⁰⁸ X. ZUBIRI, *Cinco lecciones de filosofía*, p. 26.

²⁰⁰⁹ ARISTOTLE, *Metaphysics*, Γ, 1.

²⁰¹⁰ “Pero si, por un esfuerzo supremo, logra el hombre replegarse sobre sí mismo, siente pasar por su abismático fondo, como umbrae silentes, las interrogantes últimas de la existencia. Resuenan en la oquedad de su persona las cuestiones acerca del ser, del mundo y de la verdad. Enclavados en esta nueva soledad sonora, nos hallamos situados allende todo cuanto hay, en una especie de situación trans-real: es una situación estrictamente trans-física, metafísica. Su fórmula intelectual es justamente el problema de la filosofía contemporánea.” Underlined emphasis is ours. X. ZUBIRI, *Naturaleza, historia y Dios*, p. 32.

transgression movement. Through an act of faith and grace and the mediation of *sophia*, the experience of wonderment becomes a spiritual experience. This experience of wonderment is a first moment. The rational reflection about it is a posterior moment. Through the mediation of *sophia*, theology reflects about our spiritual contemplation of God's presence in creation. In the horizon of *mysterion* the sonorous solitude to which Zubiri refers becomes the sonorous solitude of the mystics. Zubiri borrows the expression "sonorous solitude" from the 14th stanza of the Canticle A and the 15th stanza of the Canticle B of Saint John of the Cross' "*Cántico Espiritual*"²⁰¹¹. In the 13th stanza of the Canticle A, the "mountain" is a metaphor that suggests the height of the Beloved, the "strange islands" (*ínsulas extrañas*) is the metaphor of God's mystery, the "sonorous river" suggests the act of listening something that extinguishes the exterior noise²⁰¹². In the 14th stanza, the "silent music" and the "sonorous solitude" produce a semantic opposition. They suggest the harmony of the universe and the harmony that the spirit experiences when it encounters God²⁰¹³. That is precisely the attitude and the experience of the person who encounters and contemplates God's presence.

In the following section we will propose a theological method that articulates scientific worldviews into systematic theology. This method will consider the two movements of semantic transgression developed for the last three mediations (philosophy's of nature's, ethical and ultimate meaning). Then we will provide three examples that show how this method operates in each mediation.

V. A theological method to articulate scientific worldviews in Christian systematic theology: a proposal

²⁰¹¹ *Cántico Espiritual*

Cántico A

La Esposa

"13. Mi Amado, las montañas,
los valles solitarios nemorosos,
las ínsulas extrañas,
los ríos sonoros,
el silbo de los aires amorosos.

14. La noche sosegada
en par de los levantes de la aurora,
la música callada,
la soledad sonora,
la cena que recrea y enamora."

Cántico B

La Esposa

"14. Mi Amado, las montañas,
los valles solitarios nemorosos,
las ínsulas extrañas, los ríos sonoros,
el silbo de los aires amorosos,

15. La noche sosegada
en par de los levantes del aurora,
la música callada,
la soledad sonora,
la cena que recrea y enamora."

JUAN DE LA CRUZ (Saint), *Cántico Espiritual y Poesía Completa*, p. 20 and 91.

²⁰¹² L. LÓPEZ-BARALT, *Acedios a lo indecible. San Juan de la Cruz canta al éxtasis transformante*, p. 72-73.

²⁰¹³ JUAN DE LA CRUZ (Saint), *Cántico Espiritual y Poesía Completa*, p. 20.

After the long effort to understand scientific, philosophical and theological rationalities²⁰¹⁴, we have discussed a possible articulation and the necessary mediation between natural sciences and theology. Now we will propose one possible method to integrate scientific worldviews, actions enhanced by technological development and the experience of wonderment into systematic theology. This method should respect the autonomy of each field of knowledge in terms of the differences of objects and methods. It is not our aim to produce a final global system that integrates natural sciences and theology and that operates as an explanation of the whole. That would be neither science nor theology. Our goal is to develop a theological method that integrates scientific worldviews, thoughts about technological development and the experience of wonderment when we contemplate nature into systematic theology through a double semantic transgression movement (following one of the mediations just explained in previous sections). In other words, it is a theological articulation inside one horizon of faith, e.g., *theologia*, *agape* or *mysterion*.

Although the point of departure is always revelation and faith, from a methodological point of view, a theologian can start his effort in two ways. First, theologians can go directly to the sources of theology. Then they can articulate their interpretations through concepts that emerge from the double semantic transformation movements. A second possibility is to dialogue with natural and applied sciences, be attentive to the limit questions that emerge from theoretical or applied sciences and then elaborate theological responses.

We will present an explicit method following the first methodological possibility, which could easily be modified to become the second possibility. Nonetheless, we will provide examples of both.

Following Zubiri, we need three scientific theologies: biblical-exegetical, historical and speculative. With respect to a particular theological topic, a systematic theologian should search what the Scriptures, the Fathers of the Church, the magisterium and other theologians have already said. Then, the theologian could develop a systematic speculative theology, a theology of human actions that includes theological discernment or a spiritual theology considering speculative concepts transformed to be used in a horizon of faith. Let's consider three steps, each one related to one type of scientific theology.

V.1 First step: biblical exegesis and theology

²⁰¹⁴ This was done in chapter 3, 4 and 5.

For a particular theological subject or concept, a theologian we must always hear what Scriptures affirm. Systematic theologians are not seeking necessarily to develop their own personal exegesis. Their objective is to read Scriptures as theologians. Following Sandra Schneiders, we propose a reading from three different, although complementary, perspectives²⁰¹⁵. However, we recognize that other types of readings are possible.

As Sandra Schneiders reminds us, a biblical text is at the same time historical, literary and transformative. This multidimensionality of biblical texts is related to different focuses of concern, which act as points of view from where we read the Scriptures. Schneiders considers that these three focuses of concern are the “world behind the text”, “the world of the text” and the “world before the text”. The first one is the point of view from which the text becomes a window of an ancient world. The second point of view corresponds to the text as generator of meaning. The third one relates to the significance of the text for the contemporary reader. We can understand the different methods of interpretation from the perspective of these points of views. The “world behind the text” point of view is normally related to a diachronic way of regarding the text that searches for the history of composition. In order to understand the text’s historical contexts and compositions, exegetes use historical criticism approaches (form, source and redaction criticism). The basic methodological questions are “what are the sources, the historical-cultural contexts and the literary forms of this particular text?” Granted the enormous contribution of the historical criticism approaches, it is currently accepted that these methods are not enough to interpret the meaning of biblical texts. The “world of the text” relates to a synchronic reading of the text. It is concerned with the text as it stands. Literary methods of interpretation follow this synchronic way (canonical approach, narrative criticism, parables research, rhetorical criticism, etc.). Its methodological question is “what is the message (meaning) that the text wants to convey?” The third point of view concerns the impact the text has on the reader (or community of hearers). This point of view has been developed recently and bears the influence of Ricœur’s notion of “narrative identity”. It searches for the transformation of the readers’ actions, attitudes and way of life. The sociological and psychological criticisms belong to this focus of concern. The methodological question is “what changes do the text want to provoke in the reader?”

As Schneiders affirms, there is no such thing as the correct focus of concern (you need all of them), the one correct method (you need multiple methods), and one definitive interpretation.

²⁰¹⁵ See S.-M SCHNEIDERS, *The Revelatory Text, interpreting the New Testament as Sacred Scripture*.

There is a surplus of meaning in the interpretation of biblical texts, which implies an effort of interpretation that will never be total and definitive²⁰¹⁶. What really starts the process of interpretation is not the type of method used, but a series of questions that ground our search for meaning and truth in the biblical texts²⁰¹⁷. In our case, these are questions that emerge from the dialogue between natural sciences and theology.

From these three perspectives a biblical theology should be developed. This biblical theology should make explicit God's relationship with humanity and the whole creation.

V.2 Second step: historical theology

The second step is to search what has been said about a particular subject or concept in dogmatic definitions, texts of the Fathers of the Church, declarations from the Church's magisterium and systems or commentaries produced by theologians from the past. This means that a theologian should interpret theological concepts that have been used already in the past and that have been elaborated from philosophical concepts. To understand and interpret dogmatic definitions, magisterial declarations, texts of the Fathers and theologies from the past a theologian must take into consideration the historical context of their formulation. The objective is not to become a historian. The aim is to do a theological reading of different texts and affirmations from the past. Here we present our reinterpretation of Geffré's rules of historical hermeneutics²⁰¹⁸.

1. *To understand a dogmatic definition or any theological declaration from the past, we have to understand the historical context of its formulation that is determined by the relationship between question (or problem) and answer.* We have to understand the question and the challenge that a heterodox affirmation represents to the community of believers in a particular historical period. The dogmatic definition is an answer to this specific challenge. The theologian must discern the truth *de fide* of a dogmatic definition from its formulation, which is conditioned by the system of representations or mental horizons of an epoch. Something similar must be done with texts from the Fathers of the Church and other theologians from the past. We must interpret them considering their cultural and historical context. What are the difficulties they seek to address? Who are their interlocutors?

2. *Dogmatic definitions and any other doctrinal declaration must be read in the light of present interpretations of the Scriptures.* Scriptures are the first authority and norm with respect

²⁰¹⁶ S.-M SCHNEIDERS, *The Revelatory Text*, p. 153

²⁰¹⁷ S.-M SCHNEIDERS, *The Revelatory Text*, p. 154

²⁰¹⁸ See C. GEFFRÉ, *Croire et interpreter*, p. 42-50.

to other ulterior texts of the Church. This is the teaching of *Dei Verbum*: “*This teaching office is not above the word of God.*”²⁰¹⁹ The word of God here is the Scriptures as understood by the living tradition of the Church. We should not forget that this living tradition is responsible for the canon of Scriptures. Rahner gives some examples of how exegesis has contributed to a better understanding of some doctrines of the church²⁰²⁰. According to him, contemporary exegesis has helped theologians to better understand (i) the relationship between the immanent Trinity and the economic Trinity; (ii) to develop an ascending Christology from the encounter with the man Jesus and (iii) to avoid monophysitism that sees in the human nature of Christ a kind of marionette in the hands of God.

3. *Dogmatic definitions and doctrinal declarations must be interpreted in light of a critical reading that belongs to our new mentality and context.* Our contemporary mentality of men and women of the XXIth century operates as a pre-comprehension in the hermeneutic circle. This does not mean that we should reduce the Christian message to the mentality of modern persons. It does not mean either that we should adapt Christian message to all aspects of the modern ethos as a permissiveness that could betray the Gospel. It means that we should consider the modern mentality and conscience, e.g., scientific knowledge, human rights, our conscience of the equal dignity of men and women, the conscience of democratic values, etc. If we do not consider our mental situation we risk repeating ancient formulas that will sound empty to our contemporaries.

4. *A reinterpretation of a dogmatic statement could imply a new reformulation.* Some concepts used in dogmatic statements, doctrinal declarations and other texts from the Fathers of the Church or theologians from the past, mean something different today. In explaining a dogma we should use new contemporary concepts. This does not mean that the ancient formulation is false. It was a valid and justifiable response to a question and it will always be a resource of intelligibility for the comprehension of Christian faith. However, a change of concepts and formulations could be necessary to be faithful to the meaning of faith. Consider the concept of “transubstantiation”. The formulation that in the Eucharist there is a “transubstantiation” of the bread and wine into the body and blood of Christ is true and justifiable. However, the term “substance” does not have the same meaning today that it had in the time of the formulation of the doctrine. Today’s explanation of this doctrine should use other concepts to explain the “real presence” of Christ.

²⁰¹⁹ SECOND VATICAN COUNCIL, *Dei Verbum*, No. 10.

²⁰²⁰ K. RAHNER, *Exégèse et Dogmatique*, p. 44-46.

V.3 Third step: the development of speculative theology

Taking into consideration biblical exegesis, biblical theology and historical theology the theologian seeks to articulate the internal coherence of revelation with knowledge of other realities or practices (e.g., scientific knowledge or technological actions) through the mediation of philosophy. It is in this step where concepts are elaborated via the two semantic transgressions movements proposed.

Particular scientific worldviews, facts and thoughts about actions enhanced by technosciences are expressed by means of concepts or discourses. These concepts and discourses are transformed into philosophical concepts. Then these philosophical concepts are transformed into theological concepts in the horizons of *theologia*, *agape* or *mysterion* to develop theological systems, to answer a limit question or to discern a situation and decide a particular course of action. The theologian should discern what are the plausible philosophical concepts, deliberations, values or criteria to be used in the second movement of semantic transgression. Not all concepts, norms, criteria or values are compatible with the Christian message.

The following section will provide three examples of this method.

VI. Three examples: the concept of creation, human impact on the environment through technological development and a contemplative-spiritual theology of God's presence in the cosmos

In this section we develop three examples of systematic theology in dialogue with scientific worldviews through the mediation of philosophy. These examples are: (i) a reinterpretation of the theological concept of "creation", (ii) a theology of human action and (iii) a spiritual theology of the contemplation of God's creation. Our objective is to present concrete examples that illustrate the already explained steps to articulate natural sciences into the theological discourse and the benefits for systematic theology to dialogue with natural sciences. Furthermore we seek to show that our proposed method is, at the same time, faithful to the "deposit of faith", clearly a theological effort that follows an explicit theological method and it enables us to develop a theology that seeks to creatively understand revelation taking in consideration our contemporary mental horizon influenced by natural sciences.

We choose and develop these three examples following the three proposed philosophical mediations: natural philosophy, ethics and philosophy of the ultimate meaning of human life and

cosmic existence. For that reason each example is different from the other two. We do not pretend to be exhaustive with them or to develop a full theological system.

The first example is about a reinterpretation of the theological concept of creation of the universe in dialogue with recent developments in the field of cosmology, subatomic particles physics and evolutionary biology. We will see how these sciences may help us understand today the meaning of creation. The second example is a limit question. There we will confront the environmental crisis from which emerges a question about the meaning of today's human action characterized by technological advances that produces an enormous impact on the environment without equal in other moments in history. Finally, the third example will be the development of a spiritual theology rooted in a contemplation of God's presence in the cosmos.

VI.1 The autonomy of creation: an interpretation in dialogue with natural sciences

In this section we will reinterpret the theological notion of creation in dialogue with cosmology, elementary particle physics and evolutionary biology. Due to its relevance for the other two examples we will develop this example in more detail. Following our proposed method, we will start with the biblical notions of creation. We will focus our attention in the analysis of four biblical texts: Gen 1,1-2a; 2 Maccabees 7,1-42; Col 1, 15-20 and Jn 1²⁰²¹. These texts will be analyzed taking into consideration the perspective of “the world behind the text”, “the world of the text” and “the world before the text”. Finally, from each text we will retrieve the fundamental biblical theology of the notion of creation. In this section we will present only the biblical theology retrieved from the texts. The details of our reading from the perspectives as formulated by Schneiders is presented in Appendix 1.

In a second step we will see some posterior theological evolutions of the concept of creation. In this example we will analyze some texts of two Fathers of the Church, Irenaeus of Lyon and Saint Augustine, and two medieval theologians, Saint Thomas Aquinas and John Duns Scotus. Then we will analyze four magisterial formulations (dogmatic and ordinary magisterium). Finally, in the section of speculative theology, we will perform two movements of semantic transgression (a philosophical and a theological hermeneutics of nature) following some of Ladrière's, Gesché's and Zubiri's insights.

VI.1.1 First Step: Biblical exegesis and theology

²⁰²¹ In a more detailed analysis we should have taken into consideration the whole plurality of texts from the Hebrew Bible and from the New Testament.

VI.1.1.1 Hebrew Bible and Deuterocanonical books

A. Biblical theology of the Priestly Narrative of Creation: Genesis 1,1 - 2,4a

As we already affirmed in chapter 5, the task of biblical theology is to present what the biblical texts say about God's relationship to human beings and to creation. Here we will present different aspects of the biblical theology of the Priestly account related to creation: God's act of creation through his word and the relation between creation and the Covenant.

A.1 God's act of creation

According to André Wénin, from the point of view of God there are two modes of creation in the narrative of Gen 1, 1–2, 4a. None of them are about a creation *ex nihilo*. The first mode is a victory over chaos, which is in some way an act of salvation²⁰²². The formless void and darkness in Gen 1,1 evokes the image of a devastated uninhabitable village (Is 24,10), the image of a desert where death rules (Dt 32,10) or the world of death (Gen 7,11 and Ex 15,5). However, God does not destroy the elements of chaos hostile to life. They are limited and integrated into the created world²⁰²³. God uses his wind (*rûah*) in his act of creation, but how? God's *rûah* evokes, like a superlative, the power of God's wind²⁰²⁴, or better, the power of God's storm (Dn 7, 2)²⁰²⁵. Gen 1,1 suggests an image of God's power waiting, trembling and self-controlled²⁰²⁶. This metaphor conveys the impression that to start the act of creation God restrains his own power which could become a devastating force with the capacity to annihilate everything. The power of God's wind is calmed down and modulated in a creative word. God's creative word structures creation as it structures the narrative²⁰²⁷.

The second mode of creation appears in the creation of living beings (vegetation, animals and human beings)²⁰²⁸. It is the gift of life that renders possible a multiplicity of different species that are characterized by being fecund. The plants have their own seeds that assure their reproduction (Gn 1,11). Animals and humanity received a blessing and an invitation to be fruitful and to multiply (Gn 1,22 and 28). This mode of creation suggests that God does not keep for Himself the power of fecundity. On the contrary, this is a gift shared with living creatures whose lives can be fecund without God's direct intervention. Moreover, God delegates some of his

²⁰²² A. WÉNIN, *D'Adam à Abraham*, p. 28.

²⁰²³ A. WÉNIN, *D'Adam à Abraham*, p. 34.

²⁰²⁴ Speiser translates it as "an awesome wind". E.A. SPEISER, *Genesis*, p. 3 and 5 (note 2).

²⁰²⁵ A. WÉNIN, *D'Adam à Abraham*, p. 29.

²⁰²⁶ A. WÉNIN, *D'Adam à Abraham*, p. 30.

²⁰²⁷ See Psalm 33,6 for the relationship between God's *rûah* and God's words in creation.

²⁰²⁸ A. WÉNIN, *D'Adam à Abraham*, p. 34.

power to his creatures²⁰²⁹: the heavenly bodies control time, humanity is responsible for the earth and all living things are responsible to multiply themselves. After entrusting some of his power and seeing that it was very good, God can and will retreat in the seventh day.

What does God do during the seventh day? This is seen in the parallelism between two verses:

“on the seventh day God finished the work that he had done” (Gen 2,2).

“on the seventh day He rested from all the work that he had done” (Gen 2,3).

According to Wénin, this parallelism between “finished” (in the sense of achieved) and “rested” implies that they should be taken as synonyms²⁰³⁰. For the Hebrew, God’s rest and retreat is what achieves the act of creation. If God does not withdraw creation would not be achieved. These two modes of creation, from the viewpoint of God, suggest an act of withdrawal that allows the world to finish itself and to continue the creative work. God takes the risk of having a creation that is achieved as an autonomous world, in particular through the human being who is responsible for the earth²⁰³¹.

In conclusion, in this narrative God shows his “omnipotence” by limiting his own power²⁰³². God is more powerful than his own forces²⁰³³.

A.2 God’s words and the act of creation as separation: the viewpoint of the creature

According to the text, God’s word exists before created realities²⁰³⁴. The visible world contains the traces of God’s creative words²⁰³⁵. These traces are evident in some created things that act as vicarious words: the heavenly bodies are words in the sense of having a semantic function for liturgical festivities. Consequently, God’s act of creation is not only about the creation of things, but the creation of meaning²⁰³⁶. The word of God inserts meaning in creation and in time. This is clear by the affirmation that “God saw that it was good”. The human being, created in God’s image, is a being that has the power of the word²⁰³⁷, i.e., the power of meaning.

²⁰²⁹ A. WÉNIN, *D’Adam à Abraham*, p. 34.

²⁰³⁰ A. WÉNIN, *D’Adam à Abraham*, p. 35.

²⁰³¹ A. WÉNIN, *D’Adam à Abraham*, p. 36.

²⁰³² P. BEAUCHAMP, *Testament biblique*, p. 27.

²⁰³³ This is the sense of the book of Wisdom that affirms the following: “For your strength is the basis of your saving justice, and your sovereignty over all makes you lenient to all. You show your strength when people will not believe in your absolute power, and you confound any insolence in those who do know it. But you, controlling your strength, are mild in judgment, and govern us with great lenience, for you have only to will, and your power is there.” (Wis 12, 16-18, according to the translation of the New Jerusalem Bible).

²⁰³⁴ P. BEAUCHAMP, *Testament Biblique*, p. 18.

²⁰³⁵ A. WÉNIN, *D’Adam à Abraham*, p. 24.

²⁰³⁶ P. BEAUCHAMP, *Testament Biblique*, p. 21.

²⁰³⁷ P. BEAUCHAMP, *Testament Biblique*, p. 22.

The way the word of God structures the world is through the act of “separation.”²⁰³⁸ He separates light from darkness, waters under the dome from the waters above the dome and the earth from the sea. God’s word distinguishes different times by means of three types of heavenly bodies, different types of vegetation (plants and fruit trees of every kind), three groups of animals (monsters, fishes and birds) and three types of animals on earth (cattle, creeping things and wild animals), each one according to their own species. One of the characteristics of God’s creative words in this narrative is precisely this continuous act of separation and distinction. This separation that constitutes each thing in its “otherness” is the condition that renders possible a world seen by God as very good²⁰³⁹. God’s creative word creates each thing through these separations. In a second movement each thing is integrated in a network of relations where it finds its place, its utility and its fecundity²⁰⁴⁰. The text affirms that God is the Absolutely Other that grounds the otherness of each created thing. Each thing is not self-grounded but grounded in God.

A.3 Relationship between creation and the Alliance

For the reader there is a theological echo between ten creative words and the Ten Commandments that create the people of Israel²⁰⁴¹. The Priestly writer orients his message about the creative words of God toward God’s word in one man, Moses²⁰⁴². The Ten Commandments are ten words that separate God from the idol; the father from the son and the generations; the Israelite from his son, his daughter, his animals and from the foreigner. These ten words separate in order to establish correct relations where life and freedom can be developed.

When God creates an autonomous world He prepares the terrain for the Covenant. The Covenant presupposes free partners that choose to assume their limits to open a space for the life and freedom of the other²⁰⁴³. Moreover, the Covenant could not be accomplished if there is no word exchanges between God and the human being. To be involved in a Covenant is to “hear” the “word” of the partner. To conclude, the Covenant means that the human being hears God and that God hears the human being²⁰⁴⁴.

²⁰³⁸ A. WÉNIN, *D’Adam à Abraham*, p. 31-33.

²⁰³⁹ A. WÉNIN, *D’Adam à Abraham*, p. 32.

²⁰⁴⁰ A. WÉNIN, *D’Adam à Abraham*, p. 33.

²⁰⁴¹ A. WÉNIN, *D’Adam à Abraham*, p. 26.

²⁰⁴² P. BEAUCHAMP, *Testament Biblique*, p. 17.

²⁰⁴³ A. WÉNIN, *D’Adam à Abraham*, p. 36.

²⁰⁴⁴ P. BEAUCHAMP, *Testament Biblique*, p. 29.

B. Biblical theology of 2 Maccabees 7,1-42

B.1 A theology of martyrdom.

The theology of 2 Maccabees affirms that if any Jew suffers or perishes undeservedly, he will be resurrected as recompense²⁰⁴⁵. This book prolongs beyond death the theme of justice and retribution. It also develops the belief of the resurrection of the dead as a new creation.

B.2 Creation as an affirmation from faith

Creation is not the primary theme of the text, which is about the resurrection of the just. However it is an essential part. The text witnesses a process of further elimination of any anthropomorphism with respect to God's acts. The text confesses, at the same time, its ignorance and its faith in the act of creation. Here the writer distinguishes two orders: the explanation of the beginnings that comes from historical or cosmological knowledge vis-à-vis the confession of faith²⁰⁴⁶. Cosmological theories and philosophical reflections about the beginnings have a value in themselves and will depend on the provisional state of the human effort of understanding. The confession of faith is about the belief that God is the creator of everything even when we ignore how He does it. Although there is an evolution in the formulation between Gen 1 and 2 Macc 7, there are some constant elements: the idea of creation is attached to the idea of a unique God and the belief that in the whole creation the human being remains a privileged being to whom God addresses his word directly and his Law²⁰⁴⁷.

B.3 Creation *ex nihilo*?

In 2 Mac 7,28 the Greek formulation *ouk ex ontôn* has been translated in Latin as *ex nihilo* and passed to later Christian theology as the root of the posterior doctrine of creation *ex nihilo*. However the Greek expression has two possible translations²⁰⁴⁸: (i) “*not from things that existed*”, (ii) “*from things that did not exist*”.

The first possible translation could be interpreted as follows: “*Though no individual things existed, God created the world from undifferentiated raw matter.*”²⁰⁴⁹ This undifferentiated raw

²⁰⁴⁵ R. DORAN, *2 Maccabees*, p. 735.

²⁰⁴⁶ P. GIBERT, *Bible, mythes et récits de commencement*, p. 148.

²⁰⁴⁷ P. GIBERT, *Bible, mythes et récits de commencement*, p. 151.

²⁰⁴⁸ J.A. GOLDSTEIN, *II Maccabees*, p. 307. Pierre Gibert considers both translations as possible. (i) “*Dieu a tout fait non à partir de ce qui était (déjà)*”, (ii) “*Dieu a tout fait à partir de ce qui n'était pas.*” P. GIBERT, *Bible, mythes et récits de commencement*, p. 143.

²⁰⁴⁹ J.A. GOLDSTEIN, *II Maccabees*, p. 307.

matter is what precedes creation in Genesis 1: the formless void, the water and the darkness. The second possible translation implies that nothing existed before creation²⁰⁵⁰. Both translations are grammatically correct and possible. Did the author intend without any ambiguity to affirm creation *ex nihilo*? Both, Goldstein and Gibert affirm that the theology of creation *ex nihilo* is not affirmed here. Nevertheless, one thing is clear, the text expresses that God is the absolute origin of everything that exists and of the gift of life after death. This affirmation of God as the origin of everything is found in other texts of the New Testament.

Rom. 4:17 “*as it is written, ‘I have made you the father of many nations’—in the presence of the God in whom he believed, who gives life to the dead and calls into existence the things that do not exist.*”²⁰⁵¹

Heb 11, 3: “*By faith we understand that the worlds were prepared by the word of God, so that what is seen was made from things that are not visible.*”²⁰⁵²

VI.1.1.2 New Testament

C. The biblical theology of the hymn of Colossians 1,15-20

C.1 The Cosmic Christ

This hymn emphasizes the cosmic dimension of Christ. Christ is the origin of everything in the cosmos. At the same time, He is the Firstborn of creation and the Firstborn of the new creation (through his resurrection). The historical event of Christ, in whom and for whom everything is created, manifests that creation was not a remote act in a far-distant past. On the contrary, creation continues in Christ’s life, death and resurrection. Christ’s resurrection achieved the cosmos as a new creation that is totally reconciled in Him.

Cosmology and soteriology, protology and eschatology are linked and articulated in the risen and cosmic Christ²⁰⁵³. Christ, the Firstborn and the Risen Lord, assures and hold up the coherence of the cosmos. The cosmos is not a meaningless place always threatened to be destroyed and annihilated. On the contrary, the event of Christ grounds the interpretation that the

²⁰⁵⁰ P. GIBERT, *Bible, mythes et récits de commencement*, p. 143.

²⁰⁵¹ Paul is referring to the faith of Abraham in God. Paul invites the reader to belief in the God who gives life to the death (2 Macc) and the God who is the creator of everything. The dead refers perhaps to Abraham old age. The call into existence of things that did not exist may refer to Abraham’s and Sarah’s difficulties in having the promised offspring. However there is a connection between creation and life given to what did not exist as found in 2 Macc 7. See B. BYRNE, *Romans*, p. 153-154. J. FITZMYER, *The letter to the Romans*, in *The New Jerome Biblical Commentary*, p. 843.

²⁰⁵² This text clearly states that is by faith that we believe. It also manifests the connection between God’s word (Gen 1) and the formation of the world made from things that are not visible (2 Macc 7).

²⁰⁵³ A. DETTWILER, *L’épître aux colossiens*, p. 296.

cosmos is good. Finally, “Christ gathers in Himself the creator and the creature, during time and for all eternity.”²⁰⁵⁴

D. The biblical theology of John 1, the Prologue

D.1 Christ is God’s Word, the origin of the cosmos and its achievement

The central theological nucleus of the Prologue is double. First, it identifies Christ with God’s *Logos*, which translates the Hebrew *dabar* (word), and with God’s Wisdom. Second, it reveals that this *Logos* is God²⁰⁵⁵. As in Genesis, the author affirms that through God’s Word everything exists. However, he does not say how this happens.

Until the event of Christ, the origin of creation could not be apprehended in its whole truth²⁰⁵⁶. Seeing creation from the horizon of Christ enables us to recognize that the origin of the world belongs to an order different from the order of scientific or speculative knowledge²⁰⁵⁷. The origin of the universe belongs to God’s Wisdom and *Logos*. The temporal beginning of the cosmos and its mechanism belong to science and philosophy. Having said that, the ultimate origin of the world is a mystery that becomes clear through the event of Christ including his resurrection. This is further developed in the Book of Revelation. The inaccessible origin of the world is the *Logos* who is the Alpha and the Omega (Apoc., 1,8.17) who recapitulates the beginning and the end (Eph 1, 9-10; Apoc. 22,13), who makes all things new (Apoc. 21, 5). Christ is the achievement that will be manifested at the end where the Lord of God will be the light that vanquishes darkness forever (Apoc. 22, 1-5)²⁰⁵⁸. Here the notions of creation and salvation are combined in the concept of a "new creation" where the new heaven and earth will be revealed.

VI.1.2 Historical theology and the concept of creation

VI.1.2.1 The Fathers of the Church

The Fathers of the Church further developed the notion of creation. Within them we find a diversity that should be explored. Due to the limits of this work we will only consider the contribution of Saint Irenaeus of Lyon and Saint Augustine. These two authors are significant for

²⁰⁵⁴ P. GIBERT, *Bible, mythes et récits de commencement*, p. 263.

²⁰⁵⁵ P. GIBERT, *Bible, mythes et récits de commencement*, p. 264.

²⁰⁵⁶ P. GIBERT, *Bible, mythes et récits de commencement*, p. 265.

²⁰⁵⁷ P. GIBERT, *Bible, mythes et récits de commencement*, p. 265.

²⁰⁵⁸ The end of the Book of Revelation is a clear reference to Gn 1 and to Jn 1.

the theological concept of creation. Saint Irenaeus is an Ante-Nicene Father while Saint Augustine is a Post-Nicene Father. Both of them had to confront at different time periods a recurrent dualism characterized by a pessimist consideration regarding matter and creation. Finally, they have been very influential in posterior theologians in the East and the West.

A. Saint Irenaeus of Lyon and the creative act of God

Irenaeus reacts against the Gnostic's separation between a God who is Creator and a God who is Savior. Irenaeus affirms the unity of God Creator and Savior and the unity of creation and salvation. For him creation is an initiative from the Father through his two hands: the Son and the Spirit. The whole Triune God is involved in the act of creation. God is self-sufficiency and for that reason He is free in creating all things²⁰⁵⁹. Everything is a pure gift, including the goodness of matter, which is neither uncreated nor necessary to enable God's creation. Irenaeus critiques the Gnostic's idea that matter is uncreated and necessary for the act of creation²⁰⁶⁰.

God's power is manifested by the fact that the same God acts in the creation of an informed matter, which is created *ex nihilo* and also acts in giving forms to it. Both acts are consequences of God's goodness and will²⁰⁶¹. Against the Gnostics's dualism, Irenaeus affirms the goodness of matter and the goodness of the human being.

In Irenaeus, we find a strong connection between the mystery of Christ and creation. This Father of the Church affirms that there are two objectives in the incarnation of the *Logos*. The first motif of the incarnation is to fulfill God's adoption of humanity and the human being's divinization²⁰⁶². The second motif is to bring the sinner to God's friendship²⁰⁶³. Irenaeus believes that the first motif has the priority and is rooted in the creation act even before the reality of sin²⁰⁶⁴. For Irenaeus what ultimately answers the question about the objective of creation, and consequently about the meaning of the world, is the revelation of the incarnation.

²⁰⁵⁹ L.-F. LADARIA, *La création du ciel et de la terre*, p. 39.

²⁰⁶⁰ L.-F. LADARIA, *La création du ciel et de la terre*, p. 40.

²⁰⁶¹ L.-F. LADARIA, *La création du ciel et de la terre*, p. 41.

²⁰⁶² "Comment aurions-nous pu en effet avoir part à la filiation adoptive à l'égard de Dieu, si nous n'avions pas reçu cette communion avec Dieu, si son Verbe n'était pas entré en communion avec nous en se faisant chair ? C'est d'ailleurs pourquoi il est passé par tous les âges de la vie, rendant par là à tous les hommes la communion avec Dieu" (p. 366). "Car telle est la raison pour laquelle le Verbe s'est fait homme, et le Fils de Dieu, Fils de l'homme : c'est pour que l'homme, en se mélangeant au Verbe et en recevant ainsi la filiation adoptive, devienne fils de Dieu" (p. 368). IRÉNÉE DE LYON, *Contre les hérésies*, Paris, Cerf, 1985, p. 366 and 368. B. SESBOÜÉ, *Tout récapituler dans le Christ*, p. 109-113.

²⁰⁶³ "Car il fallait que le Médiateur de Dieu et des hommes, par sa parenté avec chacune des deux parties, les ramenât l'une et l'autre à l'amitié et à la concorde, en sorte que tout à la fois Dieu accueillît l'homme et que l'homme s'offrît à Dieu". IRÉNÉE DE LYON, *Contre les hérésies*, p. 366. B. SESBOÜÉ, *Tout récapituler dans le Christ*, p. 116-118.

²⁰⁶⁴ "[...] lui, le fils de Dieu devenu Fils de l'homme afin que par lui nous recevions la filiation adoptive, l'homme portant et saisissant le Fils de Dieu". IRÉNÉE DE LYON, *Contre les hérésies*, p. 348. B. SESBOÜÉ, *Tout récapituler dans le Christ*, p. 107-108 and 110.

The relationship between salvation and incarnation is developed through the concept of recapitulation. In Ireneaus, recapitulation implies a certain number of operations that express all salvation's aspects brought by Christ to humanity: to sum up, to assume, to recreate and to achieve²⁰⁶⁵. Christ sums up in himself the whole of human history. In Christ's particular destiny the totality of human histories and salvation history are concentrated. Christ assumes the visible universe and the human reality according to the double law of sovereignty and complete solidarity, which includes cosmic solidarity. Christ recreates, restores, and liberates humanity. This is the recapitulation's redemptive dimension. Finally, Christ achieves the whole creation by bringing to it the eschatological fulfillment.

B. Augustine and the fight against the Manichean.

For Augustine, the Father creates heavens and earth by his Word (*Verbum*) as an act of divine Love (the Holy Spirit). The Holy Spirit's role in creation is to finish the creative act and in Him all things return to God²⁰⁶⁶. Against the Manicheans' dualism, Augustine affirms that God creates everything and all creatures participate of God goodness. This participation is possible due to the radical difference between God and creatures²⁰⁶⁷. The world is not eternal; there has been a beginning. Without any necessity God creates everything *ex nihilo*²⁰⁶⁸, even the formless and imperfect matter that existed before God's creation of our world²⁰⁶⁹. The creation of the cosmos will be a second moment where this formless matter will receive the forms that constitute our world²⁰⁷⁰.

Augustine, in his commentaries on the book of Genesis, accepts that God creates literally in six days. Everything is already present in the original stuff of the universe. In order to explain the movement and development of living beings that will appear in the cosmos after six days, Augustine postulates the existence of the *rationes seminales*, invisible seeds. They are at the origin of everything and will grow during time into extended being. All creatures exist sometimes

²⁰⁶⁵ B. SESBOÜÉ, *Tout récapituler dans le Christ*, p. 160-163.

²⁰⁶⁶ L.-F. LADARIA, *La création du ciel et de la terre*, p. 50

²⁰⁶⁷ L.-F. LADARIA, *La création du ciel et de la terre*, p. 52

²⁰⁶⁸ L.-F. LADARIA, *La création du ciel et de la terre*, p. 53

²⁰⁶⁹ "If, then, Genesis is silent about anything that God hath made, which neither sound faith nor unerring understanding doubts that God hath made, let not any sober teaching dare to say that these waters were coeternal with God because we find them mentioned in the book of Genesis and do not find it mentioned when they were created. If Truth instructs us, why may we not interpret that unformed matter which the Scripture calls the earth--invisible and unformed--and the lightless abyss as having been made by God from nothing; and thus understand that they are not coeternal with him, although the narrative fails to tell us precisely when they were made?" AUGUSTINE, *Confessions*, XII, 22, 31, p. 209. L.-F. LADARIA, *La création du ciel et de la terre*, p. 50. V.-J. BOURKE, *The essential Augustine*, p. 98.

²⁰⁷⁰ L.-F. LADARIA, *La création du ciel et de la terre*, p. 50.

as “seeds” and sometimes as grown beings that came out of their *rationes seminales*²⁰⁷¹. God makes things out of these “seeds” or accomplishes them by his divine power²⁰⁷². Finally, because everything comes from God, matter is not the source of evil²⁰⁷³. Evil comes from the free will of the rational creature²⁰⁷⁴.

IV.1.2.2 The Scholasticism

In this section we will briefly present the notion of creation of two of the greatest theologians of the Middle Ages, Thomas Aquinas and John Duns Scotus. They represent two complementary approaches elaborated from two different perspectives. Aquinas is a Dominican theologian whose great influence in Catholic theology is undeniable. His categories to understand God’s act of creation were and still are a significant development. John Duns Scotus is a Franciscan theologian whose reflections about the relation between creation, incarnation and salvation still influence today theologians that want to point out that creation and salvation are intimately connected.

A. Thomas Aquinas

For Thomas Aquinas creation is a truth established by faith that can be proved by reason²⁰⁷⁵. Nevertheless, he regards the notion of creation in time to be a truth affirmed by faith that reason cannot establish definitely²⁰⁷⁶. This is attributable to the fact that finite causes act chronologically but God acts instantly, which means that God’s action occurs instantaneous to its effect and not previously in time. Hence, we can neither prove nor disprove that the world is eternal.

²⁰⁷¹ V.J. BOURKE, *The essential Augustine*, p. 99.

²⁰⁷² “[...] the Creator keeps to Himself the ability to make out of all these things something other than what their seminal reasons, as it were, contain – but not something that He did not place in them, so that He might produce it out of them or accomplish it by his own power.” AUGUSTINE, *Commentary on Genesis*, IX, 17, 32, in V.-J. BOURKE, *The essential Augustine*, p. 103.

²⁰⁷³ AUGUSTINE, *Confessions*, XII, 28, 38, p. 212.

²⁰⁷⁴ AUGUSTINE, *Confessions*, XII, 38, 53, p. 243.

²⁰⁷⁵ L.-F. LADARIA, *La création du ciel et de la terre*, p. 69.

²⁰⁷⁶ “I answer that, by faith alone do we hold, and by no demonstration can it be proved, that the world did not always exist, as was said above of the mystery of the Trinity. The reason of this is that the newness of the world cannot be demonstrated on the part of the world itself. For the principle of demonstration is the essence of a thing. Now everything according to its species is abstracted from “here” and “now”; whence it is said that universals are everywhere and always. Hence it cannot be demonstrated that man, or heaven, or a stone were not always. Likewise neither can it be demonstrated on the part of the efficient cause, which acts by will. For the will of God cannot be investigated by reason, except as regards those things which God must will of necessity; and what He wills about creatures is not among these, as was said above. But the divine will can be manifested by revelation, on which faith rests. Hence that the world began to exist is an object of faith, but not of demonstration or science. And it is useful to consider this, lest anyone, presuming to demonstrate what is of faith, should bring forward reasons that are not cogent, so as to give occasion to unbelievers to laugh, thinking that on such grounds we believe things that are of faith.” THOMAS AQUINAS, *Summa Theologica*, Ia, q.44, art. 2.

Aquinas follows Aristotelian causes to explain the act of creation. He privileges the efficient causality in the creation act: God is the absolute principle of everything, even of the first formless matter²⁰⁷⁷. Then he discusses the exemplary cause who is God Himself. Finally, for Aquinas the final cause is the goodness of God in whom all things participate in their perfection²⁰⁷⁸. Beside Aristotelian causes, Aquinas also uses the category of “participation” to develop his theology of creation²⁰⁷⁹. Our contingent being is a participation in God’s necessary being. Aquinas believes there is a vestige of God in every creature, but especially in rational ones who were created in God’s image with a capacity to understand and to love.

Aquinas also explains creation by using the category of “relation”. Creation is a relation of the creature to the Creator who is the principle of all finite beings²⁰⁸⁰. Being a creature is being in dependency with respect to the Creator. Through this category of creation Aquinas goes beyond the idea that creation is about a temporal beginning of things. For him the reference to the Creator is a relation of dependency that is extended during time and never stops, i.e., it is not localized in a particular moment in time. Creation is not only about the beginning of creatures’ existence but also a preservation of all beings²⁰⁸¹. The acknowledgement of a relative autonomy of the creature, which has received from God its own consistence, does not deny its radical dependency on God. On the contrary, the autonomy of the creature is a consequence of its participation in God’s absolute freedom.

With respect to God, Aquinas affirms that creation is a Trinitarian act: to create belongs to the divine essence. As a consequence it is common to the whole Trinity. God has created the world by his Verb and his Love. The Father is the origin of creation because He has not received from somebody else the power to create. The Son is the Wisdom and the Holy Spirit is the goodness that is manifested in the act of creation²⁰⁸². Finally, Aquinas’ theology of creation has

²⁰⁷⁷ L.-F. LADARIA, *La création du ciel et de la terre*, p. 71.

²⁰⁷⁸ L.-F. LADARIA, *La création du ciel et de la terre*, p. 70.

²⁰⁷⁹ “I answer that, It must be said that every being in any way existing is from God. For whatever is found in anything by participation, must be caused in it by that to which it belongs essentially, as iron becomes ignited by fire. [...] Therefore all beings apart from God are not their own being, but are beings by participation. Therefore it must be that all things which are diversified by the diverse participation of being, so as to be more or less perfect, are caused by one First Being, Who possesses being most perfectly.” The underlined emphasis is ours. THOMAS AQUINAS, ST, Ia, q.44, art. 1.

²⁰⁸⁰ “I answer that, Creation places something in the thing created according to relation only; because what is created, is not made by movement, or by change. [...]. Hence creation in the creature is only a certain relation to the Creator as to the principle of its being; even as in passion, which implies movement, is implied a relation to the principle of motion.” The underlined emphasis is ours. THOMAS AQUINAS, ST, Ia, q.45, art. 3.

²⁰⁸¹ “[...] but He also gives created agents their forms and preserves them in being.” “Reply to Objection 3: God not only gives things their form, but He also preserves them in existence, and applies them to act, and is moreover the end of every action, as above explained.” The underlined emphasis is ours. THOMAS AQUINAS, ST, Ia, q.105, art. 5.

²⁰⁸² L.-F. LADARIA, *La création du ciel et de la terre*, p. 72.

two limits. The Angelical Doctor has not developed the connection between creation and salvation. Moreover, for him the incarnation aimed at one objective: our salvation from sin.

B. Duns Scotus

Scotus defends the idea that the incarnation was predestined before all human merit or demerit²⁰⁸³. The fulfillment of Creation is in direct relationship with the incarnation. His influences are Saint Francis of Assisi's insight on the beauty of creation grounded in Christ and the Hymn of Colossians 1,15 about Christ the Image of the invisible God and the Firstborn of every creature²⁰⁸⁴. For Scotus, God's love is the cause of all divine *ad extra* actions²⁰⁸⁵, including creation and incarnation. God by his love and goodness predestines anyone to participate in God's goodness and this "*is prior by nature to the prevision of the sin or damnation of anyone.*"²⁰⁸⁶ Briefly, God's perfection and love will the perfection of creation. Consequently, the incarnation is predestined to fulfill creation. For that reason Christ is the center of God's creation and redemption. In Scotus's own words:

*"Predestination consists in foreordaining someone first of all to glory and then to other things which are ordered to glory. Now the human nature in Christ was predestined to be glorified, and in order to be glorified, it was predestined to be united to the Word, in as much as such glory as it was granted would never have been conferred on this nature had it not been so united. [...] And just as it is foreordained that this nature be united to the Word, so it is predestined that the Word be man and that this man be the Word."*²⁰⁸⁷

Then the summit of creation is its communion with God in Christ. Then the objective of the incarnation is not primarily to save humanity from damnation due to Adam's fall but to raise humanity to the fullness of glory in God's Son made man.

VI.1.2.3 Dogmatic and doctrinal formulations

In these sections we will discuss the concept of creation in the symbols of faith and in four magisterium's formulations.

²⁰⁸³ L.-F. LADARIA, *La création du ciel et de la terre*, p. 74.

²⁰⁸⁴ I. DELIO, *Revisiting the Franciscan doctrine of Christ*, p. 5.

²⁰⁸⁵ L.-F. LADARIA, *La création du ciel et de la terre*, p. 74.

²⁰⁸⁶ A.-B. WOLTER, *Duns Scotus: Four Questions on Mary*, p. 29.

²⁰⁸⁷ Quoted by A.-B. WOLTER, *Four Questions on Mary*, p. 29. Also quoted by I. DELIO, *Revisiting the Franciscan doctrine of Christ*, p. 8-9.

A. Creation in the Symbols of faith

Table 6.1 The affirmations of God as Creator in the symbols of faith

The Symbol of the Apostles	Nicean-Constantinopolitan Creed
<i>I believe in God, the Father Almighty, creator of heaven and earth.</i>	<i>I (We) believe in one God, the Father Almighty, Maker of heaven and earth, and of all things visible and invisible.</i>

For Ladrière the believer who affirms a creed believes in many predicates: one God, a God who is Father, Almighty and Creator, etc. Both creeds proclaim that creation is not meaningless. Its meaning is grounded in God. Moreover, God's creation is not something separated from the history of salvation. It is related to the Covenant, to Christ, to the Holy Spirit's action and to the final eschatological fulfillment²⁰⁸⁸.

B. The Council of Sens and the relationship between God and the world

The Council of Sens condemns the following thesis that Saint Bernard attributed to Peter Abelard:

*“That the Holy Spirit is not from the substance of the Father, but is rather the soul of the world.”*²⁰⁸⁹

The Council of Sens affirms the fundamental distinction between God and the creature²⁰⁹⁰. At the same time, the Council wants to affirm without any ambiguity the freedom of God who creates without any necessity.

C. Fourth Lateran Council

The Fourth Lateran Council sought the reform of the Church and the unity between the East and the West. The Pope Innocent III saw the necessity of condemning some heresies that put at risk the unity of Christianity. Among the heresies condemned were some heretic theses of Joachim of Fiore and Amaury (Almaric in French) of Bène²⁰⁹¹. Among other things, the texts of this council affirms the following:

“The Father is from none, the Son from the Father alone, and the Holy Spirit from both equally, eternally without beginning or end; the Father generating, the Son

²⁰⁸⁸ See J. LADRIÈRE, *L'articulation du sens III*, p.278. Rahner has a similar position. See K. RAHNER, *Foundation of Christian faith*, p. 190-202.

²⁰⁸⁹ THE SYNOD OF SENS, *Condemnation of Peter Abelard, 1140/1141*, in Jaroslav PELIKAN and Valerie HOTCHKISS, *Creed and Confessions of Faith in the Christian Tradition*, p. 734.

²⁰⁹⁰ L.-F. LADARIA, *La création du ciel et de la terre*, p. 62.

²⁰⁹¹ A. PARAVICINI BAGLIANI, *La centralisation romaine*, p. 546 and 548.

*being born, and the Holy Spirit proceeding; consubstantial and coequal, co-omnipotent and coeternal; one principle of all things, Creator of all things invisible and visible, spiritual and corporeal; who by his almighty power at the beginning of time created from nothing [ex nihilo] both spiritual and corporeal creatures, that is to say angelic and earthly, and then created human beings composed as it were of both spirit and body in common.*²⁰⁹²

This council confirms the position of Peter Lombard by affirming that in creation we can see the work of the three divine persons in their unity²⁰⁹³. In addition, the Council affirms that everything is created *ex nihilo*. There are two objectives in the affirmation of creation *ex nihilo*. First, the text affirms that there is no reality that is coeternal with God. Second, the Council condemns Almaric Bène's and the Almaricians' doctrine of pantheism that identified God and the cosmos²⁰⁹⁴. The Council denies any dualism and condemns Cathars' pessimism²⁰⁹⁵ with respect to the created world.

D. The First Vatican Council

The First Vatican Council exposes some fundamental points of the doctrine of creation in the dogmatic constitution *Dei Filius*²⁰⁹⁶. This council was developed within a mental horizon summarized by the following expression: "*the Church, appointed by God to be mother and teacher of nations, recognizes her obligations to all and is always ready and anxious to raise the fallen, to steady those who stumble, to embrace those who return, and to strengthen the good and urge them on to what is better*"²⁰⁹⁷. According to Theobald, this council seeks to justify the

²⁰⁹² FOURTH LATERAN COUNCIL, *The Lateran Creed (De Fide catholica)*, 1215, in Jaroslav PELIKAN and Valerie HOTCHKISS, *Creed and Confessions of Faith in the Christian Tradition*, p. 741.

²⁰⁹³ L.-F. LADARIA, *La création du ciel et de la terre*, p. 65.

²⁰⁹⁴ See Aquinas' criticism of Almaricians: "*On this point there have been three errors. Some have affirmed that God is the world-soul, as is clear from Augustine (De Civ. Dei vii, 6). This is practically the same as the opinion of those who assert that God is the soul of the highest heaven. Again, others have said that God is the formal principle of all things; and this was the theory of the Almaricians. The third error is that of David of Dinant, who most absurdly taught that God was primary matter.*" The underlined emphasis is ours. THOMAS AQUINAS, ST, Ia, q.3, art. 8, p. 14-20. D. DORAN, *The Philosophy of John Scottus Eriugena*, p. 86.

²⁰⁹⁵ L.-F. LADARIA, *La création du ciel et de la terre*, p. 64.

²⁰⁹⁶ "*The Holy, Catholic, Apostolic and Roman Church believes and acknowledges that there is one true and living God, creator and lord of heaven and earth, almighty, eternal, immeasurable, incomprehensible, infinite in will, understanding and every perfection. Since he is one, singular, completely simple and unchangeable spiritual substance, he must be declared to be in reality and in essence, distinct from the world, supremely happy in himself and from himself, and inexpressibly loftier than anything besides himself which either exists or can be imagined. This one true God, by his goodness and almighty power, not with the intention of increasing his happiness, nor indeed of obtaining happiness, but in order to manifest his perfection by the good things which he bestows on what he creates, by an absolutely free plan, together from the beginning of time brought into being from nothing the twofold created order, that is the spiritual and the bodily, the angelic and the earthly, and thereafter the human which is, in a way, common to both since it is composed of spirit and body. Everything that God has brought into being he protects and governs by his providence, which reaches from one end of the earth to the other and orders all things well. All things are open and laid bare to his eyes, even those which will be brought about by the free activity of creatures.*" FIRST VATICAN COUNCIL, *Dogmatic Constitution on the Catholic Faith*, 1870, in Jaroslav PELIKAN and Valerie HOTCHKISS, *Creed and Confessions of Faith in the Christian Tradition*, p. 345.

²⁰⁹⁷ FIRST VATICAN COUNCIL, *Dogmatic Constitution on the Catholic Faith*, No. 9.

Church's authority vis-à-vis the "errors of modern thinking"²⁰⁹⁸. The council searches evidences of God's assistance and Christ's presence in the Church²⁰⁹⁹. In a polemical context against pantheism, materialism and atheism, this council affirms that the dogma of creation is also accessible to reason; it is a truth of the natural order²¹⁰⁰.

Against pantheism the council affirms that God, true Creator, is different from the world, beyond everything that we can conceive about Him from his creatures²¹⁰¹. God has created *ex nihilo* the world for his goodness and almighty in an act of freedom. This creation *ex nihilo* is accesible to reason and is part of the *preambula fidei*²¹⁰². God has not created the world to augment his beatitude since He does not depend on the creature. The objective of creation is the manifestation of the divine perfection by the goods given to creatures. This means that the finality of creation is God himself, not because He must be improved, but because creatures find their plenitude in the participation of God's perfection and goodness²¹⁰³. Finally, the council makes a reference to the divine providence: God governs by his providence all things that He has created. Nothing is hidden from his eyes, not even future things or events²¹⁰⁴.

Talking about creation, the council does not mention the Trinity but only refers to the unique God. The affirmation of creation is not in reference to the symbol of faith. Creation is discussed in the section of the *praebula fidei* that are accessible to reason. The *Dei Filius*, after discussing God the Creator in the first chapter, discusses in the second chapter the theme of revelation. As a consequence, there is no explicit affirmation about the relation between creation and salvation history. It seems that the background thesis of the document is that the dogma of creation is not only an article of faith, but is also a truth that can be recognized by reason. The Council does not enter into the details of how some elements of the doctrine of creation could be known by reason. The council provides an interpretation of the formula "creation *ex nihilo*": everything depends in God according to its substance (in all that it is)²¹⁰⁵.

E. The Second Vatican Council

The Second Vatican Council does not develop the theme of creation explicitly in one document. Nevertheless, it makes significant references about it. Unlike the First Vatican

²⁰⁹⁸ C. THEOBALD, *La constitution dogmatique Dei Filius du Concile de Vatican I*, p. 266-267.

²⁰⁹⁹ C. THEOBALD, *La constitution dogmatique Dei Filius du Concile de Vatican I*, p. 261-262.

²¹⁰⁰ C. THEOBALD, *La constitution dogmatique Dei Filius du Concile de Vatican I*, p. 269.

²¹⁰¹ L.-F. LADARIA, *La création du ciel et de la terre*, p. 82.

²¹⁰² See C. THEOBALD, *La théologie de la création en question. Un état des lieux*.

²¹⁰³ L.-F. LADARIA, *La création du ciel et de la terre*, p. 84.

²¹⁰⁴ L.-F. LADARIA, *La création du ciel et de la terre*, p. 83.

²¹⁰⁵ L.-F. LADARIA, *La création du ciel et de la terre*, p. 84

Council, this council seeks to dialogue with the modern world as an interlocutor capable of appreciating its achievements but at the same time capable of criticizing its mistakes²¹⁰⁶. Here, the idea of creation would not be presented as an evidence of God's act and justification of the Church's authority. In the *Dei Verbum* creation is inserted in the order of revelation and salvation history²¹⁰⁷. Creation is part of God's desire to enter in a Covenant with humanity. The double finality of creation is the glory of God and the good of the human being. God is the only creator of everything; at the same time humanity prolongs the work of the Creator. The goodness of the Creator is imprinted in the creature. This goodness can be seen in the created things' autonomy and consistency²¹⁰⁸. However, the Council explicitly affirms that autonomy does not mean independence. Without the Creator the creature disappears.

The achievement of all human activities is attributed to Christ and the paschal mystery²¹⁰⁹. Through the incarnation God assumes and sanctifies the whole creation²¹¹⁰. This Christological reference points to the eschatological consummation of all creation.

VI.1.3 Speculative theology

Taking seriously scientific worldviews and concepts, how can we understand today faith proclamations? How can we reinterpret the theological notion of creation considering the scientific concept of evolution? What is the relationship between God and finite realities? These are already theological questions. In order to answer these questions taking into consideration

²¹⁰⁶ C. THEOBALD, *La théologie de la création en question. Un état des lieux*.

²¹⁰⁷ "God, who through the Word creates all things (see John 1:3) and keeps them in existence, gives men an enduring witness to Himself in created realities (see Rom. 1:19-20). Planning to make known the way of heavenly salvation, He went further and from the start manifested Himself to our first parents. Then after their fall His promise of redemption aroused in them the hope of being saved (see Gen. 3:15) and from that time on He ceaselessly kept the human race in His care, to give eternal life to those who perseveringly do good in search of salvation (see Rom. 2:6-7). Then, at the time He had appointed He called Abraham in order to make of him a great nation (see Gen. 12:2). Through the patriarchs, and after them through Moses and the prophets, He taught this people to acknowledge Himself the one living and true God, provident father and just judge, and to wait for the Savior promised by Him, and in this manner prepared the way for the Gospel down through the centuries." The underlined emphasis is ours. SECOND VATICAN COUNCIL, *Dei Verbum*, No. 3. See L.-F. LADARIA, *La création du ciel et de la terre*, p. 85.

²¹⁰⁸ "If by the autonomy of earthly affairs we mean that created things and societies themselves enjoy their own laws and values which must be gradually deciphered, put to use, and regulated by men, then it is entirely right to demand that autonomy. Such is not merely required by modern man, but harmonizes also with the will of the Creator. For by the very circumstance of their having been created, all things are endowed with their own stability, truth, goodness, proper laws and order. Man must respect these as he isolates them by the appropriate methods of the individual sciences or arts. Therefore if methodical investigation within every branch of learning is carried out in a genuinely scientific manner and in accord with moral norms, it never truly conflicts with faith, for earthly matters and the concerns of faith derive from the same God. Indeed whoever labors to penetrate the secrets of reality with a humble and steady mind, even though he is unaware of the fact, is nevertheless being led by the hand of God, who holds all things in existence, and gives them their identity. Consequently, we cannot but deplore certain habits of mind, which are sometimes found too among Christians, which do not sufficiently attend to the rightful independence of science and which, from the arguments and controversies they spark, lead many minds to conclude that faith and science are mutually opposed." SECOND VATICAN COUNCIL, *Gaudium et Spes*, No. 36.

²¹⁰⁹ L.-F. LADARIA, *La création du ciel et de la terre*, p. 86.

²¹¹⁰ "For by His incarnation the Father's Word assumed, and sanctified through His cross and resurrection, the whole of man, body and soul, and through that totality the whole of nature created by God for man's use." SECOND VATICAN COUNCIL, *Gaudium et Spes*, No. 41.

natural sciences, we must turn to the two semantic movements: the philosophical hermeneutics of nature as a semantic transformation from *phusis* to *thêoria* and the theological hermeneutics of the world as a semantic transformation from *thêoria* to *theologia*.

Let's start by considering what cosmology, the physics of subatomic particle and evolutionary biology are saying about our cosmos.

VI.1.3.1 The horizon of *phusis*: scientific worldviews, facts and concepts

A. Cosmology

The science of cosmology provides us with a scientific worldview that characterizes the cosmos as a process of expansion and becoming, having a beginning and being a transition from the simple to the complex.

A.1 The universe is in a process of expansion and becoming.

The main fact established by modern research is that the universe is in a state of expansion²¹¹¹. The evidence for this expansion has been increasing since the beginning of the 20th century. In the late 1929, Edwin Hubble measured the distances of galaxies. He observed that the greater was the distances between galaxies the greatest was the speed at which each galaxy moves away from the others²¹¹². This is called Hubble's law. Basically it says that the speed of recession (getting far away from the point of observation) and distance are directly proportional. Hubble's measurements and law enables the description of the expansion of the universe. This expansion of the universe leads Georges Lemaître to propose the hypothesis that the expansion of the universe might be traced to a state where everything was concentrated in a very small volume. In 1931 Georges Lemaître presented his hypothesis of a primitive atom, later known as the Big Bang cosmological model²¹¹³.

A.2 The world has not existed always: it has a beginning.

Hubble's law not only enables the description of the expansion of the universe. It is also used

²¹¹¹ See P. J. E. PEEBLES, et al., *The Evolution of the Universe*, p. 8-9. I. MORISON, *Introduction to Astronomy and Cosmology*, p. 302-303.

²¹¹² I. MORISON, *Introduction to Astronomy and Cosmology*, p. 304.

²¹¹³ As Dominique Lambert well explains it, the Big Bang should not be identified with God's act of creation. In order to avoid such identification Lambert distinguishes between a theological concept of creation, a metaphysical origin (as a relation that ground the world in its being) and a temporal beginning identified with an initial singularity studied by physicist. This coincides with our distinction of three rationalities: natural sciences (physicist), philosophy (metaphysics) and theology. See D. LAMBERT, *Sciences et théologie*, p. 143 and 145-159.

to calculate the age of the cosmos²¹¹⁴. Contemporary cosmology elaborates a worldview of a universe that started around 15,000,000,000 years ago²¹¹⁵. At that time all matter and energy was concentrated in a state of enormous density, pressure and temperature²¹¹⁶. After the initial “explosion” the cosmos started to expand and to cool at a rapid rate. Proofs of this Big Bang theory have increased in the 20th century²¹¹⁷. Even facing some unanswered questions, the cosmological model of an initial state of the cosmos that burst into an expansion process is accepted almost unanimously by current cosmologists.

A.3 There is a transition from the simple to the complex.

During the first minute of expansion the forces of nature assumed their present properties. Elementary particles called quarks traveled freely and became locked in neutrons and protons. Atoms (hydrogen and helium) started to coalesce into gas clouds that collapse into stars clusters around 300,000 years after the initial Big Bang²¹¹⁸.

When the universe was half its present size the first generation of stars produced most of the heavy elements found today (carbon, oxygen, iron, etc.)²¹¹⁹. When the first generation of stars consumed their fuel they started to cool down incrementing their density. At a particular instance the stars’ density reached a threshold of contraction that produced an explosion called a super nova. These explosions scattered around the heavy elements that are the basic building blocks of planets and life. Later this interstellar matter would regroup enabling the eventual formation of other smaller stars with solar systems²¹²⁰. When the universe was 2/3 its present size, around 5 billions years ago, our sun was formed. It is a second or perhaps a third generation star. Within it

²¹¹⁴ P. J. E. PEEBLES, et al, *The Evolution of the Universe*, p. 6

²¹¹⁵ As we will see this estimation follows the computation using Hubble’s law. Until now, this is validated by the estimation of the age of some old stars in the Milky Way (15 billions years old). Moreover, the oldest known chemical elements are around 15 billions years old. See P. J. E. PEEBLES, et al, *The Evolution of the Universe*, p. 6-7.

²¹¹⁶ D. LAMBERT, *Sciences et théologie*, p. 143.

²¹¹⁷ George Gamow realized that the Big Bang should have left behind a radiation that would still pervade the universe. This radiation, called later the *cosmic microwave background* (CMB), would correspond to the temperature of the universe (every body that has a temperature beyond 0° K emits a radiation). A universe that expanded and cooled eventually would have a temperature of 3000° K at around 380,000 thousand years after its beginning (15,000,000,000 years ago). Due to the voyage of the electromagnetic waves (photons) the wavelength of the photons that correspond to the CMB would have expanded. As a consequence the radiation should be in the infrared and the microwave region of the spectrum and should correspond to a temperature of 3° K. This was still a hypothesis until 1963. That year Penzias and Wilson observed that the universe was filled with a background radiation. The observations of the satellite COBE in 1992 have shown that this radiation corresponded to a radiation of 2.7° K that was homogeneous (equal density everywhere) and isotropic (same physical properties everywhere). These observations agreed with the predictions that the universe would be filled with radiation left over from the Big Bang. See I. MORISON, *Introduction to Astronomy and Cosmology*, p. 309-310. D. LAMBERT, *Sciences et théologie*, p. 142-143.

²¹¹⁸ P. J. E. PEEBLES, et al, *The Evolution of the Universe*, p. 11.

²¹¹⁹ P. J. E. PEEBLES, et al, *The Evolution of the Universe*, p. 3. R.-B. LARSON and V. BROMM, *The First Stars in the Universe*, p.

13. Martin REES, *Exploring Our Universe and Others*, p. 24.

²¹²⁰ R.-B. LARSON and V. BROMM, *The First Stars in the Universe*, p. 13.

a solar system was formed with its particles, asteroids, comets, solid and gaseous planets²¹²¹. Finally, our planet began 4.5 billion years ago²¹²². Earth's atmosphere seems to have emerged 4.4 billion years ago²¹²³ and continents emerged around 3,960,000,000 years ago.

What we have discussed until now show an evolutionary process toward systems that become more and more complex²¹²⁴. This complexity is displayed through the unity of autonomous levels of organization. Consider for example the chemical components at the molecular level and their relative autonomy with respect to what happens at the nuclear level. Consider also what happens at the biological level in our planet and its relative autonomy to nuclear physics and even chemistry. Although each level is built on another level (biology on chemistry, chemistry on physics) it is driven by different principles and functions²¹²⁵.

B. Elementary particle physics

Elementary particle physics seeks to answer the question: what is the matter made of at the most basic level?²¹²⁶ A diversity of subatomic particles has been discovered during the Twentieth Century²¹²⁷.

B.1 Diversity of subatomic particles

Since the end of the Nineteenth Century a large number of subatomic particles has been identified. The diversity of particles is so large that physicists started since the 1960's to use letters and numbers to identify them. However, there is a series of patterns among these particles: there are three types of charges (positive, negative or neutral), all particles have an anti-particle with the reverse charge, and each particle has a spin on its axis. In addition, these particles belong to two categories: they are heavy nuclear particles and products of their interactions (protons,

²¹²¹ This has been proved by means of modern telescopes that detect electromagnetic waves from distant galaxies (billions of light years away). Particle accelerators have confirmed and tested the basic models and theories of physics behind the theories of the expansion of the universe, Einstein's Theory of General Relativity. Finally, satellites have detected the cosmic background that validates the theory of the Big Bang. P. J. E. PEEBLES, et al, *The Evolution of the Universe*, p. 4.

²¹²² C.-J. ALLÈGRE and S.-H. SCHNEIDER, *The Evolution of the Earth*, p. 72.

²¹²³ C.-J. ALLÈGRE and S.-H. SCHNEIDER, *The Evolution of the Earth*, p. 75.

²¹²⁴ C. THEOBALD et al, *L'univers n'est pas sourd*, p. 51.

²¹²⁵ We have discussed already that neither evolutionary biology cannot be reduced to molecular biology nor chemistry to elementary particles. As Gould affirms with respect to physics laws: "*But laws of nature do not tell us why we have crabs and snails at all, why insects rule the multicellular world and why vertebrates rather than persistent algal mats exist as the most complex forms of life on the earth.*" The underlined emphasis is ours. Stephen Jay GOULD, *The evolution of life on the earth*, p. 237.

²¹²⁶ D. GRIFFINS, *Introduction to elementary particles*, p. 1

²¹²⁷ See D. GRIFFINS, *Introduction to elementary particles*, p. 11-46.

neutrons and pions) collectively known as hadrons or they are leptons characterized for being lighter (e.g. electrons, neutrinos, muons, etc.)²¹²⁸.

B.2 The dynamical reality of the micro-cosmos: the standard model

In the current theory all matter is made of two kinds of categories of particles called leptons and quarks and three kinds of forces that explain their interactions: electromagnetic force, weak force and strong force²¹²⁹. Quarks are small particles, never seen in isolation, that make the heavy nuclear particles, the hadrons (e.g., protons and neutrons)²¹³⁰.

There is an anti-quark for each quark, which means that there is a total of 12 quarks and anti-quarks. Protons, neutrons and pions consist on the combination of three types of quarks²¹³¹. A proton consists of two ups and a down. A neutron consists of two downs and an up. A pion is an up quark with an anti-down or vice versa. All quarks can combine to produce a large number of hadrons. The leptons are observed as isolated entities that are not formed by quarks.

All matter in the universe interacts by means of the four forces: gravitational force, electromagnetic force, nuclear strong force and nuclear weak force. However, at the subatomic level only three forces play a role: electromagnetic, strong and weak forces. The strong force is responsible for binding the quarks together forming the hadrons. It is also responsible for keeping together the atom avoiding a disintegration due to protons' repulsion of each other²¹³². Leptons are immune to the strong force. The weak force is responsible for the interaction between quarks and leptons. It is also responsible for a particular radioactive decay that occurs when a neutron becomes a proton plus an electron and a neutrino²¹³³. Electromagnetic force acts on all charges particles. It causes the repulsion of particles with the same charge and the attraction of particles with opposing charge.

²¹²⁸ P. DAVIES, *Cosmic Jackpot*, p. 89-90.

²¹²⁹ C. QUIGG, *The Coming Revolutions in Particle Physics*, p. 46 and 48.

²¹³⁰ As shown by the following table, there are six types of quarks.

Particles that make known matter

Quarks		Leptons	
<i>Bottom</i> with charge of -1/3	<i>Top</i> with charge of +2/3	<i>Tau</i> with charge of -1	<i>Tau-Neutrino</i> with charge of 0
<i>Strange</i> with charge of -1/3	<i>Charm</i> with charge of +2/3	<i>Muon</i> with charge of -1	<i>Muon-Neutrino</i> with charge of 0
<i>Down</i> with charge of -1/3	<i>Up</i> with charge of +2/3	<i>Electron</i> with charge of -1	<i>Electron-Neutrino</i> with charge of 0

²¹³¹ P. DAVIES, *Cosmic Jackpot*, p. 90.

²¹³² P. DAVIES, *Cosmic Jackpot*, p. 94.

²¹³³ C. QUIGG, *The Coming Revolutions in Particle Physics*, p. 47 and 49.

All particles interact through these three forces²¹³⁴. Before the development of quantum theory all these interactions were modeled by means of field's theory (e.g., gravitational and electromagnetic fields). With the establishment of quantum mechanics the interactions of particles is understood not from the perspective of "fields" but as originated from an exchange of other particles²¹³⁵. At the quantum level these interactions between two particles are attributed to the exchange of another set of particles called the "particles of forces" or "bosons." Each force, understood as a synonym of "interaction," is transmitted by means of these particles: (i) photons are carriers of electromagnetism, (ii) z bosons and (iii) w bosons are carriers of the weak force and (iv) 8 species of gluons are carriers of the strong force²¹³⁶.

Today subatomic particle physics provides an image of reality as a dynamic interaction and relationship between particles²¹³⁷. There is no reality isolated from other realities. Another aspect of this micro-cosmos is the enormous diversity of particles that interact permanently. There are huge numbers of possible complex interactions among subatomic particles.

C. Evolutionary biology

This section refers to some scientific views, observations, concepts and theories about the evolution of life.

C.1 The fact of evolution

As stated by Francisco Ayala, today the vast majority of biologists accept the evolution of organisms even if they debate and investigate the mechanisms of such biological process²¹³⁸. Evolution as a process unfolded in time is inferred from observations. The evidence that supports this evolution has been accumulated over the years by all biological disciplines²¹³⁹. "Evolution by common descent with modification"²¹⁴⁰ is well established with a certainty beyond any reasonable doubt. The accumulated evidence comes from paleontology, comparative anatomy, biogeography, embryology, biochemistry and molecular genetics, among others²¹⁴¹.

²¹³⁴ There is the hypothesis of a fourth interaction: the Higgs interaction. Today this hypothesis is being tested. M. VELTMAN, *Facts and mysteries in elementary particle physics*, p. 75 and 77.

²¹³⁵ M. VELTMAN, *Facts and mysteries in elementary particle physics*, p. 70.

²¹³⁶ There is the Higgs particle, responsible of the Higgs interaction, not yet seen, that should endow with mass the z and w boson, and similar with the quarks and the leptons. C. QUIGG, *The Coming Revolutions in Particle Physics*, p. 47-48.

²¹³⁷ J.-P. BATON and G. COHEN-TANNOUDJI, *L'horizon des particules*, p. 187.

²¹³⁸ F. AYALA, *The evolution of life: an overview*, p. 21.

²¹³⁹ F. AYALA, *The evolution of life: an overview*, p. 27.

²¹⁴⁰ The expression "descend with modification" was an earlier expression of biological evolution. See F. AYALA, *The evolution of life: an overview*, p. 22.

²¹⁴¹ F. AYALA, *The evolution of life: an overview*, p. 29.

Paleontology has shown that the general sequence of fossils from bottom upward in layered soil has an observed progression of biological structures that strongly implied a common descent and a modification over time²¹⁴². Comparative anatomy has shown the existence of morphological similarities in different species. These similarities enable the arrangement of organisms according to their degree of similarity into what is called the Linnaean hierarchy²¹⁴³. Before Darwin, the foundation of this grouping and arrangement was unknown. Scientists agree that they are better explained by a common descent²¹⁴⁴. Moreover different animals share a homologous structure (e.g., wings found in the Archaeopteryx and birds) that can be explained by the partial inheritance of the same ancestor²¹⁴⁵. Biogeography contributes by showing a huge diversity of species that belong to diverse geographical systems. Scientists explain this biological diversity as a result of the evolutionary process through which the descendants of local or migrant species became adapted to the environment²¹⁴⁶. Without the theory of biological evolution there would not be a rational explanation for the distributional irregularities²¹⁴⁷.

Embryology is another source of independent evidence. The similarity of larval stages across some species supports the idea that they have a common ancestor²¹⁴⁸. Finally molecular biology and genetics provided detailed evidence for evolution. The genetic code that passes information storage in the DNA molecule is the same in every species²¹⁴⁹. Species that share the same genetic structure cannot have independent origin²¹⁵⁰. Moreover by means of molecular biology's techniques, scientists can quantify the degree of similarity in the sequence of nucleotides. This degree of similarity can confirm inferences in other biological fields and hence, the hypothesis of a common ancestor among species. The level of certainty of DNA analysis is nothing less than overwhelming²¹⁵¹.

All of these evidences accumulated from different fields confirm the well known expression of Dobzhansky: "*nothing in biology makes sense, except in the light of evolution.*"²¹⁵²

C.2 A scientific worldview of life's process²¹⁵³

²¹⁴² F. AYALA, *The evolution of life: an overview*, p. 29.

²¹⁴³ E. MAYR, *What evolution is*, p. 23.

²¹⁴⁴ E. MAYR, *What evolution is*, p. 31.

²¹⁴⁵ E. MAYR, *What evolution is*, p. 27.

²¹⁴⁶ F. AYALA, *The evolution of life: an overview*, p. 33.

²¹⁴⁷ E. MAYR, *What evolution is*, p. 34.

²¹⁴⁸ F. AYALA, *The evolution of life: an overview*, p. 34.

²¹⁴⁹ F. AYALA, *The evolution of life: an overview*, p. 35.

²¹⁵⁰ F. AYALA, *The evolution of life: an overview*, p. 35.

²¹⁵¹ See E. MAYR, *What evolution is*, p. 34-39.

²¹⁵² Quoted by Mayr in E. MAYR, *What evolution is*, p. 39.

The oldest rocks found that preserve cellular fossils date back to 3,500,000,000 years ago. These fossils contain the remains of prokaryotic cells²¹⁵⁴. The first eukaryotic cells²¹⁵⁵ seem to arise 1,400,000,000 years ago²¹⁵⁶. The evidence points to the appearance of multicellular structures about 670 millions years ago²¹⁵⁷. During the Cambrian explosion, 543 millions years ago, there is a major flowering of new phyla²¹⁵⁸. Jay Gould characterizes this period, which lasted for five million years, as one of “intense creativity” that was followed by 500 million years of variation²¹⁵⁹.

The first vertebrate (simple fish) appears between 530 and 520 millions years ago²¹⁶⁰. Around 380 millions years ago a fish started the long effort to occupy land. Already the *Eusthenopteron*, which lived in the marsh, had a skull similar to amphibians and its cutaneous respiration allows him to survive in the mud²¹⁶¹. Land vertebrates such as amphibians and reptiles appear successively 350 and 310 millions years ago²¹⁶².

Mammals appear around 230 millions years ago²¹⁶³. Around 65 millions years ago they start an important diversification and colonization of different milieux (land and sea)²¹⁶⁴. Most modern orders of mammals appear 55 millions years ago.

Non human primates appears 60 millions years ago and the earliest ape appears 25 million years ago²¹⁶⁵. The hominid lineage diverges from the chimpanzee lineage 5 to 8 millions years ago²¹⁶⁶. The bipedal *Australopitecus anamensis*, dated from 4 millions years ago, is in direct line of descent with *Australopitecus afarensis*, *Homo habilis*, *Homo erectus* and the *Homo sapiens*²¹⁶⁷. Other hominids do not seem to be in direct line of descendent of modern humans,

²¹⁵³ The times periods given here are approximated and there are some debates about them. However, they give an idea of the scientific view of the evolutionary process. We will limit our presentation to animals. With respect to the evolution of plants the reader can refer to Cyrille PRESTIANNI, *du désert à la forêt : chroniques du verdissement d'une planète*, in *Comprendre l'évolution*, p. 27-38.

²¹⁵⁴ Prokariotes are bacteria cells characterized for not having nucleus as the Eukaryotes. They do not have membrane-bound organelles (mitochondria, chloroplasts, etc.) or endoplasmic membrane. E. MAYR, *What evolution is*, p. 46.

²¹⁵⁵ These are more complex cells with a nucleus, with an endoplasmic membrane system and normally contain organelles. E. MAYR, *What evolution is*, p. 46.

²¹⁵⁶ E. MAYR, *What evolution is*, p. 46.

²¹⁵⁷ F. AYALA, *The evolution of life: an overview*, p. 30.

²¹⁵⁸ E. MAYR, *What evolution is*, p. 59.

²¹⁵⁹ S. JAY GOULD, *The evolution of life on the earth*, p. 243.

²¹⁶⁰ E. MAYR, *What evolution is*, p. 64-65.

²¹⁶¹ J.-L. HARTENBERGER, *Les fossiles, témoins de l'évolution*, in *Comprendre l'évolution*, p. 43.

²¹⁶² It is not clear when birds emerge. There are two possibilities: 200 million years ago or 80 to 110 millions years ago. E. MAYR, *What evolution is*, p. 65.

²¹⁶³ J.-L. HARTENBERGER, *Les fossiles, témoins de l'évolution*, in *Comprendre l'évolution*, p. 47.

²¹⁶⁴ J.-L. HARTENBERGER, *Les fossiles, témoins de l'évolution*, p. 47.

²¹⁶⁵ F. AYALA, *The evolution of life: an overview*, p. 30.

²¹⁶⁶ E. MAYR, *What evolution is*, p. 237.

²¹⁶⁷ This is a hypothesis suggested by scientists. Obviously there are still many debates about the phylogeny between hominids. New discoveries result in constant revisions of the dates and the lineage that goes from apes to the Homo. See F. AYALA, *The*

e.g., *Australopithecus africanus* (3.5 millions years ago), *Paranthropus aethiopicus* (2.5 millions years ago), *Paranthropus robustus* (2.0 millions years ago)²¹⁶⁸. Moreover, there is the *Homo neanderthalensis*, who appears 200,000 years ago and disappears between 30,000 to 40,000 years ago. Finally the *Homo sapiens* appeared around 100,000 years ago.

C.3 Mechanisms that explain the process of biological evolution

To make things more simple we will center our attention on two mechanisms that render possible the evolution of species: mutation and natural selection²¹⁶⁹.

C.3.1 Random events and processes as the origin of variation: genetic mutation

Gene mutations can be caused by errors in the replication during the cell division, although other mutations might appear in other moments and being produced by other causes. The cell cycle is a complex of sequential process where the cell needs to duplicate the information encoded in the DNA (DNA replication), grow and divide into two daughter cells (mitosis). During the DNA replication, two identical DNA molecules are reproduced from a parent molecule²¹⁷⁰. Nevertheless an occasional “mistake” or mutation occurs in the DNA during replication. In consequence, the copy of DNA lightly varies from the original. Originally this mutation appears in a single cell of an organism, and then it passes on to cells that descend from the first. There are three fundamental characteristics of mutations: mutation rates are low, mutations occur in all species and mutations are random (stochastic) events, i.e., they happen spontaneously. Through the process of sexual reproduction these mutations are inherited in subsequent generations.

With respect to evolutionary consequences, there are three kinds of mutations: beneficial, neutral or disadvantageous²¹⁷¹. Neutral mutations are those that have negligible consequences in the organism’s ability to survive or reproduce. They are the most frequent kind of mutation (although the mutation rate is low). Beneficial mutations are advantageous for the organism’s adaptation to the milieu. However, it is more likely that mutations are harmful than advantageous

evolution of life: an overview, p. 55-57. E. MAYR, *What evolution is*, p. 242. C.-J. CELA-CONDE and F.-J. AYALA, *Human Evolution*, p. 106-110.

²¹⁶⁸ F. AYALA, *The evolution of life: an overview*, p. 56. C.-J. CELA-CONDE and F.-J. AYALA, *Human Evolution*, p. 107.

²¹⁶⁹ Today biologists agree there are other mechanisms in the evolutionary process: gene flow, genetic drift, biased variation and non random mating. See E. MAYR, *What evolution is*, p. 96.

²¹⁷⁰ F. AYALA, *The evolution of life: an overview*, p. 38.

²¹⁷¹ E. MAYR, *What evolution is*, p. 98.

to their carriers²¹⁷². Natural selection slowly eliminates harmful mutations that are disadvantageous for the organism adaptation to the environment.

C.3.2 Natural selection explains the adaptation to the environment.

Darwin describes natural selection as follows:

*“[...] can we doubt (remembering that many more individuals are born than can possibly survive) that individuals having any advantage, however slight, over others, would have the best chance of surviving and of procreating their kind? On the other hand, we may feel sure that any variation in the least degree injurious would be rigidly destroyed. This preservation of favorable variations and the rejection of injurious variations, I call natural selection.”*²¹⁷³

In another text Darwin writes:

*“Owing to this struggle, variations, however slight, and from whatever cause proceeding, if they be in any degree profitable to the individuals of a species, in their infinitely complex relations to other organic beings and to their physical conditions of life, will tend to the preservation of such individuals, and will generally be inherited by the offspring. The offspring, also, will thus have a better chance of surviving, for, of the many individuals of any species which are periodically born, but a small number can survive. I have called this principle, by which each slight variation, if useful, is preserved, by the term natural selection, in order to mark its relation to man's power of selection.”*²¹⁷⁴

Natural selection is a non-random process of elimination. The progenitors of a following generation are the individuals that survived due to the possession of biological characteristics that make them well adapted for the existing environmental conditions²¹⁷⁵. The modern concept of natural selection defines it as a process of discarding individuals with variations (mutations) that are disadvantageous for the organism's adaptation to the environment. On the other hand, the process selects individuals carrying “useful” variants, in terms of adaptation. One can distinguish a positive selection from a negative one²¹⁷⁶. Positive selection is a statistical bias in favor of individuals with useful variants that will pass the advantageous mutations to the population. Negative selection gradually eliminates from the population (through a number of generations)

²¹⁷² F. AYALA, *The evolution of life: an overview*, p. 38.

²¹⁷³ C. DARWIN, *The Origin of Species*, Penguin Books, London, 1985, p. 130-131 (p. 63 in the version of 1872).

²¹⁷⁴ C. DARWIN, *The Origin of Species*, Penguin Books, London, 1985, p. 115 (p. 49 in the version of 1872).

²¹⁷⁵ E. MAYR, *What evolution is*, p. 117.

²¹⁷⁶ J. VANDENHAUTE, and J. REISSE, *Le piège des mots: quelques exemples de la biologie*, in *Comprendre l'évolution*, p. 291.

individuals with disadvantageous mutations. Due to the continuous change in the environment this process continues indefinitely²¹⁷⁷.

C.4 Main characteristics of the history of evolution

This double process of mutations and natural selection explains the double character of biological evolution: “chance” and “necessity”. “Chance” here refers to the aspect of random events or processes due to genetic mutations. It also refers to a “chance” or “unpredictable” event such as the asteroid that fell in the Yucatan Peninsula²¹⁷⁸. “Necessity” refers to the factor of adaptation to the environment due to natural selection. According to Mayr, evolution is neither about pure randomness (chance or accident) nor about a deterministic movement toward a non-stopping perfect adaptation²¹⁷⁹. These two inseparable factors (“chance” and “necessity”) account for two main characteristics found in the living world: diversity and complexity²¹⁸⁰.

C.4.1 Biodiversity

There is an enormous diversity of living species. Scientists have found and described 250 thousands species of living plants, 100 thousands species of fungi and 1.5 millions of species of animals and microorganisms²¹⁸¹. According to recent estimates, there are at least 10 millions more species to be discovered²¹⁸². There is also an incredible heterogeneity in size, shape and structures. In terms of size we have from the small bacteria with a diameter of less than one thousand of a millimeter to the whales of 30 meters long with 120 tons and the sequoias of 100 meters height weighting several thousand tons.

There is also a huge diversity in terms of the ecological setting²¹⁸³. There are microorganisms that live in boiling waters (e.g., *Pyrolobus fumarii*) while some fungi and algae live in ice masses and in saline pools at -23° C. Some species live in the deepest parts of the

²¹⁷⁷ F. AYALA, *The evolution of life: an overview*, p. 40.

²¹⁷⁸ “Chance” is a polysemic concept that can mean “luck” (*fortune* in French). It also refers to an “uncertain event” that could be favorable or disadvantageous (e.g., an accident). Furthermore, it can mean a “random event”. The last one is related since the Seventeenth Century to the probability theory, i.e., the probability p_A that an event “A” happens. Currently the concept “chance” is used in sciences in the last sense of random events. A random event could happen because there is a lack of knowledge of the mechanisms that produce it. However, it could happen because there is no causal deterministic mechanism that produces it, e.g., the case of quantum mechanics. What is relevant here is that “chance” refers to something “unforeseeable”. See J. GAYON, *Hasard*, p. 581-583. A. PEACOCKE, *Theology for a Scientific Age*, p. 115-118.

²¹⁷⁹ E. MAYR, *What evolution is*, p. 228-229.

²¹⁸⁰ This is against Monod who, in his book *Le hasard et la nécessité*, affirmed that the emergence of a particular living organism was the effect of a pure accident. J. MONOD, *Le hasard et la nécessité*, p. 155-174. A. PEACOCKE, *Theology for a Scientific Age*, p. 117-118.

²¹⁸¹ F. AYALA, *The evolution of life: an overview*, p. 32.

²¹⁸² F. AYALA, *The evolution of life: an overview*, p. 21.

²¹⁸³ F. AYALA, *The evolution of life: an overview*, p. 21.

oceans while others live in the highest mountains on earth. There are some species that can live in diverse environments, e.g., the human being while others are extremely specialized²¹⁸⁴.

C.4.2 Complexity and progress?

There is a debate among Darwinists on the existence of “complexity” in the evolutionary process²¹⁸⁵. Jay Gould criticizes the position that sees a trend toward complexity in the evolutionary process. For him the fact that “*every once in a while, a more complex creature evolves*” is nothing else than a rare and episodic event. He even argues that complex organisms “*do not even constitute an evolutionary series but form a motley sequence of distantly related taxa, usually depicted as eukaryotic cell, jellyfish, trilobite, nautiloid, eurypterid, fish, an amphibian such as Eryops, a dinosaur, a mammal and a human being. This sequence cannot be construed as the major thrust or trend of life’s history.*”²¹⁸⁶ For Gould there are no evolutionary tendencies that favor increased complexity. There is no continuous trend toward complexity in the evolutionary process or a steady morphological progress in complexity²¹⁸⁷. Gould interprets the available data and concludes that it is a matter of luck that some species survived and some species went extinct. Survival is not due to some species’ complexity that helps in the adaptation and fitting to the environment²¹⁸⁸. For Gould the only reason that we keep the idea of complexity in evolution is that we are focusing on ourselves and we are focalized excessively on complex creatures²¹⁸⁹.

Today most Darwinists reject the notion of universal progress of evolution. There is no teleological evolutionary progress or law²¹⁹⁰. However, Gould’s position is perhaps extremist and is not shared by all Darwinists. Darwin accepted the significance of organic complexity for the living nature. For him organic complexity is explained by natural selection²¹⁹¹. As Michael Ruse explains, Darwin stresses the argument of adaptive complexity by integrating it into his theory of

²¹⁸⁴ E. MAYR, *What evolution is*, p. 32.

²¹⁸⁵ In this work we deal with evolutionary Darwinism not with the so called “Intelligent Design” and its notion of irreducible complexity, which we consider is neither science nor a good religious idea. For some excellent critique of Intelligent Design see F. AYALA, *Design without Designer*, in W.-A. DEMSKI and M. RUSE, *Debating Design*, p. 68-71. G. COBUT, *Le dessein intelligent: histoire d’un creationisme déguisé en science*, in *Comprendre l’évolution*, p. 177-188. T. BACKELJAU, K. JORDAENS and P. DEVOS, *La complexité irréductible: tromperie des apparences*, in *Comprendre l’évolution*, p. 189-207.

²¹⁸⁶ S.-J. GOULD, *The evolution of life on the earth*, p. 239-240.

²¹⁸⁷ S.-J. GOULD, *The evolution of life on the earth*, p. 243-244.

²¹⁸⁸ P.-J. BOWLER, *Evolution. The History of an Idea*, p. 350.

²¹⁸⁹ S.-J. GOULD, *The evolution of life on the earth*, p. 240.

²¹⁹⁰ E. MAYR, *What evolution is*, p. 215.

²¹⁹¹ “*Although the belief that an organ so perfect as the eye could have been formed by natural selection, is enough to stagger any one; yet in the case of any organ, if we know of a long series of gradations in complexity, each good for its possessor, then, under changing conditions of life, there is no logical impossibility in the acquirement of any conceivable degree of perfection through natural selection.*” C. DARWIN, *The origin of species*, p. 231 (p. 165 in the version of 1872).

natural selection. What Darwin sought was to push any external teleology (i.e., an external agent) out of science²¹⁹².

Mayr, as all Darwinists, disagrees with the idea that there is a steady improvement generation after generation of every phyletic lineage. However, Mayr accepts that since the beginning of life 3,500,000,000 years ago, organisms have become more diversified and complex²¹⁹³. He argues that when scientists observe a considerable number of lineages at particular times they see progression²¹⁹⁴. Mayr mentions some of these progressions²¹⁹⁵: multicellularity, development of highly specialized structures and organs, endothermy, highly developed parental care, an efficient central nervous system, etc. In that sense, for Mayr it is justified to see a progression in the evolutionary events aimed at adaptation that go from the prokaryotes to eukaryotes such as vertebrates, mammals, primates and human²¹⁹⁶. Even a Darwinist such as Dawkins, who cannot be suspected of seeking a justification of a theocentric vision of the world, defends the existence of organized complexity²¹⁹⁷.

According to Christian de Duve, biological evolution proceeds in two directions that are influenced in an unequal way by the environment. He calls one direction “horizontal evolution” and the other “vertical evolution”²¹⁹⁸. Horizontal evolution is responsible for the extraordinary diversity of biological structures²¹⁹⁹. Randomness plays the fundamental role in shaping this type of evolution. Each type of biological structure, by means of chance, produces ramifications and many species adapted to different ecological settings.

However this does not exhaust all types of evolutions. Vertical evolution involves significant changes in the body structure and plan and, with time, produces living beings of increasing complexity²²⁰⁰. Sometimes there are genetic modifications, rare indeed, that modify substantially the structure of organism and which are compatible with the survival and reproductions of the organism. In many cases, although not always, this type of evolution causes an increase in complexity. With time vertical evolution produces living beings with increasing complexity from the point of view of increasing reproductive means in plants and animals, an

²¹⁹² M. RUSE, *The Argument from Design*, in *Debating Design*, p. 22-23.

²¹⁹³ E. MAYR, *What evolution is*, p. 212.

²¹⁹⁴ E. MAYR, *What evolution is*, p. 213.

²¹⁹⁵ E. MAYR, *What evolution is*, p. 215.

²¹⁹⁶ E. MAYR, *What evolution is*, p. 214 and 216.

²¹⁹⁷ "The theory of evolution by cumulative natural selection is the only theory we know of what is in principle capable of explaining the existence of organized complexity. Even if the evidence did not favor it, it would still be the best theory available!" R. DAWKINS, *The Blind Watchmaker*, p. 317.

²¹⁹⁸ C. DE DUVE, *Life Evolving. Molecules, Mind and Meaning*, p. 181. In French: C. DE DUVE, *À l'écoute de vivant*, p. 216.

²¹⁹⁹ C. DE DUVE, *Life Evolving*, p. 182 (p. 217 in Fr.).

²²⁰⁰ C. DE DUVE, *Life Evolving*, p. 183 (p. 218 in Fr.).

increasing number of differentiated cell types and increasingly intricate system of neuronal networks in animals²²⁰¹. According to de Duve, there are more inner constraints in the vertical than in the horizontal evolution. In his own words:

*“Vertical evolution, thus defined, is subject to much more stringent inner constraints than horizontal evolution. It is intuitively evident that transforming a body plan—say, from a fish to an amphibian—must be more difficult than just modifying it in some trivial fashion—such as turning an ancestral fish into a sole or a mackerel—especially because each intermediary form has to be viable and able to reproduce. [...] In concrete terms, this means that there are fewer genetic options that can propel evolution vertically than can do so horizontally. The difficulty increases—and, thus, the number of options decreases—as complexity increases. This, also, is evident. A simpler body plan is likely to be more flexible and more tolerant to change than a more complicated one.”*²²⁰²

With this de Duve wants to say that a complex individual has more genes and for this reason it has more material to change. However, this complex individual must experience a mutation of more genetic information than an individual with fewer genes in order to see a radical change of his bodily structure.

Once the evolutionary process arrives at the complex nervous system it has the effect of providing an advantage to the animal with respect to the environment and to other species²²⁰³. A more developed brain makes the animal more independent from the environment. For de Duve the emergence of the complex nervous system is not a matter of pure luck. It is a biological advantage to the species.

C.5 Scientific comments about scientific worldviews

When scientists make comments about scientific representations, they already begin to interpret them. As a consequence, they go from experimental data, scientific representations (mathematical models, scientific concepts and historical narratives) and scientific conclusions to a speculative discourse about the meaning of the self-organization of the cosmos and the meaning of human life²²⁰⁴.

Commenting on these two facts of diversity and complexity, scientists do not doubt in calling the evolutionary process “creative.” Even Gould calls the Cambrian explosion as a period

²²⁰¹ C. DE DUVE, *Life Evolving*, p. 183 (p. 218 in Fr.).

²²⁰² C. DE DUVE, *Life Evolving*, p. 183 (p. 218 in Fr.).

²²⁰³ Here Christian de Duve continues with a critique to Gould’s affirmation that complex species in general, and in specific the human being, are rare and pure random events. See C. DE DUVE, *Life Evolving*, p. 184-185 (p. 219-220 in Fr.).

²²⁰⁴ J. LADRIÈRE, *L’articulation du sens II*, p. 295-296.

of “intense creativity”²²⁰⁵. Ayala attributes a “creative role” to natural selection due to its capacity to generate novelty²²⁰⁶. For him Darwin’s fundamental discovery is the existence of an evolutionary process that is creative and not guided by an external intelligence²²⁰⁷.

VI.1.3.2 From the horizon of *phusis* to the horizon of *theôria*: a philosophical hermeneutics of scientific representations

In this section we present a particular philosophical hermeneutics. We use two criteria to choose it. First of all, it is a philosophy of nature that takes into consideration the scientific advances of the last 150 years. Its concepts are not empty but rooted in recent scientific discoveries in the fields of cosmology, subatomic particles physics, chemistry and biology. A second criterion is the fact that it is not contrary to the Christian message. As we will show below, this hermeneutics will enable us to operate a second semantic transgression movement from *theôria* to *theologia*.

We should clarify that our goal in this example is not to produce a complete treatise on the philosophy of nature. That is outside of the scope of this work. Our objective is to retrieve the major concepts and philosophical elements that could be transformed into the horizon of *theologia* in order to re-elaborate the concept of creation.

As we have done previously in this work, we will depend mostly on Jean Ladrière’s and Xavier Zubiri’s sketches of philosophy of nature²²⁰⁸.

A. The scientific concept of evolution

The scientific representation of the cosmos is expressed by the scientific concept of evolution. Scientists have observed the appearance of diversity and the development of complex systems in the inorganic world: from subatomic particles, to atoms, molecules, stars, planetary systems, galaxies and clusters of galaxies. Something similar happens in organic systems: from macromolecules and genes to cells, tissues, through whole organisms, and the interaction and organization of whole organisms into families, communities, societies, populations, species and biota²²⁰⁹. The two big phenomena shown by contemporary sciences are: the expansion of the

²²⁰⁵ S.-J. GOULD, *The evolution of life on the earth*, p. 243.

²²⁰⁶ F. AYALA, *Design without Designer*, in *Debating Design*, p. 60-61.

²²⁰⁷ F. AYALA, *Design without Designer*, in *Debating Design*, p. 64.

²²⁰⁸ Here we use the book *Acerca del mundo* that was a course offered by Zubiri in the year 1960, when he was writing *Sobre la esencia*. In that book Zubiri deals with details about the philosophical concept of evolution. See *Acerca del mundo*, p. viii.

²²⁰⁹ E. MAYR, *This is biology: the science of the living world*, p. 107.

universe (in cosmology) and the biological evolution (in evolutionary biology)²²¹⁰. Natural sciences produce an image of a cosmos in a process of self-genesis²²¹¹.

B. The polysemic concept of emergence

Ladrière proposes the concept of “emergence” to initiate the semantic transformation from scientific worldviews to a philosophical interpretation of the cosmic non-stopping process of becoming. According to Ladrière, the concept of emergence is not scientific but philosophical²²¹². Currently, there is a debate about the classification of the concept “emergence”. Many would not agree with Ladrière and classify this term as a scientific concept. Philip Clayton contributes to clarify the polysemy of the term “emergence”. For him this term is used within specific scientific fields in order to describe some features of a known specified physical or biological system²²¹³. Among those who use “emergence” as a scientific concept, there is notable Ernst Mayr²²¹⁴. Moreover, Anne Fagot-Largeault shows that this concept has been used in science even before it was used in philosophy²²¹⁵.

Clayton affirms that the term is also used in a meta-scientific sense to manifest transitions from some sciences to others: chemical structures emerge out of the underlying physics, biological systems emerge from biochemical dynamics, cognitive phenomena (e.g., memory, language, rationality and inventiveness) emerge from neural processes²²¹⁶. This meta-scientific meaning of emergence is found in Ladrière’s reflections about the methodological principles that guide scientific research already discussed in Chapter 2. For Ladrière, the principle of emergence affirms that there are different modes of reality that cannot be reduced to only one mode, e.g., the mode of the inorganic systems, the biological organism, and the personal reality. These three modes correspond to three domains of sciences: physics-chemistry, life sciences and human sciences²²¹⁷. Each mode of reality has in itself the principles of intelligibility that enable our understanding of its internal structures. Life is not reduced to meager inorganic systems and conscience is not reduced to mere biochemical processes. Consequently, psychology cannot be reduced to biology as biology cannot be reduced to chemistry or physics. According to Clayton,

²²¹⁰ J. LADRIÈRE, *L’articulation de sens II*, p. 293.

²²¹¹ J. LADRIÈRE, *L’articulation de sens II*, p. 294.

²²¹² J. LADRIÈRE, *L’articulation de sens II*, p. 294.

²²¹³ P. CLAYTON, *Mind and Emergence*, p. 40.

²²¹⁴ See E. MAYR, *This is biology: the science of the living world*, 1998, p. 19-20

²²¹⁵ It was used in physics by Voltaire and Newton. Geologists talk about the “emergence” of continents. Botanist and even evolutionist use the word to talk about the “emergence” of a new functional organ in an animal or vegetal line (i.e. the “emergence” of the eye) See D. ANDLER, et al., *Philosophie des sciences*, p. 941.

²²¹⁶ P. CLAYTON, *Mind and Emergence*, p. 41.

²²¹⁷ J. LADRIÈRE, *Approches philosophiques de la création*, p. 17.

emergence is a pattern that “recurs across a wide range of scientific (and non-scientific) fields.”²²¹⁸

Finally, there is a third notion of the term: a metaphysical sense of emergence. It is a metaphysics of emergence, which is an understanding of nature in its continuous production of complex realities. This third notion is also present in Ladrière. For him, the “process of becoming” manifests itself more intensely during periods characterized by discontinuities where new original realities emerge²²¹⁹. The three major metaphysical emergences are: the emergence of matter (in the form of elementary particles), the emergence of life and the emergence of conscience²²²⁰.

These three senses of the term “emergence” show that it is a limit concept in the sense of belonging to the horizon of *phusis* and *thêoria* as well. For that reason this concept enables a semantic transformation from the horizon of *phusis* to the horizon of *thêoria*. The common point in all of these usages is found in the etymological definition of “emergence”²²²¹. Emergence has the meaning of something coming up new from another thing²²²².

C. The concept of event

In his hermeneutics of nature, Ladrière elaborates a metaphysical use of the term “emergence” that subsumes also the scientific and meta-scientific meaning of the concept. To unfold the potential of the concept of emergence, Ladrière analyzes and elaborates the concept of “event”²²²³. This concept enables him to interpret the cosmos as an emergence of new realities.

An **event** is something new that arrives unexpectedly²²²⁴. It is a discontinuity in a process that contributes to new possibilities and perspectives²²²⁵. An event is a transition from one state to a new state²²²⁶. The new state has a relation with previous ones even when the event introduces a

²²¹⁸ P. CLAYTON, *Mind and Emergence*, p. 49.

²²¹⁹ J. LADRIÈRE, *Approches philosophiques de la création*, p. 33-34.

²²²⁰ J. LADRIÈRE, *Approches philosophiques de la création*, p. 34.

²²²¹ **Emergence** comes from the Latin “*emergere*” that means to rise out or up, to bring forth, to bring to light. It comes from “*ex*”- out and “*mergere*” -to dip or to sink. The notion suggests a rising from a liquid by virtue of buoyancy.

²²²² X. ZUBIRI, *Acerca del mundo*, p. 98.

²²²³ J. LADRIÈRE, *L’articulation de sens II*, p. 296.

²²²⁴ Consider these examples of “cosmic events”: the emergence of protons, neutrons, the constitution of helium and other heavy elements (e.g. carbon and oxygen); the emergence of stars, galaxies, solar systems and our planet; the emergence of eukaryotes, prokaryotes, multicellular systems and unexpected new organisms or species. Consider also the event of self-conscience that is a novelty not without consequence even to the environment.

²²²⁵ J. LADRIÈRE, *L’articulation de sens III*, p. 311.

²²²⁶ J. LADRIÈRE, *L’articulation de sens II*, p. 296

difference²²²⁷. This new state consists of a difference and a novelty. Each new state is open to further developments to become new events. There is always the possibility of an innovation and a new difference to appear. Clearly these differences and novelties appear gradually²²²⁸.

How do these differences and novelties happen? In terms of living systems, evolution must not be interpreted as one kind of generation²²²⁹. When a reality generates a second reality, both of them share the same general structure, e.g. parents and sons share the “human structure”. That is not the novelty of evolution. That innovation does not consist either in the development of a reality. Development consists in the possibility that a virtual present produces its own unfolding toward a developed entity (e.g., the case of a seed becoming a tree)²²³⁰. That is not yet a biological innovation, at least in the sense of evolution. To understand philosophically a biological innovation Zubiri introduces the concept of **virtuality**. For him a virtuality is a reality that might produce something new that is not achieved in the present moment²²³¹. Evolution is the constitution of new virtualities for new species²²³². This virtuality not only contains virtually a reality to generate or to develop, which would simply be a generation or a development. The virtuality to which evolution refers has the capacity or potential to undergo a modification (or a mutation or a transformation) of itself to become another new virtuality for a new species through a gradual process²²³³. Zubiri gives as examples of virtualities the seeds or zygotes²²³⁴. When a beneficial mutation occurs the sequence of DNA changes and it can produce a new species that is present in a virtuality, i.e., a seed or a zygote²²³⁵. This new virtuality is a seed or a zygote with the DNA sequence that belongs to a new species. This means that evolution is the constitution of new virtualities (seeds or zygotes) with the DNA sequence of a new species. However the mere constitution of a new virtuality is not enough. It is a new virtuality that generates a stable species through the configurative power of the medium (reproduction and stability guaranteed by the natural selection). Stable means two things: it is a species that has durability through time and it can generate new individuals in new generations. This is precisely the meaning of “beneficial mutation” vis-à-vis “harmful mutation.” Here Zubiri talks about the concept of *biological*

²²²⁷ Although Ladrière does not give any example, let's consider the emergence of prokaryotes. It is a transition from a mere inorganic system to a new unexpected state: a biological reality. There is a difference but at the same time it preserves the chemical and physical properties of previous inorganic states. See J. LADRIÈRE, *L'articulation de sens II*, p. 297.

²²²⁸ X. ZUBIRI, *Acerca del mundo*, p. 125.

²²²⁹ X. ZUBIRI, *Acerca del mundo*, p. 137-138.

²²³⁰ X. ZUBIRI, *Acerca del mundo*, p. 138.

²²³¹ X. ZUBIRI, *Acerca del mundo*, p. 138-139.

²²³² X. ZUBIRI, *Acerca del mundo*, p. 139.

²²³³ X. ZUBIRI, *Acerca del mundo*, p. 139-140 and 142-143.

²²³⁴ X. ZUBIRI, *Acerca del mundo*, p. 163.

²²³⁵ A beneficial mutation could possibly result in a new species but not necessarily. It could only imply changes in the proteins at the cellular level.

potential. Biological potential is the capacity that a virtuality has to produce a new virtuality²²³⁶. This is how differences and novelties happen. What really emerges through an event is an “**otherness**.”

An event is, at the same time, a transition and an arrival, a continuity and a discontinuity, a similarity and a difference, a resumption and a novelty, a simple transformation of a system’s state and the arrival of a new stable (in the sense of duration) structure. When this concept is applied to interpret the scientific worldview it makes evident the temporal aspect of the cosmos’ self-genesis. It is not an eternal repetition, but an incessant becoming²²³⁷. The true event is this process of becoming and self-organization where the cosmos constitutes and organizes itself²²³⁸. The cosmos is always in a process of self-constitution without a pre-established plan. The world is immersed in a non-stopping process of becoming by means of internal cosmic forces and by principles of organization that belongs to different levels of structure in nature²²³⁹.

The notion of event connotes certain characteristics when applied to the evolution of the cosmos²²⁴⁰. First, there is the aspect of unity. According to Ladrière at every new event the world as a unity takes a new singular form. However, it is not clear the sense of the world’s unity in Ladrière. Following Zubiri, we affirm that this unity is nothing else than the ‘**respectivity**’ within the world²²⁴¹. This respectivity means that every real thing is what it is in a constitutional interdependence on other realities. Every real thing is “with respect to” other things²²⁴². The world is a **systematic unity** and not a simple aggregate or addition of individual isolated

²²³⁶ X. ZUBIRI, *Acerca del mundo*, p. 164.

²²³⁷ J. LADRIÈRE, *L’articulation de sens II*, p. 298.

²²³⁸ J. LADRIÈRE, *L’articulation de sens II*, p. 297-298.

²²³⁹ J. LADRIÈRE, *Foi chrétienne et le destin de la raison*, p. 205-206.

²²⁴⁰ J. LADRIÈRE, *L’articulation de sens II*, p. 298.

²²⁴¹ What does Zubiri mean with the term “**respectivity**”? We have already discussed this concept. However we believe it is pertinent to elaborate here that notion. We already mention the sense of “respectivity” in the field apprehension (see chapter 4, section III.4.3.4) and in Zubiri’s notion of a religious logos and Christian theology (see chapter 5, section IV.3.4.1). Let’s now elaborate it in the sense of the world (reality beyond apprehension). For Zubiri real things are not independent of each other. They form a totality and this totality has two aspects: an operative aspect and a constitutive aspect. The operative totality consists in the interdependence that the functions of each thing has with the functions of all other things. Moreover, this operative interconnection is grounded in the constitution of each real thing. The constitutive totality means that the constitution of each thing is in function of the constitution of the others. Consequently, respectivity is not a simple relation (causal relation, temporal relation, spatial relation, etc.). The respectivity of things is a constitutive moment of each thing. Things are not in respectivity, they are respectivity. Respectivity does not mean that real things start to be real and then they become “connected”. Respectivity means that things are real and are what they are in a constitutive interdependence with the others. There is no real thing that is what it is isolated from the others. The **world** is the constitutive totality of things that are in a constitutive interdependence. The world is the respectivity of the whole real. At the same time, each real thing is a moment of the world. It is relevant to know that Ladrière has a similar concept, the *diakosmesis*. This concept refers to the unity of the cosmos where each entity influences the others and their manifestations through interactions. See X. ZUBIRI, *Acerca del mundo*, p. 87. X. ZUBIRI, *Sobre el sentimiento y la volición*, p. 226-227. J. LADRIÈRE, *L’articulation de sens III*, p. 34-35.

²²⁴² This is clear at the subatomic level where reality is a dynamic interaction expressed by the three (or perhaps four) forces. At the cosmic level things evolve and exist due to the gravitational force. At the biological level everything depends on other realities that coincide in time or that existed previously in the same phyletic lineage, e.g., an ancestor.

realities²²⁴³. It is a system because the world is a whole (everything is connected), is coherent (every reality is a reality “of” the world) and has durability (it has a type of steadiness that enables it to exist)²²⁴⁴. Consequently the cosmos is a systematic unity and the evolution of the cosmos is a systematic process where things interact and appear in an orderly²²⁴⁵ fashion in a particular place and time²²⁴⁶. In other words, “whatever cannot appear whenever and wherever it likes in the cosmos.”

The world is characterized by a systematic unity in respectivity.

For Ladrière this aspect of unity is related to another aspect, that of irreversibility²²⁴⁷. This irreversibility is at the level of the systematic unity of the cosmos²²⁴⁸. The cosmos as a whole cannot pass through the same state of affairs twice²²⁴⁹. Due to the role of randomness at the macro and micro levels the same state cannot be reproduced at two different moments in a temporal systematic process. Configurations are born one after another in a cascade where each configuration or state is in function of others²²⁵⁰. There is a succession in the phyletic order that is not alien to some contingent aspects. Contingency in such a complex dynamic system renders impossible that an event, at the level of the world in its systematic unity, could revert the succession back²²⁵¹. This is expressed with the idea that if we could “wind the tape of time back and let it play again,” we would see other steps in the evolutionary process²²⁵².

²²⁴³ This is the meaning of the called “laws of nature”. Things and natural “states” act and react in function of other things or states. They are more than causalities; they are functionalities that express the existing interconnection between things. X. ZUBIRI, *Acerca del mundo*, p. 95-96.

²²⁴⁴ For Zubiri a system has three properties: it is a totality, it is coherent and has durability. X. ZUBIRI, *Inteligencia y Realidad*, p. 203, 206 and 210.

²²⁴⁵ Order means here a dependency of a spatial and a temporal context. For example, the heavy elements could not appear before the formation of the first generation of stars, life on earth could not appear before some biochemical conditions appeared, etc.

²²⁴⁶ This is expressed by Ladrière. “[...] l’étude des systèmes organisés, en particulier des systèmes vivants, fait voir que les effets de stabilité reposent sur des interactions incessantes [...]. Il apparaît ainsi que la nature est faite essentiellement de processus. [...] on entrevoit que toute structure, à un niveau donné, n’est que la résultante d’interactions se produisant à un niveau inférieur”. J. LADRIÈRE, *L’articulation de sens II*, p. 292. See also X. ZUBIRI, *Acerca del mundo*, p. 90 and 100.

²²⁴⁷ J. LADRIÈRE, *L’articulation de sens II*, p. 298.

²²⁴⁸ At the local subatomic level there is reversibility. Particles are transformed in other particles and they return to the original state. At the biological evolutionary level there could be a regression from complexity to greater simplicity. See E. MAYR, *What evolution is*, p. 220.

²²⁴⁹ Ladrière’s argument is based on the Second Law of Thermodynamics, better known as the law of entropy that explains the phenomenon of irreversibility in nature.

²²⁵⁰ X. ZUBIRI, *Acerca del mundo*, p. 102.

²²⁵¹ Let’s consider the cosmic level. Due to the unstoppable expansion of the universe and the contingency of some of its events (e.g., the movement of particles in the cosmos are random, the heterogeneity of some celestial bodies such as the galactic dwarf are due to random events, the small homogeneities in spatial regions can be modeled as random processes), we cannot return back to an exact previous state of the universe. Consider the biological level. The random variability (mutation) at the DNA level and the contingency at the level of the environment, like the impact of a large extraterrestrial object, are facts that render impossible a repetition of a particular state of nature. See I. MORISON, *Introduction to Astronomy and Cosmology*, p. 54. V. Mukhanov, *Physical Foundation of Cosmology*, p. 318 and 323. G. KAUFFMANN and F. VAN DEN BOSCH, *The Life cycle of Galaxies*, p. 20-21.

²²⁵² The whole expression is “Wind the tape of life back to Burgess times and let it play again. If Pikaia does not survive in the replay, we are wiped out of future history — all of us, from shark to robin to orangutan.” It comes from Gould. S.-J. GOULD, *Wonderful life*, p. 323.

Related to the aspect of irreversibility, there is an aspect of orientation. This orientation does not imply a pre-established plan or design as claimed by Intelligent Design, or a universal progress of evolution or a steady improvement of every phyletic lineage. It is an orientation that appears progressively. Every result constitutes a new base for the elaboration of new structures, which are not predetermined. This notion of orientation is equivalent to the notion of finality found in Henri Bergson. Bergson considered that the finality found in life is not pre-established. The idea of a pre-established plan arrives when we use the analogy of design made to construct an artifact. Bergson proposed a notion of finality in the retroactive sense²²⁵³. We discover an orientation in the process of becoming of the cosmos because we can contemplate in the past a series of related, although unexpected, events. In other words, there is an orientation without a predetermination.

This orientation is grounded in the fact that from a particular configuration (or event) whatever cannot appear. This process is not arbitrary. New configurations appear due to the inherent instability of matter²²⁵⁴. A new configuration depends on a previous configuration that limits and regulates it and at the same time is open to future new possibilities, which are not preordained. The emergence of different species is ordered in a temporal perspective. It is more than an external order, it is a phyletic unity²²⁵⁵.

Zubiri analyses six successive events to uncover the sense of such orientation²²⁵⁶. First, it is the rise of the cell. On it we can see the development of a membrane. Through it, the cell encloses itself and separates its life (as something interior) from the exterior milieu²²⁵⁷. Second, the multicellular organism appears. The unicellular organism divides itself into two individuals through a process of duplication. Meanwhile the multicellular organism generates a new organism through a more complicated process than a mere division of one cell in one act. The multicellular organism is more unique with respect to the species than the unicellular organism. A multicellular organism is not duplicated in one act. For that reason it is an organic system with a greater heterogeneity than a unicellular organism. In that sense it is more diverse and unique. The third fact is the sexual reproduction that emphasizes more the character of uniqueness of an organism with respect to its species²²⁵⁸. Each individual is unique from the standpoint of its genetic structure. It is not the mere duplication of a DNA sequence (i.e., a clone) as happens in an

²²⁵³ H. BERGSON, *L'évolution créatrice*, p. 51.

²²⁵⁴ X. ZUBIRI, *Acerca del mundo*, p. 114 and 119.

²²⁵⁵ X. ZUBIRI, *Acerca del mundo*, p. 132.

²²⁵⁶ Zubiri clearly states that his list of successive facts is not exhaustive. X. ZUBIRI, *Acerca del mundo*, p. 149.

²²⁵⁷ X. ZUBIRI, *Acerca del mundo*, p. 150.

²²⁵⁸ X. ZUBIRI, *Acerca del mundo*, p. 151.

asexual reproduction. The fourth fact is the development of neural or synaptic chains and later the nervous system. Through it there is a centralization of different organic systems, e.g., the cardiovascular system. This centralization produces an increment in the autonomy of the organism with respect to the relationship stimulus-response²²⁵⁹. The organism's response is more autonomous with respect to a stimulus from the environment. Fifth, there is the homeostasis that consists of mechanisms that stabilize the interior of the organism²²⁶⁰. Through it the animal is able to have a larger variability of movements through different milieus. Through the nervous system and the homeostasis the organism is more autonomous and it controls more the environment.

Finally, there is a sixth fact, the cerebral cortex and the cephalization, which is the centralization of nervous control system in the head²²⁶¹. Through it the animal not only reacts to an exterior stimulus. The animal has a set of diverse and possible responses more complicated than the response of an ameba or a plant. This enables what Zubiri calls "formalization"²²⁶². For Zubiri formalization is an anatomic-physiological structure²²⁶³ that enables the animal to have possible different responses to the same stimulus. In other words, the same stimulus brings on a more complicated set of responses in an animal with a more developed cerebral cortex than with an animal with a less developed nervous system. It is enough to see the different possible reactions that a worm, a crab, a dog, a chimpanzee and a human being could have in front of an unknown human person. This implies a considerable increment of autonomy with respect to the species and with respect to the milieu. Through this formalization an animal is not "programmed" to act in a homogeneous way following closely a homogeneous species. Consequently, the animal is a system of stimulation²²⁶⁴. However, the human being is an animal where things are not simple stimulus but stimulating realities²²⁶⁵.

The human being is an animal hyper-formalized²²⁶⁶. This means that the human person is open to a huge set of possible actions in front of a reality. This is the ground of Zubiri's sentient intelligence discussed in chapter 4. Human intelligence is the capacity to confront things as

²²⁵⁹ X. ZUBIRI, *Acerca del mundo*, p. 152.

²²⁶⁰ X. ZUBIRI, *Acerca del mundo*, p. 153.

²²⁶¹ X. ZUBIRI, *Acerca del mundo*, p. 153-154.

²²⁶² "Formalization is, as I said, independence of autonomization. This does not mean an abstract independence, but something very concrete. Independence, stated in a crude way, means that the content is more or less "detached" from the apprehending animal." (p. 38). "Formalization, then, concerns sensing as a whole as arousal, as modification of vital tone, and as response." (p. 41). "Formalization is, I repeat, at once autonomization of content and autonomization of what is perceived with respect to the animal which is apprehending." (p. 45). X. ZUBIRI, *Inteligencia y Realidad*, p. 38, 41 and 45.

²²⁶³ X. ZUBIRI, *Inteligencia y Realidad*, p. 46.

²²⁶⁴ X. ZUBIRI, *Acerca del mundo*, p. 167.

²²⁶⁵ X. ZUBIRI, *Acerca del mundo*, p. 168.

²²⁶⁶ X. ZUBIRI, *Acerca del mundo*, p. 171.

realities due to the structural unity between senses and intelligence. The human person, in front of a particular reality, can suspend his response in order to take charge of reality as reality²²⁶⁷. The primary function of sentient intelligence is biological²²⁶⁸. It is a biological factor that has allowed the human species to continue its existence. Human intelligence is a result of an evolutionary process and also a positive factor in the human species. It produces a stabilization (in the sense of a duration) of the species vis-à-vis external changes. The human person is autonomous with respect to other realities. This does not mean that there is a caesura between the human being and other animals. There is no caesura but a perfect continuity between the human being and the zoological series²²⁶⁹. Nevertheless, there is a difference. Human beings not only discover a reality but discover themselves as a reality. They become an open system, a person. The human person today lives a different life when compared to a human being that lived 15,000 years ago, while other animals live the same type of life today than 30,000 years ago. Due to the huge quantity of possible responses to the same stimulus, human beings stabilize their life through a personal project. Through personal projects human persons center themselves and endure through time²²⁷⁰.

Let's return now to the issue of orientation in the event of the world's self-constitution. With the assistance of Bergson, we already clarified in what sense we can see an orientation, the retroactive sense. Now there is the issue of what orientation we see in these six successive events. There is an orientation to an increasing diversity of structures and forms²²⁷¹. It is an orientation from a unity to a relative plurality or diversity of material structures at the quantum, cosmic, chemical and biological level. As we already discussed, there is in the biological world an explosion of biodiversity²²⁷². There are many possible realizations of life. The process of the world self-constitution is oriented toward an **otherness**!

Another aspect of this orientation is the orientation toward stable complex systems. At the cosmic level there is the gradual appearance of complex systems of stars called galaxies and galaxies are grouped into clusters of galaxies. There are more complex material structures in the universe with more complex interactions. At the chemical level in our planet there are larger and more complex structures, e.g., amino acids and proteins. At the biological level there are the complex interrelations and structures of cells, tissues, organs, organisms and ecosystems.

²²⁶⁷ X. ZUBIRI, *Acerca del mundo*, p. 171.

²²⁶⁸ X. ZUBIRI, *Acerca del mundo*, p. 172, 174 and 175.

²²⁶⁹ X. ZUBIRI, *Acerca del mundo*, p. 177.

²²⁷⁰ X. ZUBIRI, *Acerca del mundo*, p. 178-179.

²²⁷¹ X. ZUBIRI, *Acerca del mundo*, p. 119.

²²⁷² Although we discussed only the biological level, this happens also at other levels. At the chemical level there is the emergence of a family of elements with extremely diverse properties and arranged in an extreme diversity of molecular structures.

However, this complexity is not a preordained law. It is not the most relevant aspect of the cosmic process. With Zubiri, we will argue that there is something more fundamental than the aspect of complexity. It is the orientation toward stability, which means durability.

There is an orientation from the instability of matter toward more stable material structures. On the earth the climate conditions enable the appearance of relative stable molecular structures (e.g., amino acids that are parts of proteins). Moreover, there is a basic structure highly complex that has a relatively high stability: the DNA²²⁷³. Without a minimum stability, life would not be possible. This stability has a paradoxical property: it is a dynamic stability in the sense of a dynamic equilibrium with other realities and the medium²²⁷⁴. However, Zubiri uses the term “stability” not in the sense of “static” but in the sense of duration and durability²²⁷⁵. Living organisms are systems characterized by being a whole, coherent and durable. Vis-à-vis a small perturbation of the environment they can endure. If that was not the case life could not sustain and reproduce itself. This stability at the physical, chemical and biological level is relative and dynamic. If this stability was total, mutations and evolution could not be possible. Stability, durability and dynamicity are characteristics of living organism that are due to the stability, durability and even dynamicity of the genes at the molecular level²²⁷⁶. In some cases, although not always, these three interrelated aspects lead to more complex structures and interrelations. The possible emergence of complexity is grounded in these three interrelated aspects of **stability, durability and dynamicity**.

There is an orientation toward an increasing **autonomy** with respect to the medium²²⁷⁷. A living organism that would be fully and totally adapted to its milieu will disappear at minor perturbations. If human beings survive more than other complex organisms, or at least they have more possibilities to survive, it is because the human person is less bound and constrained to a determined environment²²⁷⁸. This is due to its hyper-formalization.

As a summary, there is an orientation, in a retroactive sense, from a homogeneity, instability and simplicity toward diversity, stability that may lead to complexity, autonomy and

²²⁷³ X. ZUBIRI, *Acerca del mundo*, p. 123.

²²⁷⁴ X. ZUBIRI, *Acerca del mundo*, p. 127.

²²⁷⁵ X. ZUBIRI, *Acerca del mundo*, p. 128.

²²⁷⁶ X. ZUBIRI, *Acerca del mundo*, p. 128.

²²⁷⁷ X. ZUBIRI, *Acerca del mundo*, p. 126-127. Ladrière agrees with Zubiri on this. “[...] le fait est que la dérive évolutive a lieu dans un sens bien déterminé : celui de l’apparition de systèmes de plus en plus complexes, caractérisés par des formes de comportement de plus en plus autonomes (par rapport au milieu), de plus en plus individualisées, et de plus en plus transformatrices.” J. LADRIÈRE, *L’articulation du sens II*, p. 292.

²²⁷⁸ X. ZUBIRI, *Acerca del mundo*, p. 148.

uniqueness or individuality²²⁷⁹. All of these orientations occur in the systematic unity in respectivity of the world.

Everything we have discussed about the notion of “event” allows Ladrière to reformulate the meaning of the concept of “emergence”. In the concept of “emergence,” as in the concept “event,” other concepts converge: the unexpected, novelty, unity, irreversibility and orientation²²⁸⁰. Emergence is a transition and the arrival at a new quality. Emergence is neither a simple deployment of probabilities (pure chance) nor the realization of a plan (Intelligent Design). It is an action on the conditions that brings about a new configuration²²⁸¹. Emergence implies, as does the notion “event”, a relationship to previous events in history and a transformation into something new.

We argue that the idea of emergence expresses the unity of both aspects: relationship and originality. Consequently, there are two aspects united in the concept of emergence that has not been fully deployed by Ladrière. They are the “other” and the “systematic unity in respectivity” of the world. Emergence as **otherness** and as **systematic unity in respectivity** reflects and solves the apparent paradox found in the cosmic process of self-genesis: transition and arrival, continuity and discontinuity, similarity and difference, resumption and novelty. Following this analysis we affirm the following thesis:

The world is in a process of self-constitution characterized by the continuous emergence of an “otherness” in a “systematic unity in respectivity.”

D. Ladrière’s notion of creativity

Until now we have operated a semantic transformation from the scientific concept of “evolution” to the concept of “emergence”, which includes two other concepts: “otherness” and “systematic unity in respectivity”. Still, “emergence” does not express or imply the theological notion of creation. In order to reinterpret the theological concept of creation, Ladrière uses the analogy of human activity and applies it to the notion of “emergence.”²²⁸² It is in understanding the “creativity” of a human action that we can understand, by analogy, the “creativity” of the cosmos²²⁸³. Ladrière takes the terms “creativity” from Whitehead²²⁸⁴ in order to understand the process of self-constitution of the world²²⁸⁵.

²²⁷⁹ X. ZUBIRI, *Acerca del mundo*, p. 119-120. J. LADRIÈRE, *L’articulation du sens II*, p. 292-293.

²²⁸⁰ J. LADRIÈRE, *L’articulation du sens II*, p. 299.

²²⁸¹ J. LADRIÈRE, *L’articulation du sens II*, p. 299.

²²⁸² J. LADRIÈRE, *L’articulation du sens II*, p. 296 and 303

²²⁸³ J. LADRIÈRE, *L’articulation du sens II*, p. 301.

Following a phenomenological analysis, Ladrière considers that a human action is responsible for its own constitution, its meaning and its quality²²⁸⁶. Human actions achieve human capacities and fulfill the potentials of their agent. Ladrière provides two genres of human actions that unfold human capacities and creativity: invention and decision. An invention is original in the sense of ensuring that something new arises²²⁸⁷. There is a moment where the structure of something, that had only a vague potential, becomes clear and organized in the human mind. A person, by means of a decision, creates a new quality, a new modification in the world and by doing so he modifies some dimensions of his own existence. As a consequence, he introduces a discontinuity in his existence even when he remains himself²²⁸⁸. If we apply, by analogy, this notion of “action” to the cosmos, we can understand and interpret the idea of emergence as creativity. The cosmos, at each instance in the process of self-constitution, modifies itself by unfolding new qualities that existed only as diffuse potentials. In this process the cosmos will remain always open to further unexpected modifications.

Following these insights we can formulate the creativity of the cosmos as follows:

The cosmos is an event from which emerges, by constant creative actions, its self-constitution. This constant emergence progressively manifests in time the meaning of the cosmos²²⁸⁹.

A creativity is at work in the universe. The cosmos organizes itself, without ceasing, in a creative process that produces an increasing diversity, stability that may lead to complexity, autonomy and individuality²²⁹⁰.

We should add:

This creativity is manifested through the emergence of an “otherness. This otherness is not isolated from previous events but in a systematic unity in respectivity with other realities in the cosmos.

The following table shows the process of semantic transformation from natural sciences to philosophy.

²²⁸⁴ Whitehead uses the concept of creativity to designate the mysterious, ultimate reality that originates the process of self-constitution of the cosmos. J. LADRIÈRE, *Approches philosophiques de la création*, p. 34.

²²⁸⁵ Zubiri also sees that, at least in the spatial and temporal interrelation of living organism, there is a creative aspect of life that is grounded in the orientation toward relative stability. Zubiri understands this creativity in the sense of innovation. X. ZUBIRI, *Acerca del mundo*, p. 128. X. ZUBIRI, *Estructura Dinámica de la Realidad*, p. 172 and 186.

²²⁸⁶ J. LADRIÈRE, *L'articulation du sens II*, p. 300.

²²⁸⁷ J. LADRIÈRE, *L'articulation du sens II*, p. 302.

²²⁸⁸ J. LADRIÈRE, *L'articulation du sens II*, p. 303.

²²⁸⁹ This is our modification of what Ladrière wrote in *L'articulation du sens II*, p. 305.

²²⁹⁰ This is also our modification to what Ladrière wrote in *L'articulation du sens II*, p. 277. See also X. ZUBIRI, *Acerca del mundo*, p. 128.

Table 6.2 The semantic transformation from natural sciences to philosophy

Horizon of natural sciences (<i>Phusis</i>)	Horizon of a philosophy of nature (<i>Theôria</i>)
Evolution → <i>Cosmic expansion and biological evolution.</i>	Emergence → Creativity ↑ ↑ Event Action
<i>There is an enormous diversity of material structures and living species.</i> <i>There is a manifestation of stable and complex inorganic and organic systems.</i>	<i>The cosmos is an event from which emerges, by constant creative actions, its self-constitution. This constant emergence progressively manifests in time the meaning of the cosmos.</i> <i>A creativity is at work in the universe. The cosmos organizes itself, without ceasing, in a creative process that produces an increasingly diversity, stability that may lead to complexity, autonomy and individuality</i> <i>This creativity is manifested through the emergence of an “otherness. This otherness is not isolated from previous events but in a systematic unity in respectivity with other realities in the cosmos.</i>

E. Transcendence in the immanence: relationship to a philosophy of religion

Ladrière’s concept of creativity is not yet a theological concept. This creativity is immanent to the world. It is significant that the philosophical hermeneutic of nature just presented, based on Zubiri’s and Ladrière’s works, has not appealed to a principle outside our world in order to explain the structure of a phenomenon or the creative process immanent to the world.

However, this process of self-constitution is not only about particular things that emerge. It is the whole universe that emerges. Vis-à-vis its existence and its self-constitution, the universe is an enigma, a problem for the human being²²⁹¹. From there humanity asks itself about the ultimate origin or foundation of the world.

With respect to these issues and problems, philosophy can remain in the pure immanence. If we follow the position of atheism or even pantheism, we would affirm that the cosmos is self-sufficient and it is itself its own ground. This position argues that there is no other ultimate foundation for the universe’s immanent creativity and meaning. The world is self-sufficient. Pantheism is the position found in the classical idea that everything emerges from the *Soul of the world* or in the modern idea the whole world is a mode of the divine substance²²⁹². For Zubiri this is problematic. If the universe evolves due to an inherent instability this would imply that its

²²⁹¹ X. ZUBIRI, *Acerca del mundo*, p. 209.

²²⁹² X. ZUBIRI, *Acerca del mundo*, p. 218.

ultimate foundation, which is merely one moment of the world²²⁹³, is unstable. How can an unstable foundation be a foundation at all? This is a difficulty that pantheism must answer.

There is another possibility, the theistic position. Each event in the cosmos is actual, accomplished in itself, even when it emerges from a creative process that is undetermined, unpredictable and unaccomplished. This calls for an ultimate, possibilitating and impelling reality beyond the undetermined and unaccomplished process of the cosmos. This ultimate reality is the ultimate absolute foundation of the whole self-constitution process of the cosmos. This reality must have the following characteristic:

- This reality must act in the whole cosmos and in the whole process of emergence²²⁹⁴. This ultimate foundation must be an absolute creativity, source of the world's creativity²²⁹⁵.
- As an ultimate foundation it should operate inside the cosmos (immanent). Without its immanent presence the universe could not exist²²⁹⁶ (against deism).
- The ultimate foundation exists by itself independently of the world²²⁹⁷. Or, as Zubiri says, this principle is absolutely absolute and absolutely free. It is immanent to the world without being affected by the process of emergence of the cosmos (against pantheism).
- As a consequence of "its" independence of the world²²⁹⁸, this absolute creativity must be beyond the limits of the world. In other words, it is transcendental and actual. It is not part of this world.

The theistic position calls this ultimate, absolutely absolute, possibilitating and impelling foundation: God. God as a transcendental reality and the world are not one (God is not equal to the world). However, this does not mean either that God and the world are two things. God and the world are not two realities that can be put side by side²²⁹⁹. God's presence is immanent to the world. God is not outside things, is not above things, is not below them, is not simply at their beginning and is not merely at their end. God is present in all things. Perhaps, it is better to say that the whole universe is present in God, the ultimate foundation that renders possible the existence of things and that impels the autonomous immanent creativity of the whole world. However, God is not affected by the world. There remains always an absolute difference, which

²²⁹³ X. ZUBIRI, *Acerca del mundo*, p. 216-217.

²²⁹⁴ J. LADRIÈRE, *L'articulation du sens II*, p. 300.

²²⁹⁵ J. LADRIÈRE, *L'articulation du sens II*, p. 306

²²⁹⁶ X. ZUBIRI, *Acerca del mundo*, p. 214.

²²⁹⁷ X. ZUBIRI, *Acerca del mundo*, p. 215.

²²⁹⁸ X. ZUBIRI, *Acerca del mundo*, p. 219.

²²⁹⁹ X. ZUBIRI, *Acerca del mundo*, p. 220.

cannot be abolished, between God and the world. This position, which is neither deism nor pantheism is what is called **panentheism**²³⁰⁰.

We have found the ground of the religious meaning of life and the world. This paves the route to monotheism and the horizon of *theologia*.

VI.1.3.3 From the horizon of *theôria* to the horizon of *theologia*: a theological hermeneutics of the world

We have already distinguished between the speculative horizon of philosophy and the horizon of self-understanding of faith²³⁰¹. However, after distinguishing both of them, we have affirmed that faith can assume in its order of confession, the speculative philosophical discourse²³⁰². Before continuing this section, we must clarify that the notion of creation is first of all a theological concept²³⁰³ and not a metaphysical theory. It is something revealed by God²³⁰⁴.

In this section we will reinterpret systematically the theological notion of creation retrieved from the Scriptures and witnessed by Tradition (Fathers of the Church, doctrinal formulations and theologians). In order to reinterpret the notion of creation we will assume and transform, in the form of semantic transgression, the speculative concepts of "creativity", "otherness" and "systematic unity in respectivity". In our development we will follow some intuitions of Adolphe Gesché and Xavier Zubiri. Let's start with Gesché's contributions. His theology of the cosmos assumes a speculative reflection on the cosmic "creativity." Gesché's theology articulates the scientific worldview of the evolution and a theology of "creation" by means of the philosophical concepts of creativity and autonomy.

A. The three paradigms of theology of creation

First, Adolphe Gesché reviews three historical models of the theology of creation. The first model is the theocentric vision of the cosmos²³⁰⁵. This model, which predominates until modern times, understands God as Creator in the sense of maker²³⁰⁶. It also understands creation as a passive cosmos that does not have anything to say about itself.

The second perspective is that of anthropocentrism where all things and the cosmos itself,

²³⁰⁰ The term **panentheism** comes from *pan* (all) + *en* (in) + *theo* (God). Literally means God in all things, or better all things in God. This position rejects any separation (deism) and any identification (pantheism) between God and the world.

²³⁰¹ J. LADRIÈRE, *Foi chrétienne et le destin de la raison*, p. 212.

²³⁰² J. LADRIÈRE, *L'articulation du sens II*, p. 307-308.

²³⁰³ J. LADRIÈRE, *Approches philosophiques de la création*, p. 18.

²³⁰⁴ J. LADRIÈRE, *Approches philosophiques de la création*, p. 18.

²³⁰⁵ A. GESCHÉ, *Le cosmos*, p. 16.

²³⁰⁶ A. GESCHÉ, *Le cosmos*, p. 19.

is understood from the perspective of the human being. God creates the cosmos merely for the human being. The human person's task is to control and to master nature. According to Gesché this vision justified the manipulation and exploitation of our environment²³⁰⁷. This vision predominates in modern mentality until recently. There is also a third perspective, a world closed in itself without any reference to God. It could have been created by God in an initial act at the beginnings, but now it goes through its own path alone. If we may say so, this perspective suggests an image of a creature abandoned by God. This is a type of cosmos-centrism already proposed by deism.

However, by means of the concept of an immanent “creativity” operating in the cosmos, Gesché develops a new paradigm in which the divine act of creation produces a cosmos with its own consistency in its own otherness²³⁰⁸. Ladrière’s notion of creativity allows Gesché to find the theological meaning and intelligibility of the cosmos in its otherness. As such, in this paradigm there are three poles: an autonomous and creative world, a free co-creator human being²³⁰⁹ and the transcendental absolutely free God-Creator²³¹⁰.

A.1 The cosmos

There is in the universe a fundamental immanent principle of creativity that drives the whole creation²³¹¹. The cosmos is an event where reality organizes²³¹² itself in an autonomous and constant process of becoming²³¹³. The cosmos precedes us in its own way with its creativity²³¹⁴ and autonomy. This autonomous creative creation expresses the will of God²³¹⁵. God wanted a reality characterized by being “other.”

A.2 The human being

Creation is the place where men and women live²³¹⁶. It is the indispensable home where men and women constitute and understand themselves²³¹⁷. It provides the resources for a human personal project and the human search for meaning. This search for meaning and the

²³⁰⁷ A. GESCHÉ, *Le cosmos*, p. 10

²³⁰⁸ A. GESCHÉ, *Le cosmos*, p. 13

²³⁰⁹ A topic developed in Adolphe GESCHÉ, *Dieu pour penser. II. L'homme*, Cerf, Paris 1993.

²³¹⁰ A. GESCHÉ, *Le cosmos*, p. 13-14.

²³¹¹ A. GESCHÉ, *Le cosmos*, p. 63 and 65.

²³¹² A. GESCHÉ, *Le cosmos*, p. 123

²³¹³ A. GESCHÉ, *Le cosmos*, p. 126.

²³¹⁴ A. GESCHÉ, *Le cosmos*, p. 63.

²³¹⁵ A. GESCHÉ, *Le cosmos*, p. 19

²³¹⁶ A. GESCHÉ, *Le cosmos*, p. 43.

²³¹⁷ A. GESCHÉ, *Le cosmos*, p. 64.

development of the human project manifest God's calling to humanity to become co-creator. The uniqueness of the human being is not a break with nature²³¹⁸. Human freedom and capacity for innovation are rooted in the autonomy and creativity of the cosmos²³¹⁹. Then, human specificity is not a break but nature's achievement²³²⁰.

A.3 God the Creator

The notion of a self-creative and autonomous cosmos makes us reject the idea of God as a manufacturing cause²³²¹. God is neither a watchmaker²³²² nor the Great Architect²³²³. Moreover, the world's autonomy and creativity pose a few questions on the idea of creation. Does an autonomous and creative world challenge the role of God the Creator? Does the idea of an autonomous creation imply a world independent of God²³²⁴? These questions may be reformulated as following: how can we articulate the idea of creation's otherness with respect to God with the concept of dependence on the Creator? How can we conceive God's creative act?

B. Gesché's reflection on the act of creation from the point of view of the creature

Gesché articulates the idea of creation's otherness with the concept of dependence on the Creator with the following thesis: "***God, as a cause, makes that things make themselves.***"²³²⁵

This thesis does not say that things make themselves alone and totally independent of God, as if there was no creation. Creation is the act to bring about something entirely different in its bestowed autonomy and otherness²³²⁶. To create is not to dictate or to program in advance, but to open a space of autonomy and otherness where the creature emerges and becomes by itself²³²⁷. It is God Himself who provokes²³²⁸, who calls an immanent creative process of becoming from which all things will emerge²³²⁹. God is the initiator, the condition of possibility, the ultimate and absolute foundation of this creative process of becoming.

This autonomous creative process of becoming is possible due to a distance between

²³¹⁸ A. GESCHÉ, *Le cosmos*, p. 81.

²³¹⁹ A. GESCHÉ, *Le cosmos*, p. 79, 129.

²³²⁰ A. GESCHÉ, *Le cosmos*, p. 64.

²³²¹ A. GESCHÉ, *Le cosmos*, p. 73.

²³²² A. GESCHÉ, *Le cosmos*, p. 58.

²³²³ A. GESCHÉ, *Le cosmos*, p. 59.

²³²⁴ A. GESCHÉ, *Le cosmos*, p. 69. This question is also found in Zubiri. See X. ZUBIRI, *El hombre y Dios*, p. 161 and 164.

²³²⁵ A. GESCHÉ, *Le cosmos*, p. 71.

²³²⁶ A. GESCHÉ, *Le cosmos*, p. 61.

²³²⁷ A. GESCHÉ, *Le cosmos*, p. 72.

²³²⁸ To provoke comes from latin *provocare*: to call from outside.

²³²⁹ A. GESCHÉ, *Le cosmos*, p. 73.

creation and God. This distance implies that God wants and respects creation's otherness. How to interpret theologically this distance? Does Gesché follow the idea of deisms that represented God as a distant deity who abandoned the world to its own immanent mechanisms? The answer is clearly negative. This distance does not imply that God abandons his creation. On the contrary, the distance and radical difference between God and the world allows creation to participate of God's creative power. Here we are closer to Aquinas' concept of participation²³³⁰ than to the deist watchmaker who withdraws from his fabrication. The distance and otherness are conditions that render possible creation's participation of God. The distance and otherness are also conditions that render possible a relation, another Thomist concept²³³¹.

Moreover, this distance also tells us something about God. It suggests a first kenosis in the act of creation. This kenosis implies that God does not seek something for Himself through his act of creation²³³². On the contrary, He even shares with the whole creation his capacity to produce something new and something other.

Finally, Gesché offers a reinterpretation of the symbol of faith. "*God by whom all things were made*" must be understood as "*God by whom all things become*"²³³³.

C. Zubiri and the act of creation from the point of view of God

With respect to God, the world is an "other"²³³⁴. This theological otherness is more radical than the otherness produced by the world's becoming process where diverse (as "other") things emerge from previous existing realities. God's act of creation is to produce an otherness without God becoming other, changed or modified²³³⁵. Is the world created *ex nihilo*? Strictly speaking nothing comes from nothing. Nothingness is not a source of something. Everything comes from God's act of creation. To be created is to be from God²³³⁶. Creation *ex nihilo* should be reinterpreted in the sense that God does not seek or need an external support or ground to create. There is an absolute difference between the world's immanent creativity and God's act of creation. In the immanent creativity something new (as "other") emerges in a particular moment and space from previously existing realities. Meanwhile, God creates the whole world without any dependence of previous materials, space and time. The world absolutely depends on God and

²³³⁰ THOMAS AQUINAS, *Summa Theologiae*, Ia, Q. 13, Art. 10; Q. 44, Art. 1, 3; Q. 49, Art. 3.; Q. 84, Art. 1.

²³³¹ THOMAS AQUINAS, *Summa Theologiae*, Ia, Q. 45, Art. 3.

²³³² A. GESCHÉ, *Le cosmos*, p. 56. In a similar manner Haught argues for a divine kenotic compassion seen through nature's evolutionary process. See J. HAUGHT, *God after Darwin*, p. 109-114.

²³³³ A. GESCHÉ, *Le cosmos*, p. 72.

²³³⁴ X. ZUBIRI, *Acerca del mundo*, p. 223-224.

²³³⁵ X. ZUBIRI, *Acerca del mundo*, p. 225.

²³³⁶ X. ZUBIRI, *Acerca del mundo*, p. 225.

on no other ultimate foundation. Furthermore, God creates without necessity. Nothing inside or outside him forces God to create. Moreover, God remains fully Himself when He creates an “other”. God is unaffected by the act of Creation. He is always different from what He creates.

The otherness of the world with respect to the Eternal God is manifested by the fact that everything emerges in a temporal process and in a particular place in a systematic unity in respectivity with other things that exists simultaneously or that exists previously. Creation cannot be reduced to a temporal beginning²³³⁷. Creation is a continuous action: God is the ultimate foundation and source of each thing at each instant, state, event and place that exists in the world.

Considering that reinterpretation of creation *ex nihilo* and *creatio continua* we should answer the following question: how can we understand God’s act of creation? To answer that question Zubiri analyses the act of being caused by something else. In some way a causing reality is open to be outside itself to produce an effect²³³⁸. This is clear in the notion of **ecstasy**²³³⁹, which means “to stand outside oneself.” God does not need to create or to stand outside Himself. According to Zubiri, God in absolute freedom decides to be in ecstasy, to stand outside Himself to create. This act of standing outside Himself, to go to an “other”, is what is called agape. God stands outside Himself to give reality to an “other” in an act of pure love. God communicates Himself to an “other” to give to the creature its reality and self-consistency. Moreover, this unstoppable radical dependency of the creature with respect to the Creator is what respectivity is about. The world’s otherness that self-constitutes itself in a temporal and spatial process is a divine gift from a God who stands outside of Himself as an act of divine love. The world’s respectivity to the divine absolute reality is nothing else than the world’s absolute dependency on God to exist. Here we should clarify that creation’s respectivity is not reciprocal. God does not have any dependence on the world. Otherness (as self-consistency and autonomy) and respectivity (as absolute dependency on God) are acts of God’s freedom and love.

The world autonomy and self-consistency is shown in the order of manifestation and self-constitution. They ground the autonomy of natural sciences that study the order of manifestation and self-constitution.

D. Our reflections on the systematic aspect of a reinterpretation of the concept of creation

²³³⁷ The Greek term *arkhe* that appears in Gn 1 and Jn 1, implies at the same time a temporal beginning and a principle or fundamental origin.

²³³⁸ X. ZUBIRI, *Acerca del mundo*, p. 235.

²³³⁹ Ecstasy comes from Greek *ekstasis* as a variation from *existanai*. It is composed from *ek* "out" and *histanai* "to place, cause to stand." Ecstasy means "to displace" or "to put out of place."

D.1 Trinitarian aspects of the theology of creation

Without seeking to develop a treatise on the Trinity, which is outside the scope of the present work, and without seeking to be exhaustive we will mention some Trinitarian aspects that are systematically related to creation. What we have discussed in terms of the act of creation in Gesché and in Zubiri only considers God as a unity. There is no doubt that this unity is reflected in the act of creation. However, as Gesché affirms, God's unity is a dynamic unity that does not erase the distinction of persons²³⁴⁰. God is a true unity and a true plurality. Without this divine unity we will fall into a tritheism. Without the plurality we will fall in a divine closed monad. Let's see how a Trinitarian theology addresses better some issues and difficulties in our reinterpretation of the theological concept of creation.

D.1.1 God's Otherness and Communion

First of all, God's ecstasy in the act of creation (standing outside Himself) is a manifestation-revelation of God's inner life. God is not a closed monad. There is an inner openness in God to an "Other" that is not exterior to Him. There is an **Otherness in God**, the Eternal *Logos*. This is the divine ground of God's act of ecstasy, of standing outside Himself. The distance that God maintains with creation, which lets the cosmos be in a creative process, is grounded in this *Logos'* Divine Otherness.

The world is created through the Son. As a Divine Otherness the Son is the Paradigm, the Model, the Archetype, the Icon, the Exemplar of the worldly immanent otherness²³⁴¹. The act of creation, the diversity of the world, the immanent creativity that produces each real thing in its otherness is grounded in the *Logos'* Otherness. It is the trace of God's *Logos* in the world. Another aspect of the *Logos'* presence in the world (as the Archetype and the Wisdom), is the immanent capacity of the world to structure itself. This is what Ladrière calls the world's inner *logos* or rationality²³⁴².

Second, this Otherness is not an alienation in the Trinity. There is a full communion between God and his Divine *Logos*. The Holy Spirit is the **Subsistent Communion** of the Father and the Son. There is a permanent intratrinitarian respectivity, in the sense of divine communion: the Son is "with respect to" the Father and the Father "with respect to" the Son. This is the divine ground of the immanent systematic unity in respectivity of the cosmos. Things are "other"

²³⁴⁰ A. GESCHÉ, *Le cosmos*, p. 155.

²³⁴¹ A. GESCHÉ, *Le cosmos*, p. 156.

²³⁴² J. LADRIÈRE, *L'articulation du sens II*, p. 273-276. See also A. GESCHÉ, *Le cosmos*, p. 171.

without being isolated or disconnected from the rest. Creation is an act of integration of each thing in a dynamic “network of relations”. The Holy Spirit as a Divine Subsistent Communion is the divine ground of the world’s self-constitution as a system of unity in respectivity.

These Trinitarian aspects, Divine Otherness and Divine Communion, are the divine ground of God’s free ecstasy and the divine immanent presence in the world. They are also the divine ground of God’s transcendence to creation, i.e., God is not affected, forced, or reduced to be immanent to the world. God’s Otherness and Communion are absolutely independent of the world’s otherness and respectivity. Moreover, the world’s otherness and systematic respectivity are not simple products of pure chance but willed by God. That is why the world is seen by God as good.

Only a Trinitarian God can create a world as ours: neither uniform nor segmented in isolated monads. That is why we proposed a modification to Gesché’s formulation to reflect a Trinitarian theology of creation: *God by whom all things become in their otherness and in a systematic unity and relationship.*

D.1.2 The Trinity as the ground of the relationship between the order of manifestation and the order of revelation.

Another Trinitarian aspect of the theology of creation refers to the relation between the order of manifestation and the order of revelation. The world is the place where human beings have experiences, including the experience of God. It is the place, and not outside of it, where God reveals Himself and where the human person discovers, experiments and welcomes (or rejects) God.

We argue that the discontinuity and continuity between the order of manifestation and the order of revelation is not rooted in any historical dialectic movement, but in the Trinitarian God. First of all, *God is the Absolute Other with respect to the order of manifestation (history and cosmos) and our human capacities to apprehend the manifested*²³⁴³. God in Himself is absolutely beyond our capacities to reach and apprehend²³⁴⁴. “*He is nothing of this world*”²³⁴⁵. Through our mere apprehension of the order of manifestation we cannot arrive at God in Himself and God’s

²³⁴³ This is the theme of God’s invisibility, the *Deus absconditus*, in the Scriptures. Just to mention some New Testaments’ reference: Jn 1,18; Rom 1,20; 1 Tim 1,17; 1 Jn 4,12; Heb 11,13 and 27.

²³⁴⁴ H. DENZINGER and P. HÜNERMANN, *Symboles et définitions de la foi catholique*, no. 3015. J. LADRIÈRE, *L’articulation du sens II*, p. 222.

²³⁴⁵ B. LONERGAN, *Method in theology*, p. 110.

self-communication to us. This is the foundation of the aspects of discontinuity between the order of revelation and the order of manifestation²³⁴⁶.

The Logos is the Trinitarian immanent subsistent principle of God's self-communication to us in history. The *Logos* begotten by the Father (*logos endiathetos*) is the eternal ground of God exiting Himself for the sake of creation (*logos prophorikos*). The *Logos* is already the principle of all the intelligibility found in the cosmos, including the human being. The incarnated *Logos* is the Emmanuel, God with us, God's supreme form of manifestation²³⁴⁷, a historical and cosmic moment²³⁴⁸. The incarnation is the foundation of the aspects of continuity between the order of revelation and the order of manifestation.

The Holy Spirit is the Trinitarian immanent subsistent principle of the transfiguration of the order of manifestation to become sacrament of God's self-communication. The Holy Spirit is the subsistent communion of the Father and the Son. He is the eternal ground of communion of realities characterized by being diverse (without confusion and without separation)²³⁴⁹. Through the Holy Spirit, the Word of God takes flesh²³⁵⁰, the eternal enters history, the invisible becomes visible without confusing God and humanity. It is the Holy Spirit who renders the cosmos and history (the order of manifestation) a sacrament that makes present God²³⁵¹ (the order of revelation). This is the foundation of the relationship between revelation and manifestation, faith and reason, creation and cosmic self-constitution, history and salvation. This relationship can be

²³⁴⁶ As it is the ground of the moment of negative theology in Aquinas, Rahner, Lonergan and Barth.

²³⁴⁷ This is what Irenaeus of Lyon affirms. "Et tel fut bien le but dans lequel le Père révéla le Fils : se manifester par lui à tous, [...]. C'est donc à tous que le Père s'est révélé, en rendant son Verbe visible à tous, comme c'est aussi à tous que le Verbe a montré le Père et le Fils, puisqu'il a été vu de tous [...] car la Réalité invisible qu'on voyait dans le Fils était le Père, et la Réalité visible en laquelle on voyait le Père était le Fils." IRÉNÉE DE LYON, *Contre les hérésies*, p. 421. See also Jn 14,9.

²³⁴⁸ "We declare to you what was from the beginning, what we have heard, what we have seen with our eyes, what we have looked at and touched with our hands, concerning the word of life — this life was revealed, and we have seen it and testify to it, and declare to you the eternal life that was with the Father and was revealed to us" in 1 Jn 1,1-2.

"He is the image of the invisible God" in Col 1,15.

²³⁴⁹ Here are some texts of *Lumen Gentium* that refer to the Holy Spirit as the principle of communion: "The Church, which the Spirit guides in way of all truth and which He unified in communion and in works of ministry, He both equips and directs with hierarchical and charismatic gifts and adorns with His fruits" (LG, no. 4). "He [Christ] united her [the Church] to Himself as His own body and brought it to perfection by the gift of the Holy Spirit for God's glory" (LG, no. 39). SECOND VATICAN COUNCIL, *Lumen Gentium*, no. 4 and 39.

²³⁵⁰ Lc 1, 35. See also the *Symbol of Nicea-constantinople* in H. DENZINGER and P. HÜNERMANN, *Symboles et définitions de la foi catholique*, no. 150.

²³⁵¹ Here are some texts of *Lumen Gentium* that refer to the Holy Spirit as the principle of transformation of the world and the actions of the sacrament: "It is not only through the sacraments and the ministries of the Church that the Holy Spirit sanctifies and leads the people of God and enriches it with virtues, but, "allotting his gifts to everyone according as He wills, He distributes special graces among the faithful of every rank" (LG no. 12). "For this reason the laity, dedicated to Christ and anointed by the Holy Spirit, are marvelously called and wonderfully prepared so that ever more abundant fruits of the Spirit may be produced in them. For all their works, prayers and apostolic endeavors, their ordinary married and family life, their daily occupations, their physical and mental relaxation, if carried out in the Spirit, and even the hardships of life, if patiently borne—all these become "spiritual sacrifices acceptable to God through Jesus Christ". Together with the offering of the Lord's body, they are most fittingly offered in the celebration of the Eucharist. Thus, as those everywhere who adore in holy activity, the laity consecrates the world itself to God" (LG no. 34). "Our union with the Church in heaven is put into effect in its noblest manner especially in the sacred Liturgy, wherein the power of the Holy Spirit acts upon us through sacramental signs." (LG no. 50). SECOND VATICAN COUNCIL, *Lumen Gentium*, no. 12, 34 and 50.

expressed in a negative formulation with the maxim: *neither confusion nor separation*. However, following Ladrière's contributions and words we can also develop a positive formulation: *revelation assumes and transfigures what is manifested*.

D.2 Christological aspects of the theology of creation

God creates the world through the *Logos* that comes out of God's mouth. Through the *Logos'* Divine Otherness God's creates the world as other. This is the divine ground for the world's stability and duration. God's communicates his reality to the other through the Otherness that stands out of Himself. This is the idea behind the concepts of the *Logos endiathetos* and the *Logos prophorikos*. God stands out of Himself to become other, a historical man that emerges from the innermost dimension of the immanent creative process of the world's self-constitution. Christ is at the same time God's standing out of Himself to communicate reality to the world and a human being that emerges from the heart of the immanent creative process. The union of this difference is grounded in the Holy Spirit, the Spirit of Life through whom the *Logos* was incarnated. Christ is God's fully assumption and blessing of the world's otherness, limits, temporality and systematic respectivity. God in an absolute freedom decides to become other (temporal, limited, in a worldly respectivity). Although God does not change in Himself, He changes in the other, in Christ. Following Gesché we affirm that God freely became human in our world because the cosmos is the house of the otherness and as such it can become the *Logos'* house²³⁵².

Through history, Jesus lived a constant ecstasy, a constant standing out of Himself to encounter other human fellows and to invite them to be in communion among themselves and with God. Christ was also in constant ecstasy with the Father from whom everything originated. For that reason, Jesus in his limited historical life was already an achievement of creation. Christ's life shows the link between creation, meaning, fulfillment and salvation. Christ's life revealed the sense of the world's openness to otherness and respectivity. Christ witnessed an immense respect for the otherness of women, of the poor and of everybody without considering their moral condition. Christ's was not an abstract respect for humanity but a respect for the concrete person.

Moreover, Christ showed through his praxis the theological sense of respectivity: communion between persons. His fraternity and solidarity without expecting something in

²³⁵² A. GESCHÉ, *Le cosmos*, p. 184.

exchange is beyond a functional or a merely metaphysical-anthropological abstract respectivity. Christ's praxis was beyond a merely respectivity in the sense of belonging to the same biological species, or in the sense of belonging to the same class, clan, group or family. Without any hesitation, we argue that Christ revealed the ultimate sense of respectivity: a calling to be brothers and sisters in communion with God. This Christological respectivity is above all a radical state of standing out of oneself, of being open and in concrete service to others. Christ's radical love implies even forgetting and leaving behind one's primacy and power to let others "be", even to the point of suffering a terrible experience of otherness as loneliness and as rejection: the cross.

D.3 Anthropological aspects of the theology of creation

The human being is created as an "other". Human otherness is manifested by the fact that he is an open system, a life that is not achieved but called to fulfillment. The human being is free from some determination in the sense that a person can postpone a response to the stimulus originated in other realities. All of this is summarized by the concept "person." The human otherness is his "personhood." The human person develops a personal life through a personal project. The personal project guides the human person's choices, actions and efforts toward a chosen horizon. This is what Zubiri calls the "relative absolute" already discussed in chapter 5.

In addition, the human person is not only an "other" but also a being called to relationship. Human beings relate not only at the level of nature (generation) but also at the level of culture, society and friendship. The human person is not independent from others. Every human being constructs his personal project through the encounter with other human persons. Human systematic unity in respectivity can be developed as a simple social and functional relationship, but it could be developed through the relationship of communion between persons. For these reasons a human being can enter into a covenant with God. A covenant is a relationship of communion that presumes the other's personhood. God invites every human person to be in communion with him.

Moreover, this relationship of communion does not erase human otherness. On the contrary, human personality, which is already grounded in God as the ultimate foundation, deepens in a relationship with a God who is Absolutely Absolute, One and Plural, who is "Otherness" and "Communion." This deepening of personhood happens at a personal level and at the level of society through history. This is precisely the notion of salvation history. However,

there is a risk here. God took the risk to create a relative absolute that could deny precisely this calling to fulfillment, to develop his open personality and to enter in a relationship of communion.

D.4 Eschatological aspects of the theology of creation

Through all of what we have discussed there is a tension between “otherness” and “respectivity”, unstable and stable, process and duration, manifestation and revelation. All these aspects exist in a dynamic tension open toward the future. This dynamic tension open toward the future implies that the formal goal is present as a promise and as a hope. The process of self-constitution is being unfolded, is not determined in advance and is not fully achieved yet. This is precisely what characterizes an eschatological movement.

It is not by chance that the book of Revelation ends like the beginning of the book of Genesis. The world cannot be achieved without Christ, without being a new creation in a full and radical dependency to God that does not erase its “otherness”. Only by being fully in God a creature is fully “other” and fully in respectivity without any tension. There is one act with different moments: creation, incarnation, salvation and eschatological achievement in Christ. The world is unstable because it has not yet manifested its last figure.

Christ resurrection shows the hidden potentials of the universe: a new creation. The resurrection and the eschaton presuppose creation and history. In that sense the cosmos is a world full of hope and open to achievement. Gesché does not hesitate to say that our cosmos has a “*resurrectional*” structure²³⁵³. We interpret this as a radical openness to be transfigured as Jesus was radically open to be transfigured in his resurrection. The whole cosmos, through the immanent hidden presence of God, carries in itself a hidden calling and a hope to the eschatological mode of reality already announced in Christ but not yet realized in us.

Rather than saying that God caused the world (in the sense of a manufacturing process), it is better to say that God dares a creative autonomous world. God, the Creator who restrains Himself, is the ultimate foundation of an adventure that is still unfolding, open to the future and full of hope. More cannot be said about this. Here we are touching the sacred ground of God’s hidden presence.

Here we end our reinterpretation of the theological concept of “creation” in dialogue with natural sciences. The proposed method has enabled us to elaborate the relation between God’s act

²³⁵³ A. GESCHÉ, *Le cosmos*, p. 187.

of creation and the autonomous and creative world. Next two sections will elaborate a theology of human action and a spiritual theology of the contemplation of God's creation.

VI.2 The environmental crisis and the increased human impact through technological advances

In this section we will develop an example of the ethical mediation. It will be a theological answer to a limit question that emerges in the middle of the environmental crisis. This question refers to the meaning of human actions, specially those that have an enormous impact on the environment by means of contemporary technological advances.

The objective of this example is not to develop all details and aspects of the environmental crisis or a whole systematic reflection on human actions but simply to present a possible articulation inside the horizon of agape with a deliberation about human action influenced and enhanced by technological and scientific development. The genre will be different from the previous example. It is an answer to a limit question and not necessarily a systematic development. As a consequence, there are theological aspects about human action that will be left aside, e.g., relation faith-action in the justification of the believer. The methodological start point is this initial limit question. From there we will follow the two semantic transgression movements that will enable the elaboration of a theological response. However, we should not lose the perspective that faith is the ultimate point of departure of the theologian's response.

VI.2.1 The environmental crisis

Today we encounter many signs that manifest an environmental crisis without precedent in human history. Among these signs or events there are the following: global warming and the acceleration of climate change; soil, water and air contamination; natural resources depletion; large-scale deforestation; threat to biodiversity and massive extinction of species and the huge accumulation of chemical and nuclear waste²³⁵⁴.

A series of related limit questions emerge from this environmental crisis:

²³⁵⁴ Some available data that confirms this ecological crisis can be found in UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP), *Global Environment Outlook: Latin America And The Caribbean*, 2010. Online, http://www.unep.org/pdf/GEOLAC_3_ENGLISH.pdf (Page Consulted November 8, 2011). UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP), *Our World in Numbers*. Online, http://www.unep.org/annualreport/2010/pdfs/our_world_in_numbers.pdf (Page Consulted November 8, 2011). UNITED NATIONS ENVIRONMENT PROGRAMME, *Fourth Global Environment Outlook: Environment for Development Assessment Report*, 2007. Online, http://www.unep.org/geo/GEO4/report/GEO-4_Report_Full_en.pdf (Page Consulted November 8, 2011).

Are Christianity and Judaism responsible for the environmental crisis? There are many who think that our modern attitude with respect to the environment is rooted in the Jewish and Christian religious belief that the human being is created to master and dominate nature.

What is the theological meaning of human actions, specially those that have an enormous impact on the environment by means of contemporary technological advances?

Can Christian theology provide a general principle that enables a theological discernment of human action with respect to its impact to the environment?

To answer these questions from the standpoint of theology we will follow an ethical mediation in the following sections.

VI.2.2 From the horizon of *techne* to the horizon of *ethikos*: a philosophical deliberation over human action and achievement

This section will consist of three parts. The first one will be an analysis of the meaning of technological development whose objective is to enhance the capacities of human action. This analysis considers the concrete mental situation of the environmental crisis. The second part will be an ethical deliberation of the human impact on the environment. The third point is a philosophical reflection on the meaning of technological innovations and human creativity.

VI.2.2.1 The modern mental configuration as the situation that guides technological action

What is the mentality or mental horizon that guides and influences modern technological action?²³⁵⁵ Normally we think that technological development is neutral with respect to any mentality or horizon of meaning. However, the environmental crisis suggests that human actions by means of modern technology are really influenced by an attitude and even a worldview that operates in the background. Since Descartes, modernity has separated the subject and the object. Descartes considers the subject as a mere observer for whom the perceivable reality becomes an object to be interpreted and understood²³⁵⁶. The object, which stands in front of the subject, must be apprehended through the mediation of an “idea.”²³⁵⁷ According to Descartes the objective of modern science’s apprehension of the object is to master and control nature²³⁵⁸.

²³⁵⁵ Mentality or mental configuration or horizon is discussed in chapter 4, section III.4.3.2 and in chapter 5, section IV.3.4.2.

²³⁵⁶ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 282.

²³⁵⁷ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 283.

²³⁵⁸ “Car elles m’ont fait voir qu’il est possible de parvenir à des connaissances qui soient fort utiles à la vie, et qu’au lieu de cette philosophie spéculative, qu’on enseigne dans les écoles, on en peut trouver une pratique, par laquelle, connaissant la force et les actions du feu, de l’eau, de l’air, des astres, des cieus et de tous les autres corps qui nous environnent, aussi distinctement que nous connaissons les divers métiers de nos artisans, nous les pourrions employer en même façon à tous les usages auxquels

This process of separation of the subject with respect to the object is called objectivism. The subject's relation to the object is not something of the order of a life's experience (the *Lebenswelt*), but of the order of control and master²³⁵⁹. The paradigm in this process of objectivity is the constructed mathematical object²³⁶⁰. As a consequence, modern science (here understood as physics) constructs its objects through mathematical models²³⁶¹.

The emergence of human or social sciences and the development of quantum physics bring most scientists and philosophers to reject this notion of objectivity²³⁶². However the mentality of being detached from nature and the search to control the environment continues its influence²³⁶³. Moreover, this mentality is connected to pragmatism, which is the attitude of reducing the desire to know to the simple utility of things²³⁶⁴. According to pragmatism, we learn in order to develop useful instruments and results from what surrounds us. Consequently, this mentality of objectivism reduces natural sciences to an efficient technique that helps us re-construct and dominate a world from which we are detached.

Nobody can deny the enormous benefits that technology produces for humanity. However the technological development found everywhere produces a truly existential induction in us. We project the pragmatic-objectivist mentality, inseparable from the goal of technical efficiency, into the world and into other human beings as well²³⁶⁵. This mental situation sees the world as a collection of things with mechanism to reconstruct and control in order to serve human beings. In other words, nature is “constructed” in the image and likeness of machines with the only purpose to serve human beings. This is the anthropocentrism to which Gesché refers²³⁶⁶.

In conclusion, the root of the modern mentality of control and dominion over nature, which has produced an enormous impact on our environment, is rooted in a coincidental union of a series of factors, among which there are the following: a progressive separation of the subject and the object, an anthropocentrism, an objectivist consideration of nature and a pragmatist primacy of technical efficiency.

ils sont propres, et ainsi nous rendre comme maîtres et possesseurs de la Nature. Ce qui n'est pas seulement à désirer pour l'invention d'une infinité d'artifices, qui feraient qu'on jouirait, sans aucune peine, des fruits de la terre et de toutes les commodités qui s'y trouvent, mais principalement aussi pour la conservation de la santé, laquelle est sans doute le premier bien et le fondement de tous les autres biens de cette vie ;” The underlined emphasis is ours. R. DESCARTES, *Discours de la méthode*, p. 634.

²³⁵⁹ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 285.

²³⁶⁰ This is a subject already discussed in chapter 3, from section III.1.3 to section III.1.4.

²³⁶¹ This is another subject already discussed in chapter 3, section III.2.1.3.

²³⁶² See chapter 3, section III.3.3.

²³⁶³ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 287.

²³⁶⁴ X. ZUBIRI, *Naturaleza, historia y Dios*, p. 42.

²³⁶⁵ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 292.

²³⁶⁶ See section IV.1.3.3 on this chapter.

VI.2.2.2 An ethical deliberation of human actions vis-à-vis the ecological crisis

Scientific and technological development and innovations belong to the horizon of human action. A human **action** is a voluntary intervention that inserts in the course of events some determinations originated in a human project²³⁶⁷. A human action is neither disordered nor chaotic. It has motivations, intentions and objectives²³⁶⁸. They also have visible effects. What is distinctive of human action is its capacity to produce a situation that would not have happened without human intervention. With contemporary technology we are capable of creating new situations in the world, including dramatic effects in ecological systems, that demand an ethical deliberation.

Human actions originate in an anthropological tension: what we are vis-à-vis what we are becoming. We are unachieved realities with an immanent calling to become fulfilled. A human action is precisely that personal effort and power to affect oneself in order to move toward a personal accomplishment²³⁶⁹. Through human action we build our own personality, historicity, society and culture. We experience a **responsibility** toward our personal accomplishment²³⁷⁰, which in some way is present already although not accomplished yet. We are responsible with respect to us and with respect to other fellow humans because nobody can arrive at a personal achievement isolated. This responsibility is lived as a **solidarity** toward other fellow humans. This human responsibility and solidarity is specified through principles, norms, attitudes and concrete orientations for our personal and social actions²³⁷¹.

However, we are not only in solidarity with other human beings. Human actions are situated in a cosmic environment, which is the place that supports our biological existence²³⁷². Moreover, the cosmic environment is our home from which human life emerges. We are not cut off from the cosmic process of self-genesis. On the contrary we are in solidarity with the whole world. We inhabit a milieu characterized by a network of relations, i.e, a systematic unity in respectivity. The world is not an “abstract” construction done by means of techno-sciences. The world is our home, our *oikos*: a milieu of nourishment, a protective environment and a network of relation to the rest of the cosmos²³⁷³. Our historicity and our cultural development exist in a close

²³⁶⁷ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 240.

²³⁶⁸ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 296.

²³⁶⁹ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 231.

²³⁷⁰ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 302.

²³⁷¹ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 231.

²³⁷² J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 41.

²³⁷³ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 233.

relationship with the environment. This makes us responsible of our cosmic environment. The relationship to the environment demands an ethical deliberation with respect to human actions that could affect it.

Technology and applied sciences have contributed to enhance our quality of life, the conditions of human life and even the development of our culture. However, our technological power and its powerful impact on the environment threaten the environmental conditions from which we emerged²³⁷⁴. We are responsible for maintaining a **harmonious relationship** with the environment that we share with other species. Here the concept of harmony enables us to criticize the anthropocentrism of our modern mentality. Our subjectivity and the human personal project are not the center but an element of what we already described as a system of unity in respectivity²³⁷⁵. That is the sense of harmony: to welcome the difference as a cosmic principle of “otherness” that is not detached from a systematic unity. Our human actions, specially those empowered by technological development, have an enormous impact on our environment. That is the ground of the human responsibility and solidarity with the fragile process of cosmic harmonic self-constitution. This can be formulated as follows:

*We human beings are not detached from other cosmic realities. When we deliberate some actions that may have an environmental impact we must consider the human dependency and **solidarity** (present and future) to other species and to other fellow human beings that exist in a **network of relationships** that constitute a **harmonious** world.*

*We are **responsible** for this fragile **systematic unity in respectivity** from which every “otherness” emerged during a slow undetermined temporal process.*

This responsibility becomes concrete through self-imposed limits to our actions²³⁷⁶. This is the sense of autonomy and freedom. Autonomy has nothing to do with the arbitrary. **Autonomy** is the principle of self-imposing norms and limits²³⁷⁷. In addition, an ethical reflection must help each human person and society to move far away from the mentality of “construction and dominion.” Ethics should inspire us to seek an **authentic** human, social and global project in solidarity with the cosmos. **Authenticity** here should be understood in the sense of a true harmonious relation with the environment as opposed to an anthropocentrism that conceives the human being as detached from nature.

²³⁷⁴ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 41.

²³⁷⁵ See this chapter, section VI.1.3.2. See also J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 241.

²³⁷⁶ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 236.

²³⁷⁷ J. LADRIÈRE, *L'éthique dans l'univers de la rationalité*, p. 237-238.

In conclusion, our technological action should and must be responsible, in solidarity and authenticity vis-à-vis our environment.

VI.2.2.3 Technological innovation and human creativity

The human person is creative in many senses. First, since ancient times human beings have shown a capacity to create useful artifacts or instruments²³⁷⁸. These instruments help human beings to be more autonomous with respect to the environment. Through their use human beings can adapt to their surroundings and can adapt their surroundings. Additionally, contemporary technology and sciences have enabled human beings to produce artificially some entities that cannot be reduced to “artifacts”. Artifacts have the characteristic of not being produced by nature and once produced they do not have a natural activity. However, today we are capable of producing artificially chemical components for medicine or industrial use or even atoms or subatomic particles with a natural activity. As Zubiri affirms, “*our technology produces artificially natural entities*”²³⁷⁹. This point shows more than any other the connection between the horizon of *phusis* and the horizon of *techne*.

Second, the human being is capable of creating meaning. Zubiri argues that there are real-things and meaning-things²³⁸⁰. Although real-things are given and encountered in “nature”, the human being creates things with meaning, i.e., meaning-things. These meaning-things are instruments (i.e., technology) or oeuvres of art. Meaning is not something intrinsic and “essential” to things²³⁸¹. The meaning of things is something given by the human person. The development of technology is part of this creation of meaning. Moreover, the creation of meaning goes beyond the creation of meaning-things. It is also about the elaboration of knowledge. As Ladrière argues, the human being by means of his own personal *logos* and his intelligence is driven to make explicit the intelligibility, the harmony and the beauty that are being unfolded and manifested in the cosmos²³⁸². We can add that the human person seeks knowledge and meaning of human life. The unity of knowledge and meaning about the cosmos and about ourselves is

²³⁷⁸ Our ancestors have already constructed instruments. The earliest known instruments dated to 2.6 – 2.5 millions of years ago. There is a debate of who are the authors of the tools. However, it seems that they belonged to the *Australopithecus garhi*. See C.-J. CELA-CONDE and F. AYALA, *Human Evolution*, p. 229-230.

²³⁷⁹ X. ZUBIRI, *Sobre la esencia*, p. 84-85.

²³⁸⁰ “*A meaning-thing is not formally a real-thing, but every meaning-thing bears within it a real-thing. A table is not a real thing qua table, but rather a meaning-thing. But the table would not be a table were it not a table by virtue of being a real-thing. Now, I can make affirmations about the table, but only thanks to the fact that “table” is the meaning of a real-thing, for example, of a thing which has a certain size, shape, etc.*” X. ZUBIRI, *Inteligencia y Logos*, p. 127-128.

²³⁸¹ X. ZUBIRI, *Inteligencia y Realidad*, p. 60.

²³⁸² J. LADRIERE, *Articulation du sens II*, p. 276

what is called a **worldview** (*Weltanschauung*). Through this worldview, the human being seeks to create personal and social projects.

These acts of human creation are the result of human actions. However, there is another aspect of human creation of meaning. A human person acts, creates (things, knowledge and projects) and makes decisions impelled by values. Values are neither simple subjective products nor objective properties present in real things. Real things and their real properties are independent of values²³⁸³. However, although a value cannot be reduced to the real properties of things, our act of valuing depends on these properties²³⁸⁴. Consequently, values are not mere human and social constructions or simple subjective feelings and desires projected into real things. There is an objective aspect in our capacity of esteeming things rooted in their properties but without being reduced to them²³⁸⁵. In addition, there is a personal aspect in our capacity of valuing. A value is not one objective property of things among other properties. A value is an adjective: something is valued and esteemed²³⁸⁶. Consequently, values are not meager objective real properties present in things. It is a human act of valuing things²³⁸⁷. Without the human being there would not be values. Although values have a cognitive content, they are beyond mere intellectual acts: they are principles that orient human actions²³⁸⁸. All human actions, including all mentioned creative and innovative actions, are impelled by some values that guide evaluations, decisions and implementations. Finally, the human person is not immune to all these creations. The human person creates his own personality as he creates things, art, knowledge, projects, social and political institutions, urban systems, etc.

We believe that “**culture**” is the appropriate category that subsumes the concepts of personal and cosmic meaning, logos, reason, values, decisions, actions, projects and personal identity. The concept of culture articulates all these aspects. A culture is a symbolic universe that is communicated from one generation to the next. This symbolic universe of meaning (meaning-things, cosmic meaning, personal meaning and knowledge) and values (ethics) engenders attitudes, actions (artistic creation, technology, applied sciences, social, economical and political praxis, religious rites, etc.) and projects (personal and social). Culture is the home where every human person searches, develops and constructs his identity. Culture is the setting where the human person deliberates his actions. At the same time, the praxis of individuals, groups and

²³⁸³ X. ZUBIRI, *Sobre el sentimiento y la volición*, p. 211.

²³⁸⁴ X. ZUBIRI, *Sobre el sentimiento y la volición*, p. 212.

²³⁸⁵ D. GRACIA, *Como arqueros al blanco*, p. 342.

²³⁸⁶ X. ZUBIRI, *Sobre el sentimiento y la volición*, p. 214.

²³⁸⁷ X. ZUBIRI, *Sobre el sentimiento y la volición*, p. 219.

²³⁸⁸ D. GRACIA, *Como arqueros al blanco*, p. 98.

societies engenders a culture, which is transmitted to others. Through culture we transmit to others a way of life, values and meaning that will have an enormous impact on next generations. Even our religious categories to interpret our religious experience are inherited through the culture. At the same time, the re-elaboration and reform of religious categories and praxis have an impact on local and perhaps global culture.

It is important to realize that the constitution of this symbolic universe always remains open to further clarification and development in the future. In other words, the symbolic universe is a creative process. This creation of culture is the **responsibility** of human persons, generations and societies.

This act of creation of culture depends on our environment. The environment influences human culture. At the same time, human culture transforms the environment. In other words, human beings are responsible for their culture that engenders attitudes and actions with consequences to their environment.

Then the meaning of technological innovation and creativity is part of this symbolic universe of meaning. Human beings through their action create culture. At the same time our culture configures our mentality that engender our attitudes and actions.

Finally, we can summarize all we have said about the meaning of human action through the following affirmation:

Human beings impelled by some values are creative. Through technology they produce instruments or artifacts and they even create artificially real entities with a natural activity. In addition, human beings create a symbolic universe of knowledge and meaning (i.e., culture) that engenders attitudes, proposes values and is a milieu that enables an ethical deliberation of human actions and projects.

VI.2.3 From the horizon of *ethikos* to the horizon of *agape*: a theological discernment of human action and its meaning

In this section we will discuss how the environmental crisis and the human effort to save the earth concern Christian faith and action. A theological discourse is a second moment with respect to Christian praxis. What theology adds is a clarity that grounds our praxis in Christian principles and values. These Christian principles and values enable us to discern and decide a concrete course of actions. Let's consider now some biblical elements and some magisterial declarations before we elaborate a response to the series of limits question already formulated.

VI.2.3.1 Biblical theology

Andre Wénin recognizes that some biblical texts, in particular the text of Gen 1, have been interpreted as a divine calling to be the masters that dominate the universe²³⁸⁹. This particular reading has justified the current mentality that considers nature as a collection of objects to be controlled and transformed. In this section we will focus our attention mostly in Gen 1,1 – 2,4a. There is no doubt that this text refers to creation as God's gift to the human being. However, does this gift of creation imply a license to do whatever the person wants?

Let's consider the meaning of human creation in God's image and likeness (Gn 1, 26-28). For Wénin, to be created in God's image and likeness is less a description of an anthropological state than a calling for a mission²³⁹⁰. That mission comes immediately in the text: to master the fish, the birds and the animals. The ninth divine word (v. 28) clearly affirms that the human person is realized as an image and likeness of God when he becomes creator²³⁹¹. However, the tenth divine word (v. 29), a commandment to eat only vegetables, means that the human being can and must master the animals without violence. This commandment suggests that the human being is called to live and to collaborate in the creation of a harmonious world, respecting the "otherness" in creation.

Moreover, being created as God's image and likeness means being created in the image of a God that is not about an almighty force that absolutely controls and dominates all creation. The narrative provides an image of a God who cares about creation, who enables life and then retires Himself to let "others" be. Then, to be created in the image and likeness of God means that each human person is called to be a co-creator that controls his own forces to let "others" be. Only by fulfilling in himself that image of God can the human being be co-creator of a harmonious creation.

The role of the Law is to limit the desire to be an almighty power that controls and possesses everything²³⁹². It impels the human person to limit his violence, to recognize the "other" and to enter in a harmonious relation. That "other" is the neighbor, the foreigner and the poor. But it is also the "other" of humanity: the land and the animals²³⁹³. The Law seeks to

²³⁸⁹ A. WÉNIN, *L'homme biblique*, p. 31.

²³⁹⁰ A. WÉNIN, *L'homme biblique*, p. 38.

²³⁹¹ A. WÉNIN, *L'homme biblique*, p. 38.

²³⁹² A. WÉNIN, *L'homme biblique*, p. 41.

²³⁹³ A. WÉNIN, *L'homme biblique*, p. 42.

protect animals²³⁹⁴. The Law also seeks to protect the land: the land should rest every seven years, should not be monopolized and must be transmitted to those who will come after.

In conclusion, biblical narratives show two human models: the shepherd and the hunter²³⁹⁵. The shepherd masters the animal with care and through his word. The hunter is a violent predator. Humanity faces a moral choice vis-à-vis these two images.

VI.2.3.2 The magisterium

Our conscience of the environmental crisis is recent. For that reason we only find in recent declarations of the Church's magisterium a theological reflection about the human impact on the environment. Here we present one part of Benedict XVI's document *Caritas in Veritate*:

*"Today the subject of development is also closely related to the duties arising from our relationship to the natural environment. The environment is God's gift to everyone, and in our use of it we have a responsibility towards the poor, towards future generations and towards humanity as a whole. When nature, including the human being, is viewed as the result of mere chance or evolutionary determinism, our sense of responsibility wanes. In nature, the believer recognizes the wonderful result of God's creative activity, which we may use responsibly to satisfy our legitimate needs, material or otherwise, while respecting the intrinsic balance of creation. If this vision is lost, we end up either considering nature an untouchable taboo or, on the contrary, abusing it. Neither attitude is consonant with the Christian vision of nature as the fruit of God's creation."*²³⁹⁶

²³⁹⁴ See Ex 20, 10; 23,11-12; Dt 5, 14; 22, 1-4.6-7; 25,4.

²³⁹⁵ A. WÉNIN, *L'homme biblique*, p. 43.

²³⁹⁶ The underlined emphasis is ours. BENEDICT XVI, *Caritas In Veritate*, No 48. Other texts of Benedict XVI that mention the issue of human relationship to the environment are the followings: "2. In my Encyclical *Caritas in Veritate*, I noted that integral human development is closely linked to the obligations which flow from man's relationship with the natural environment. The environment must be seen as God's gift to all people, and the use we make of it entails a shared responsibility for all humanity, especially the poor and future generations. I also observed that whenever nature, and human beings in particular, are seen merely as products of chance or an evolutionary determinism, our overall sense of responsibility wanes. On the other hand, seeing creation as God's gift to humanity helps us understand our vocation and worth as human beings. With the Psalmist, we can exclaim with wonder: "When I look at your heavens, the work of your hands, the moon and the stars which you have established; what is man that you are mindful of him, and the son of man that you care for him?" (Ps 8:4-5). Contemplating the beauty of creation inspires us to recognize the love of the Creator, that Love which "moves the sun and the other stars".

4. Without entering into the merit of specific technical solutions, the Church is nonetheless concerned, as an "expert in humanity", to call attention to the relationship between the Creator, human beings and the created order. In 1990 John Paul II had spoken of an "ecological crisis" and, in highlighting its primarily ethical character, pointed to the "urgent moral need for a new solidarity". His appeal is all the more pressing today, in the face of signs of a growing crisis which it would be irresponsible not to take seriously. Can we remain indifferent before the problems associated with such realities as climate change, desertification, the deterioration and loss of productivity in vast agricultural areas, the pollution of rivers and aquifers, the loss of biodiversity, the increase of natural catastrophes and the deforestation of equatorial and tropical regions?

10. Technology in this sense is a response to God's command to till and keep the land (cf. Gen 2:15) that he has entrusted to humanity, and it must serve to reinforce the covenant between human beings and the environment, a covenant that should mirror God's creative love" BENEDICT XVI, *Message For The Celebration of the World Day Of Peace 1 January 2010*.

http://www.vatican.va/holy_father/benedict_xvi/messages/peace/documents/hf_ben-xvi_mes_20091208_xliii-world-day-peace_en.html

Another references to the subject is CELAM, *Aparecida*, No. 84, 122-126, 470-475 and 491.

The Pope mentions our responsibility toward others and our responsibility with the intrinsic balance of nature. He even mentions our relationship to nature: humanity is not detached from the rest of creation. He calls to avoid two extremes: to consider the environment as a sacred divinity or abusing it. Finally, the text mentions explicitly that creation is a place to contemplate God's action.

Now, we are able to answer the first limit question:

Are Christianity and Judaism responsible for the environmental crisis? There are many who think that our modern attitude with respect to the environment is rooted in the Jewish and Christian religious belief that the human being is created to master and dominate nature and that belief is at the root.

We argue that the primary responsible of the environmental crisis is our mentality of control and domination of nature rooted in a coincidental union of a series of factors. Among these factors there are the following: a progressive separation of the subject and the object, an anthropocentrism, an objectivist consideration of nature and a pragmatist primacy of technical efficiency. Evidently, these factors did not historically determine our "environmental crisis". However, they have rendered possible our mentality of domination of nature. Through historical positive events such as the industrial revolution, scientific discoveries and their applications, with the coincidental development of other factors such as a way of life that separates the human person and nature, the creation of a consumer society and a capitalist system of production, we have arrived at a mental horizon that sees in nature a collection of objects to be dominated for the sole purpose of human consumption. Moreover, we must accept that a particular partial reading of the first chapter of the book of Genesis supported this mentality. However, current exegetic revisions and magisterial declarations raise the voice against this partial interpretation and against the mentality of domination of the environment.

VI.2.3.2 A theology about human action and vocation to be co-creator

In this section we will develop a theological reflection about human actions and about our impact on the environment. First we will follow some of Gesché's intuitions about the human vocation to be co-creator. Then a theological discernment about human action will be placed in a theological anthropology's framework.

A. Gesché's theological anthropology: the human being called to be co-creator

Adolphe Gesché develops some anthropological aspects of God's creation of humanity as co-creator²³⁹⁷. For Gesché the human being is co-creator of the cosmos, of himself and of his relationship with God. Let's consider each aspect.

A.1 Co-creator of the cosmos

As we have already discussed, the cosmos is not fully made or achieved. The whole creation is in a dynamical state of self-creation²³⁹⁸. The human being is created by God and has the mission to fulfill God's creation through his human creative actions. The conditions that render possible human creative actions are freedom and the human inventive capacity²³⁹⁹. This creative freedom is not a repetitive imitation or implementation of a divine decree. It is a freedom to create and construct something new²⁴⁰⁰. For Gesché, this is the meaning of "creation in the image and likeness of God."

A.2 Co-creator of himself

God creates human beings with the mission to co-create themselves. For Gesché, that is also part of being created in the image and likeness of God²⁴⁰¹. The human person is called to create his own existence through his actions. We can add that through his actions the human being creates his own identity, his relationship to other human fellows and his social interrelations.

A.3 Co-creator of the Covenant with God

The human person is also co-creator in the sense of co-creating a relationship with God. The human being is not called to live a relationship with God based on coercions and fears. On the contrary, the human being is called to live a free relationship²⁴⁰². God takes the risk to expect and even depend on humanity's free and creative response.

Although we assume and praise Gesché's intuitions and development, we think he could have gone further in his theology of human action and co-creativity. Although Gesché is right in affirming that the human being is co-creator of the cosmos, of himself and of the covenant with God, we believe he remains vague in what the human being does create. In the following section

²³⁹⁷ Gesché uses the term "creator". We prefer to use co-creator to distinguish human creative actions from God's as ultimate, possibilitating and impelling foundation that creates through the act of ecstasy.

²³⁹⁸ A. GESCHÉ, *L'homme*, p. 79.

²³⁹⁹ A. GESCHÉ, *L'homme*, p. 81.

²⁴⁰⁰ A. GESCHÉ, *L'homme*, p. 90.

²⁴⁰¹ A. GESCHÉ, *L'homme*, p. 82.

²⁴⁰² A. GESCHÉ, *L'homme*, p. 87.

we will assume Gesché's insights, Wénin's exegetical developments and Ladrière's ethical reflections about human actions. We will conceive human action and creativity through the category of "culture."

B. A theological interpretation of human actions through the category of culture

In this section we will elaborate a theological answer to the second limit question:

What is the theological meaning of human actions, especially those that have an enormous impact on the environment by means of contemporary technological advances?

Humanity is created by God, through the *Logos*, in his image and likeness. This statement implies that the human person is called by God to be co-creator through his logos, reason, search for meaning, freedom, decisions, actions and his aesthetics sensibility, i.e., through his actions. Human actions create culture and at the same time human actions receive their meaning in a cultural milieu. Human culture is precisely that "place" where the human being articulates meaning, action, the interaction with the environment and the relationship with God. Moreover, the theological meaning of human action is rooted in the mission that God entrusts to humanity: the human being is called to be co-creator. Uniting these two aspects, anthropological and theological, we can affirm the following:

God creates the human being as co-creator. Human beings fulfilled this mission by creating culture, i.e., things, art, knowledge, projects, social and political institutions, urban systems, etc. Culture is also a milieu where the human person finds the meaning of God's creation, of human creative acts and of human relationship to God.

Through the mediation of culture a human being co-creates his identity, the environment and the mode of relationship to God. At the same time, the human being creates a particular culture, searches for meaning, values, decisions, actions and he co-creates his modes of relations to the environment and to God.

Moreover, besides these anthropological and theological aspects, there is a Christological meaning of human action. As we already explained, Christians are called to be the *forma Christi* (Gal 4,19)²⁴⁰³. The Christian vocation is to live with Christ, to live like Him, to be like Him²⁴⁰⁴. We can add: *to act with Christ* and *to act like Christ*. Consequently, for Christian believers the ultimate meaning of human actions is found in Christ. Christ is God's permanent cosmic presence

²⁴⁰³ This was discussed in Chapter 5, section IV.3.2.

²⁴⁰⁴ "I have been crucified with Christ; and it is no longer I who live, but it is Christ who lives in me. And the life I now live in the flesh I live by faith in the Son of God, who loved me and gave himself for me." Gal 2, 19-20.

because “*all things were created in Him*” (Col 1,16a) and “*in Him all things hold together*” (Col 1,17b)²⁴⁰⁵. Our human actions are our humble contributions to the achievement of Christ’s presence among us. This is the significant intuition of Teilhard de Chardin, who argues that our actions contribute to the consummation and plenitude of Christ’s cosmic presence. We find no better words than Teilhard’s:

*“It is through the collaboration which he stimulates in us that Christ, starting from all created things, is consummated and attains his plenitude. St. Paul himself tells us so. We may, perhaps, imagine that the creation was finished long ago. But that would be quite wrong. It continues still more magnificently, and at the highest levels of the world. Omnis creatura adhuc ingemiscit et parturit. And we serve to complete it, even by the humblest work of our hands. That is, ultimately, the meaning and value of our acts. Owing to the interrelation between matter, soul and Christ, we bring part of the being which he desires back to God in whatever we do. With each one of our works, we labour – in individual separation, but no less really – to build the Pleroma; that is to say, we bring to Christ a little fulfillment.”*²⁴⁰⁶

Then, for a believer, human actions, including scientific and technological development, are rooted in a calling to contribute to the fulfillment of the universe, which is nothing else than the full manifestation of Christ’s cosmic presence.

C. Moral aspects of human actions

The moral aspects of human co-creation are founded in the belief that a co-creator does not do whatever is possible²⁴⁰⁷. There is not only a creative freedom for an innovation but also a creative **responsibility**. Being images of God, our responsibility is nothing else than to create a space of openness where the “otherness” can be. Humanity is responsible to be creative and not destructive, open and not dominating²⁴⁰⁸. A human person is permanently tempted to make of himself an isolated reference of meaning, truth and the sole source of goodness. Falling into this temptation deviates humanity to the path of existential alienation. This alienation is characterized by a distrust of God, a change from an experience of wonderment in contemplating the cosmos to the abuse of nature, and a change from the path of solidarity and love to relations of oppression and injustice to our fellow humans. Evil is the contradiction of autonomy: the negation to impose on oneself a series of limits to let the “other” be. It is the lack of recognition of the “other” in a systematic unity in respectivity.

²⁴⁰⁵ See our discussion in this chapter, the Appendix 1, section C.2.

²⁴⁰⁶ P. TEILHARD DE CHARDIN, *Le Milieu Divin*, p. 41-42 (English p. 62).

²⁴⁰⁷ A. GESCHÉ, *L’homme*, p. 83.

²⁴⁰⁸ A. GESCHÉ, *L’homme*, p. 84.

Now, we can answer the third limit question:

Can Christian theology provide a general principle that enables a theological discernment of our human actions and their impact on the environment?

Human beings have a fundamental decision to make. During salvation history God invites humanity to value, care and respect “other” fellow humans and God’s gift of creation. All human actions, including technological development, should be an act of responsible co-creation in harmony and solidarity with our neighbour and with the environment.

This is grounded in God’s invitation to co-create with Him a communion, the Covenant, which presupposes the freedom and the capacity to enter in a relationship. The condition that renders possible such relationship is the recognition and the care of the “other” and the personal capacity for self-control in order to let the other be. A rejection of God’s invitation, the lack of recognition of the other, and the absence of self-control are the root of a culture of greed, domination, possessiveness and violence.

VI.3 A contemplative-spiritual theology of God’s presence in the cosmos

As we have discussed, there is another possible mediation between theology and natural sciences, a hermeneutics of the ultimate meaning of the cosmos and the human life. Through this mediation, spiritual theology can integrate the perception of the world and the search for the ultimate meaning of reality. We should clarify that spiritual theology is not in opposition to systematic theology. On the contrary, spiritual theology subsumes both, systematic theology and a theology of human action, as we will see. We should remember from the chapter of the rationality of theology that the spiritual experience constitutes the first moment of the intellectual act. The theology of spiritual life is a posterior moment.

We present here an example of a spiritual theology about the contemplation of God’s presence in creation. Let’s start by considering a biblical root and a spiritual tradition that refers to this contemplation.

VI.3.1 Biblical foundation

As we have discussed already in Gen 1, the Priestly account seems to suggest that the whole creation is a temple to worship God. Other texts in the Hebrew Bible have influenced Christian spiritual tradition, particularly the subject of contemplating God’s presence in creation. To mention one, there is the Psalm 19, 2-5a:

“The heavens are telling the glory of God; and the firmament proclaims his handiwork. Day to day pours forth speech, and night to night declares knowledge. There is no speech, nor are there words; their voice is not heard; yet their voice goes out through all the earth, and their words to the end of the world.”

According to Kselman and Barré, this text, which belongs to the first part of the psalm, is a creation hymn (v.2-7)²⁴⁰⁹. This hymn unifies the themes of creation and the glory of God. They are united through a metaphor: creation “speaks” about God’s glory.

From the New Testament, we have already discussed the text of Acts 17, 27-28²⁴¹⁰: “so that they would search for God and perhaps grope for him and find him—though indeed He is not far from each one of us. For ‘In him we live and move and have our being.’” The text argues that we are capable of searching God, in a form of groping, because He is radically near us and we are in Him²⁴¹¹.

VI.3.2 Spiritual tradition in the history of the Church

Although there are many traditions that refer to the contemplation of God’s presence in his creation, we will just refer to Ignatius of Loyola’s text of Spiritual Exercises. As part of the Spiritual Exercises, Ignatius proposes a contemplation called “contemplation to gain love.” It is a contemplation of God’s presence and God’s self-communication to the human being through the creatures. The nucleus of that contemplation is found in four points of that text²⁴¹²:

²⁴⁰⁹ J.-S. KSELMAN and M.-L. BARRÉ, *Psalms*, p. 529.

²⁴¹⁰ See chapter 5, section IV.2.3.

²⁴¹¹ J. DUPONT, *Nouvelles études sur les actes des apôtres*, p. 421.

²⁴¹² “[230] CONTEMPLACION PARA ALCANZAR AMOR.

[234] 1º punto. El primer punto es traer a la memoria los beneficios rescibidos de creación, redempción y dones particulares, ponderando con mucho afecto cuánto ha hecho Dios nuestro Señor por mí y cuánto me ha dado de lo que tiene y conseqüenter el mismo Señor desea dárseme en quanto puede según su ordenación divina. Y con esto reflectir, en mí mismo, considerando con mucha razón y justicia lo que yo debo de mi parte offrescer y dar a la su divina majestad, es a saber, todas mis cosas y a mí mismo con ellas, así como quien offresce affectándose mucho: Tomad, Señor, y recibid toda mi libertad, mi memoria, mi entendimiento y toda mi voluntad, todo mi haber y mi poseer; Vos me lo distes, a Vos, Señor, lo torno; todo es vuestro, disponed a toda vuestra voluntad; dadme vuestro amor y gracia, que ésta me basta.

[235] El segundo mirar cómo Dios habita en las criaturas, en los elementos dando ser, en las plantas vejetando, en los animales sensando, en los hombres dando entender; y así en mí dándome ser, animando, sensando, y haciéndome entender; asimismo haciendo templo de mí seyendo criado a la similitud y imagen de su divina majestad; otro tanto reflitiendo en mí mismo, por el modo que está dicho en el primer punto o por otro que sintiere mejor. De la misma manera se hará sobre cada punto que se sigue.

[236] El tercero considerar cómo Dios trabaja y labora por mí en todas cosas criadas sobre la haz de la tierra, id est, habet se ad modum laborantis. Así como en los cielos, elementos, plantas, fructos, ganados, etc., dando ser, conservando, vejetando y sensando, etc. Después reflectir en mí mismo.

[237] El quarto: mirar cómo todos los bienes y dones descenden de arriba, así como la mi medida potencia de la summa y infinita de arriba, y así justicia, bondad, piedad, misericordia, etc., así como del sol descenden los rayos, de la fuente las aguas, etc. Después acabar reflitiendo en mí mismo según está dicho. Acabar con un coloquio y un Pater noster.” IGNACIO DE LOYOLA, *Ejercicios Espirituales*, p. 97-99.

“First Point. The First Point is, to bring to memory the benefits received, of Creation, Redemption and particular gifts, pondering with much feeling how much God our Lord has done for me, and how much He has given me of what He has, and then the same Lord desires to give me Himself as much as He can, according to His Divine ordination. And with this to reflect on myself, considering with much reason and justice, what I ought on my side to offer and give to His Divine Majesty, that is to say, everything that is mine, and myself with it, as one who makes an offering with much feeling: Take, Lord, and receive all my liberty, my memory, my intellect, and all my will—all that I have and possess. Thou gavest it to me: to Thee, Lord, I return it! All is Thine, dispose of it according to all Thy will. Give me Thy love and grace, for this is enough for me [EE 234].

Second Point. The second, to look how God dwells in creatures, in the elements, giving them being, in the plants vegetating, in the animals feeling in them, in men giving them to understand and so in me, giving me being, animating me, giving me sensation and making me to understand; likewise making a temple of me, being created to the likeness and image of His Divine Majesty; [EE 235].

Third Point. The third, to consider how God works and labors for me in all things created on the face of the earth—that is, behaves like one who labors—as in the heavens, elements, plants, fruits, cattle, etc., giving them being, preserving them, giving them vegetation and sensation, etc. [EE 236].

Fourth Point. The fourth, to look how all the good things and gifts descend from above, as my poor power from the supreme and infinite power from above; and so justice, goodness, pity, mercy, etc.; as from the sun descend the rays, from the fountain the waters, etc. [EE 237].”

This contemplation resumes some of Ignatius’s forms of contemplating God’s mystery. First, God is nothing less than an absolute gift²⁴¹³. Everything around us is a gift and everything is a grace [EE 234]. Second, in giving us everything, God communicates Himself to us [EE 235]. He is present in his creatures. Everything is the temple of God’s presence. Third, He is not only present in things, He also works for us in all things [EE 236]. This implies that to be united to God is to cooperate actively with his divine action²⁴¹⁴. Finally, through God’s grace we will really know all things [EE 237]. God is the source of our contemplation and of our actions.

This spirituality is not about the attitude of *fuga mundi* that considers the world, created things or human actions as a distraction from God. On the contrary, it considers that all things could and should assist us to love God more²⁴¹⁵. However, the spiritual movement proposed by Ignatius is not a movement from created things to God, but from God the Creator to created

²⁴¹³ J. THOMAS, *Dieu en tout, tout en Dieu*, p. 226.

²⁴¹⁴ J. THOMAS, *Dieu en tout, tout en Dieu*, p. 227.

²⁴¹⁵ M. GIULIANI, S.J., *Trouver Dieu en toutes choses*, p. 215.

things that manifest the divine glory. This contemplation presupposes all the previous spiritual process, including the ascetic way of the spiritual exercises. Only somebody who has experienced a transformation of his perception can experience this contemplation. Ignatius proposes that the person who is doing the exercise should start by asking the following grace: “*It will be here to ask for interior knowledge of so great good received, in order that being entirely grateful, I may be able in all to love and serve His Divine Majesty*” [EE 233]. Only God can enable the human person to “see” his own gift through everything that otherwise could be considered as ordinary and trivial²⁴¹⁶. The effect of this contemplation is not only to change our “perception” of things but also to impel the human person to recognize his life as a gift and to desire to return back to God his life in a free act of love. This contemplation seeks to change all personal fatalism and all personal greed with respect to creation²⁴¹⁷.

VI.3.3 A spiritual contemplation of God’s presence in the cosmos for women and men of the 21th century

We should remark that Ignatius’ text of “contemplation to gain love” is expressed through the worldview of his time. Can a contemporary scientific worldview and Christian spirituality interact? We consider that they do not interact directly. A scientist is not necessarily more or less “spiritual” than somebody else. However, there is a possible mediation between natural sciences and some spiritual theologies that seek to contemplate God through his creation: the perception of the world and the search for the ultimate meaning of all reality. Let’s see how they could interact through two semantic transgression movements. This would enable us to propose a version of Ignatius’ contemplation to people from the 21th century deeply influenced by the scientific mental horizon.

VI.3.3.1 A semantic transgression from *aisthesis* to *sophia*: a philosophical hermeneutics on the ultimate foundation of all reality

As we already explained, the horizon of *aisthesis* is the horizon of the experience of wonderment when we contemplate the cosmos. Sciences seek to understand the cosmos and its constitution. However, a vision of the cosmos only from a scientific perspective is incomplete²⁴¹⁸. It misses the ultimate meaning of the cosmos that natural science cannot provide. We should add

²⁴¹⁶ O. DE VARINE, *Contemplation pour obtenir l’amour*, p. 245.

²⁴¹⁷ J. THOMAS, *Dieu en tout, tout en Dieu*, p. 229.

²⁴¹⁸ J. LADRIÈRE, *Science et théologie*, p. 22.

that the main temptation of scientists and of all our culture influenced by techno-sciences, is to see the world as a place full of objects with mechanisms to control with the only purpose to serve human beings' desires. This is expressed by Teilhard de Chardin in the following text:

*“The man who is wholly taken up with the demands of everyday living or a man who is exclusively immersed in the spirit of positivism, seldom gains more than a glimpse, at best, of this second phase in our sense-perceptions, that in which the world, having entered into us, then withdraws from us and bears us away with it: he is mediocrally sensitive of that emotive aureole, inundating our being, through which is disclosed to us at every point of contact the unique essence of the universe.”*²⁴¹⁹

There are many good examples of scientists who have been able to go beyond a simple reductive positivistic vision of the world and who have been able to experience a deep wonder when looking the universe in a new way²⁴²⁰. Consider for example the following expression of Christian de Duve:

*“The advances of biology have revolutionized the view we have of ourselves and our significance in the world. Many myths have had to be abandoned. But mystery remains, more profound and more beautiful than ever before, a reality almost inaccessible to our feeble human means.”*²⁴²¹

This already triggers the semantic transformation to the horizon of *sophia*, which is the horizon where we search the source of our experience of wonderment. Natural sciences are incapable of discerning what are the ultimate conditions and the ultimate foundations of the cosmic process of becoming. Here, through the assistance of philosophy as a wisdom, we can search this ultimate foundation that becomes the ultimate meaning of our existence in the cosmos. Again, Teilhard de Chardin expresses this movement as follows:

²⁴¹⁹ We have altered the English translation to better reflects the French meaning. “L’homme, absorbé par les exigences de la vie pratique, l’homme exclusivement positif, ne perçoit que rarement, ou à peine, cette deuxième phase de nos perceptions, — celle où le Monde, qui est entré, se retire de nous en nous emportant. Il est médiocrement sensible à l’auréole émotive, envahissante, par laquelle se décèle à nous, en tout contact, le seul Essentiel de l’Univers.” P. TEILHARD DE CHARDIN, *Pensées choisies par Fernande Tardivel*, p. 130 (English, *Pensées selected by Fernande Tardivel*, p. 78-79).

²⁴²⁰ Consider the following text of a well known cosmologist. “Au plus lointain, j’ai vu l’explosion fulgurante d’un chaos torride et, dans un océan éblouissant de lumière, un magma de matière informe se répandre. Puis, sous mes yeux étonnés, de gigantesques masses nébuleuses se sont disloquées. Les fragments, s’enroulant sur eux-mêmes, se sont lentement dessinés en spirales bleutées, et tout au long de leurs bras, de fantastiques explosions d’étoiles ont projeté dans l’espace, avec une force inouïe, des moissons d’atomes multicolores. J’ai observé dans les abysses océaniques des torrents de matière opaque s’éjecter des cheminées volcaniques, et d’immenses colonies d’organismes s’agiter en cadence auprès de cette manne sulfureuse. J’ai assisté aux combats brutaux de cerfs pour la femelle qui portera leur semence et veillera sur l’avenir de la lignée Par ces spectacles, j’ai mesuré la puissance du ferment d’organisation dont la nature est possédée. Et j’ai goûté en moi une saveur exaltante faite d’enthousiasme et de reconnaissance. Mais quand j’ai été horrifié devant les amas de cadavres dans les camps d’exterminations, j’ai été envahi d’un sentiment de grande perplexité. Où l’aventure cosmique s’était-elle fourvoyée ? Ou bien n’avais-je pas été simplement le jouet d’une illusion, d’un rêve en couleurs ? Du choc de ces visions contradictoires est née en moi une nouvelle idée de notre existence. Il y a quelque chose à faire de ces quelques décennies que la nature nous accorde : prendre résolument, et sans faillir, le parti d’embellir la réalité.” See Hubert REEVES, *Visions du monde*, Online, <http://www.hubertreeves.info/ecrits/visions.html>, (Page Consulted October 11, 2011).

²⁴²¹ C. DE DUVE, *Lessons of life*, p. 13.

*“No; strictly speaking, scientific transformism [evolution] can prove nothing for or against the existence of God. It simply establishes as a fact the concatenation of reality. It offers us an anatomy of life, not an ultimate explanation of life. It affirms that something has become organism, something has developed; but to discern the ultimate conditions of that development is beyond its competence. To decide whether the evolutionary process is self-explanatory or whether it demands for its explanation a progressive and continuous act of creation on the part of a first Mover: this falls within the domain not of physics but of metaphysics.”*²⁴²²

Here we will refer to Zubiri’s philosophy and his concept of religion already discussed²⁴²³. Zubiri, through a phenomenological analysis, arrives at what he calls the power of the real. This power of the real exercises a power over each one of us as a foundation of our personality²⁴²⁴. This power of the real is something that can be experienced as a reality that grounds my personality and that is not a concrete reality among other concrete realities²⁴²⁵. This ultimate reality is an absolutely absolute reality that is absolutely independent of things. This is what Zubiri calls God. Zubiri’s philosophy of God was already summarized in this chapter²⁴²⁶. We will not repeat it here. However, we will only mention that it is about God’s presence in all reality. It is neither pantheism (God and the cosmos are one) nor deism (God and the cosmos are two). Zubiri proposes a version of panentheism where God is present as the ultimate foundation of all realities. This paves the way for a spiritual theology that seeks to understand human spiritual experience of God’s presence in our world.

VI.3.2 A semantic transgression from *sophia* to *mysterion*: a spiritual contemplation of God’s presence in the world

The horizon of *mysterion* is the horizon of the human openness to God’s self-communication to the human being through all creation, the sacraments, human actions and spiritual practice. It is a spiritual horizon that subsumes all other theological horizons: *theologia* and *agape*. Spiritual theology is a theological reflection on this spiritual contemplation of God’s presence in all things and God’s self-communication to the human being.

In this section we will present briefly Teilhard de Chardin’s mysticism. The texts we will discuss show a contemplation that is not reduced to a scientist’s observation or a philosophical speculation. We will see that Teilhard’s contemplative mysticism subsumes what we have said

²⁴²² P. TEILHARD DE CHARDIN, *Pensées choisies par Fernande Tardivel*, p. 131 (English, p. 79).

²⁴²³ See chapter 5, section IV.2.

²⁴²⁴ X. ZUBIRI, *El hombre y Dios*, p. 88.

²⁴²⁵ X. ZUBIRI, *El hombre y Dios*, p. 95.

²⁴²⁶ See chapter 6, section VI.1.3.2 part E.

already about creation, God's presence in the world and Christian action. We will concentrate our effort on the text of *The Mass of the World* (*La messe sur le monde*). This text has the poetic style of a long prayer whose theme is God's active presence in the world²⁴²⁷. It is a spiritual meditation and not a logical analysis worried about transmitting knowledge. This text manifests the unity of scientific work and prayer, between action and mystical life in Teilhard²⁴²⁸.

In *The Mass of the World*, as Ignatius proposed in his Spiritual Exercises, Teilhard asks the grace to contemplate the others as God's gift: "*Grant me the remembrance and the mystic presence of all those whom the light is now awakening to the new day.*"²⁴²⁹ He also asks the grace of a contemplative experience of God's real presence that is not reduced to the fruit of a philosophical speculation: "*Grant, Lord, that your descent into the universal Species may not be for me just something loved and cherished, like the fruit of some philosophical speculation, but may become for me truly a real Presence.*"²⁴³⁰

Through this spiritual experience Teilhard "contemplates" both the enormous diversity in the world²⁴³¹ and its unity, which we have called, the systematic unity in respectivity:

*"What my mind glimpsed through its hesitant explorations,- what my heart craved with so little expectation of fulfillment, you now magnificently unfold for me: the fact that your creatures are not merely so linked together in solidarity that none can exist unless all the rest surround it, but that all are so dependent on a single central reality that a true life, borne in common by them all, gives them ultimately their consistence and their unity."*²⁴³²

In addition, Teilhard "sees", beyond the unity of the world, God's presence in the heart of the cosmic matter:

*"[...] mysteriously and in very truth, at the touch of the supersubstantial Word the immense host, which is the universe, is made flesh. Through your own incarnation, my God, all matter is henceforth incarnate."*²⁴³³

God's presence is a real presence and all things subsist in Him²⁴³⁴. Teilhard does not even hesitate to call the world a sacrament: "*At this moment when your life has just poured with*

²⁴²⁷ A. DUPLEIX, *La dimension eucharistique de la foi et de la théologie du Père Teilhard*, p. 170-171.

²⁴²⁸ H. DE LUBAC, *La prière du père Teilhard de Chardin*, p. 50 and 54.

²⁴²⁹ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 21-22 (English *The Mass on the World*, p. 11-12).

²⁴³⁰ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 38-39 (English p. 21).

²⁴³¹ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 53 (English p. 28).

²⁴³² P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 35 (English p. 17-28).

²⁴³³ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 33-34 (English p. 16-17).

²⁴³⁴ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 35 (English p. 18). Other texts where Teilhard makes reference to God's presence in the world are: P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 43 (English p. 22) and 45 (English p. 24).

*superabundant vigor into the sacrament of the world, I shall savor with heightened consciousness the intense yet tranquil rapture of a vision whose coherence and harmonies I can never exhaust.*²⁴³⁵ The whole world that surrounds Teilhard is the Body and Blood of God's Word²⁴³⁶. However, Teilhard clearly affirms that there is a diversity of divine presence in the cosmos²⁴³⁷. God's presence in the cosmos is not identical, at least it does not have the same degree, as God's presence in the Eucharist. As de Lubac clarifies it, Teilhard considers the Eucharist as the prototype and the source of God's cosmic presence²⁴³⁸.

However, this experience of God's universal presence is not the experience of a monist who believes in an absorption, or the experience of a pagan who worships a tangible divinity or the passive self-abandonment of a quietist²⁴³⁹. Through his spiritual experience Teilhard is transformed and united to God but does not lose his individuality. In Teilhard, God is so radically personal that He personalizes the whole creation through the creation of human beings²⁴⁴⁰. Against any pagan interpretation, Teilhard worships a God who can be "touched" in creation. Following Zubiri, this could be interpreted as a physical experience (in the sense of groping) of God in the world²⁴⁴¹. But for Teilhard God is at the same time beyond any physicalism. His experience is not the experience of a pantheist who believes that the world itself generates a supreme reality²⁴⁴². His cult is not a cult of the cosmos and his experience is not the experience of a vague principle of the world. His cult is to Christ whom he experiences as omni-presence in the world. For de Lubac, Teilhard opposes to pantheism a "*pan-christisme*," the universal influence of Christ that gives consistence to the world²⁴⁴³. Teilhard does not contemplate a divine cosmos but God in all things (1 Cor 15, 28), i.e., pan-en-theism²⁴⁴⁴.

Teilhard contemplates the unity of the multiplicity of things that is ultimately grounded in Christ. Nothing loses its "otherness" in this communion with Christ, on the contrary each thing and each human being becomes more what they are:

²⁴³⁵ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 36 (English p. 19).

²⁴³⁶ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 39 (English p. 21).

²⁴³⁷ This statement clearly shows that for Teilhard the Eucharist is the highest presence of Christ. See P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 40 (English p. 22).

²⁴³⁸ H. DE LUBAC, *La prière du père Teilhard de Chardin*, p. 218.

²⁴³⁹ See P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 36-38 (English p. 19-20).

²⁴⁴⁰ H. DE LUBAC, *La pensée religieuse du Père Teilhard de Chardin*, p. 218.

²⁴⁴¹ This is a topic discussed in chapter 5, sections IV.2.2. and IV.2.3.

²⁴⁴² P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 45 (English p. 24).

²⁴⁴³ H. DE LUBAC, *La pensée religieuse du Père Teilhard de Chardin*, p. 227.

²⁴⁴⁴ In another text Teilhard affirms a "legitimate" pantheism. What he wants to affirm was his belief in God's presence in the world: "Taking 'pantheism' in a very real sense, indeed in the etymological sense of the word (*En pasi panta Theos*, i.e. in St Paul's phrase, God "all in all") but at the same time in an absolutely legitimate sense: for if in the last resort Christians become "one with God" this unity is achieved not by way of identification, God becoming all things, but by the action—at once differentiating and unifying—of love, God being all in all, which latter concept is strictly in accord with Christian orthodoxy." Author's note in P. TEILHARD DE CHARDIN, *Le Christ dans la matière*, p. 90 (English p. 49).

*“Nothing, Lord Jesus, can subsist outside of your flesh; so that even those who have been cast out from your love are still, unhappily for them, the beneficiaries of your presence upholding them in existence. All of us, inescapably, exist in you, the universal milieu in which and through which all things live and have their being. But precisely because we are not self-contained ready-made entities which can be conceived equally well as being near to you or remote from you; precisely because in us the self-subsistent individual who is united to you grows only insofar as the union itself grows, that union whereby we are given more and more completely to you”*²⁴⁴⁵

When Teilhard identifies the world with Christ’s flesh, he is making reference to the incarnation and the Eucharist²⁴⁴⁶. Teilhard’s Christ is the Cosmic Christ²⁴⁴⁷. According to de Lubac, the background of Teilhard’s Cosmic Christ is the doctrine of the Mystical Body that Teilhard also calls the Universal Christ²⁴⁴⁸.

Against any passive self-abandonment, this contemplation triggers Teilhard’s desire to collaborate in the co-creation and the “christification” of the world²⁴⁴⁹. Teilhard offers himself wholly to the God whose omnipresence in every material thing calls him:

*“It is to your body in this its fullest extension —that is, to the world become through your power, and my faith the glorious living crucible in which is to this that I dedicate myself with all the resources which your creative magnetism has brought forth in me: with the all too feeble resources of my scientific knowledge, with my religious vows, with my priesthood, and (most dear to me) with my deepest human convictions. It is in this dedication, Lord Jesus, I desire to live, in this I desire to die.”*²⁴⁵⁰

Following the objective of Ignatius’s “Contemplation to gain love,” Teilhard’s contemplation enables him to deepen his faith (the horizon of *theologia*) and transforms his heart to desire to collaborate with God’s love (the horizon of *agape*).

Finally, Teilhard’s contemplation transfigures his perception of the cosmos. He “sees” in the universe the ultimate meaning of the cosmos and its evolutionary process: the emergence of the Cosmic Christ²⁴⁵¹.

VII. Chapter summary

²⁴⁴⁵ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 54 (English p. 29).

²⁴⁴⁶ G. MARTELET, *Teilhard de Chardin, prophète d’un Christ toujours plus grand*, p. 96.

²⁴⁴⁷ H. DE LUBAC, *La prière du père Teilhard de Chardin*, p. 57.

²⁴⁴⁸ H. DE LUBAC, *La prière du père Teilhard de Chardin*, p. 40-41.

²⁴⁴⁹ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 56 (English p. 30).

²⁴⁵⁰ P. TEILHARD DE CHARDIN, *La messe sur le monde*, p. 57 (English p. 31).

²⁴⁵¹ G. MARTELET, *Teilhard de Chardin, prophète d’un Christ toujours plus grand*, p. 240-241.

On this chapter we have discussed the articulation of scientific worldviews into systematic theology. We have elucidated the fundamental hypothesis of this work: *an articulation of scientific worldviews in systematic theology is possible through the mediation of philosophy*. Moreover, we have elaborated different possible philosophical mediations: epistemological mediation, metaphysical or philosophy of nature's mediation, ethical mediation and the ultimate meaning's mediation. An epistemological mediation clarifies the presuppositions, objects and method of each rationality. The last three mediations enable an articulation of scientific worldviews into the theological discourse by means of a double movement of semantic transgression from one horizon of meaning in the order of manifestation and self-constitution (*phusis*, *techne* and *aisthesis*) to a horizon of meaning in the order of revelation and salvation (*theologia*, *agape* and *mysterion*). Furthermore, we have proposed a theological method that integrates biblical theology, historical theology and speculative theology. The scientific worldviews are integrated through a double movement of semantic transgression in the last part related to speculative theology. Thus, we guarantee that theology remains in its epistemological and methodological boundaries.

Finally, we have provided three examples where we have applied the proposed method. These three examples further develop Gesché's paradigm of three poles: the autonomous and creative world, the free co-creator human being and the transcendental absolutely free God-Creator. God creates the world with a fundamental immanent principle of creativity that drives the whole creation. God calls humanity to become a responsible co-creator in his image and likeness. Finally, God as the ultimate and absolute foundation of all creation decides, in an act of absolute freedom, to be in ecstasy, to stand outside Himself to create. This act of standing outside Himself, to go to an "other" is nothing else than an act of absolute agape.

Chapter 7. Conclusion: the need for a permanent revision of our articulations.

I. The perspective of this work

The main point of this work is that there is a possible articulation between natural sciences and theology. An articulation is not only possible, it is also necessary for the transmission of Christian faith within our contemporary mental horizon influenced by scientific worldviews. In other words, this articulation is indispensable to believe today with intellectual honesty (following Rahner's expression). However, we must clarify that our effort does not follow two traditional forms of relating natural sciences and theology: apologetics or independence. These two forms of relation appear in the mind of not a few when they think about the "relationship between science and religion".

Our conception of the relation between natural sciences and theology is not based on an already surpassed apologetics understood as a *preambula fidei* that grounds our faith in a *demonstratio religiosa*, a *demonstratio christiana* and a *demonstratio catholica*. Moreover, we are far from the effort that seeks to "demonstrate" the Christian faith and the existence of God in the gaps of scientific knowledge. This supposed "demonstration" based on lacunas found in scientific explanations leads to the so called "*God of the gaps*" approach. A "God of the gaps" approach presumes that God's involvement in the natural world happens through divine unexplained physical actions. For this approach, the objects of theological reflection are events that natural science has not and cannot explain. Followers of the "God of the gaps" approach consider that theology is about phenomena beyond the understanding of scientific inquiry. As a consequence, theological reflection loses its foundation with the scientific progress and its increment of knowledge²⁴⁵², which leads to a continuous conflict between science and religion.

We neither follow nor support the position that considers that natural sciences and theology are two independent intellectual efforts. Although there is an indispensable methodological autonomy, the mode of relationship called "independence" presents some difficulties. From the point of view of epistemology, reality does not "appear" to us as segmented into two mutually exclusive segments or sections, one religious and the other profane. Finally, from a theological point of view, the One God is the ultimate foundation of all realities, manifested or revealed. Moreover, creation is not independent of salvation. For these reasons, natural sciences and

²⁴⁵² J.-H. BROOKE, *Science and Religion. Some Historical Perspectives*, p. 314 and 332. A. PEACOCKE, *Creation and the World of Science*, p. 132 and 136.

theology are not independent rationalities that study two independent realities. An articulation between natural sciences and theology is possible due to the unity of the human person. Consequently, it is the human being that has one intelligence that seeks the truth. The world manifests itself to the human person (the foundation of natural sciences). Moreover, God reveals Himself to the whole human person (the foundation of religious beliefs and theological systems). Furthermore, it is the human person who is in a quest for meaning to construct and achieve his existence. As a result, the human person can articulate natural sciences and theology at the level of human existential meaning, which can be fulfilled only in the encounter between God and the restless human seeker.

Our scope in this work was the interdisciplinary dialogue between natural and applied sciences and Christian theology from the explicit horizon of Christian revelation. Therefore our main objectives were: (i) *to study the conditions and foundations for a possible articulation between natural sciences and systematic theology*; (ii) *to propose a theological method, grounded in these foundations and conditions, that explicitly articulates scientific worldviews into systematic theology*. This method respects the epistemological boundaries and autonomies of each field of knowledge.

II. The grounds of a possible articulation

There are two orders of reality: the order of manifestation and the order of revelation. These orders of reference are modes of givenness, i.e., sources of knowledge. Natural sciences, human sciences and philosophy refer to the order of manifestation where real things appear as phenomena. Christian theology refers to the order of revelation where God communicates Himself to the human person. The relationship between the order of manifestation and the order of revelation can be expressed in a negative formulation with the maxim: *neither confusion nor separation*. However, there is also a positive formulation: *revelation assumes and transfigures what is manifested*. This model of relation between the order of manifestation and the order of revelation is the fundamental theological condition that renders a possible dialogue that seeks to articulate natural science, philosophy and theology. An apologetic, as the one previously described, presumes that revelation is about natural phenomena or that God actions are similar to the causes and effects found in physical realities. As a result, the order of manifestation and the order of revelation are identified and confused. The difficulty with the model of independence is that it pulls apart both orders of reality. It presumes that God's actions and revelation are "placed" in a realm totally outside history and the world.

In addition to that theological ground, there is an epistemological and anthropological condition that renders a possible dialogue between sciences and theology: the homologous rational structure of each rational field (sciences, philosophy and theology) grounded in the three moments of the fundamental immediate experience, the *logos* and reason. Moreover, for the believers the incarnated *Logos* is the subsistent truth of the cosmos and revelation. This implies that rational truths found by natural (or human) sciences and philosophy are not alien to theology. On the contrary these truths witness some aspects of God's act of creation.

We have shown the inherent difficulties in the effort of some theologians that use scientific concepts directly and immediately in the theological rationality. Our position is the following: *an articulation of scientific worldviews in systematic theology is possible through the mediation of philosophy*. Following that position, we have elaborated different possible philosophical mediations: epistemological mediation, metaphysical or philosophy of nature's mediation, ethical mediation and the ultimate meaning's mediation.

Finally, we have proposed a theological method that integrates biblical theology, historical theology and speculative theology. The scientific worldviews are integrated through a philosophical mediation, in the form of a semantic transgression, in the last part related to speculative theology. It guarantees that theology remains in its epistemological and methodological boundaries. It also respects the methodological autonomy of natural and applied sciences. Finally, we applied our proposed method to three examples.

III. Theologians' task in the interdisciplinary dialogue with natural and applied sciences

Through this research work we gain some insights about the interdisciplinary dialogue between sciences and theology. For a fruitful interdisciplinary dialogue theologians should accomplish a series of tasks. We will organize these tasks around the three questions that Kant posed as expressing central human concerns: "*What can I know?*", "*What must I do?*" and "*What may I hope?*"²⁴⁵³.

III.1 Epistemological discernment: "what can I know?"

A theologian should respect the autonomy of natural and applied sciences, philosophy and theology. He must distinguish the epistemological differences between the different fields of

²⁴⁵³ I. KANT, *Critique of Pure Reason*, A805-B833, p. 677.

knowledge. The theologian must be cautious about the different orders of reality to which each discipline makes reference, the different levels of truth and the different objects and methods of sciences, philosophy and theology.

The theologian must discern when an affirmation is based on the order of manifestation where a reality appears to the human person and when it is based on the order of God's revelation and action; they must not be confused. Moreover, the theologian must discern the different levels of truth within each rationality. There is a real truth related to the fundamental immediate experience, there is a dual truth related to affirmations and judgments (language and *logos*). Finally, there is the level of rational or reasonable truth related to sketches that seek to explain the systematic structure of different realities. Neither theology nor natural sciences are about real immediate divine or worldly truths but rational or reasonable truths that require to be confirmed through experience as testing. The dialogue between natural sciences and theology occurs at the third level: a dialogue between scientific reason and theological reason.

The theologian must discern the differences between scientific objects and methods and theology's object and method. The object of theology should not be treated as other scientific or philosophical objects. It is not something constructed or formalized. It is received as a gift from God's self-communication to humanity. If this is not taken into consideration we risk reducing theology to a mere philosophical speculation, a historical analysis or a psychological description.

III.2 Moral discernment: "what must I do?"

The theologian is an agent engaged in praxis, the understanding of faith. He is at the service of the Christian community to deepen the Church's beliefs and mission in a historical and cultural context that never ceases to change. The theologian is called to discern the personal and community's mission, possibilities and means.

Theologians should discern the conditions that render possible our human realization and liberation from all types of slavery. Discernment has a particular point of departure: faith. The theological criteria of discernment are the achievement, or lack of: justice, solidarity, fraternity, charity, service, integral liberation-salvation and promotion of all human beings.

There is a fundamental relationship between reflection and action, between faith and praxis. Thinking reflects an attitude toward reality. Theologians, as all scholars, are called to avoid the permanent temptation of being disconnected from the social, pastoral and environmental reality. At the same time, the apostolic praxis must be guided by theological discernment based on principles and norms. Theologians must always go from revelation and faith to the human, social,

pastoral and environmental realities and from all aspects of reality to his theological endeavor. This double movement characterizes the attitude of “contemplation in action”. A contemplative faith influences our actions and praxis has an undeniable effect in our experience of faith. Both moments are part of a hermeneutics circle of mutual fertility.

III.3 Spiritual discernment: “what may I hope?”

We have separated spiritual life from dogmatic and systematic theology. Although we can distinguish between the spiritual experience and theology as two moments, they are not independent. The foundation of theological reflection is the fundamental theological experience of God’s self-communication to every human being.

The theologian is called to discern God’s will in his encounter with the Word of God as witnessed by the Scriptures. In addition, the theologian should discern God’s will through the historical witness of the Christian community, creation, through the contemplation of nature and through the signs of the times within a social reality. There he can discern the means to engage in an interdisciplinary dialogue with the objective of systematizing Christian beliefs within a particular mental horizon. He will discern the possible and necessary reforms of the theological discourse and the Church’s action in the world. Furthermore, he theologian should discern what values of our present cultural context can be assumed and what aspects he should criticize due to their opposition to the Gospel.

One of Ladrière’s and Zubiri’s contributions is their clarification that theology, and all other rationalities, cannot be developed outside a mental horizon. Therefore, theologians should reflect about the contributions that contemporary culture could make to their systems. At the same time there is no naïveté in the use of contemporary concepts. Ladrière has expressed clearly that not all concepts can be transformed and used in theology. It demands an effort of intellectual, moral and spiritual discernment and examination that is helpful for the salvation of people. The risk of not doing this multifaceted discernment is to reduce the task of theology to a simple academic endeavor full of scholarship but empty of God’s will.

Finally, through these three aspects of discernment, theology can contribute with its reflection about the ultimate meaning of life that could enable scientists and philosophers to escape the temptation of nihilism. Our contemporary global culture is falling into a meaningless conception of life. Global capitalism imposes a western life style with patterns of desire and consumption that bring about human alienation and environmental destruction. Facing this reality, only “the truth that emerges from a spiritual, moral and intellectual discernment can set us

free”.

IV. A theological method and the permanent process of conversion

These three necessary discernments are interrelated through our personal and communitarian conversion. We understand “conversion” in the sense of a change of mental horizon that includes a change of ways of looking at reality, attitudes and decisions. According to Bernard Lonergan, a conversion is a fundamental change in the reality of the theologian²⁴⁵⁴. It is a change from a state of inauthenticity to embrace the fullness of human authenticity found in the Kingdom of God present in the midst of us²⁴⁵⁵. According to Lonergan, there are three types of conversion essential to the theological endeavor: intellectual conversion, moral conversion and religious conversion²⁴⁵⁶. Each category of conversion is related to an ultimate question of Kant. We will reinterpret them as fundamental attitudes and changes in the theologian that are essential to accomplish a fruitful interdisciplinary dialogue.

Theologians are invited to an intellectual conversion by changing constantly their long ingrained habits of thought and their old categories to understand reality and faith²⁴⁵⁷. Intellectual conversion is the effort to deepen the meaning of our life, the mystery of reality (in nature, society and culture) and the mysteries of faith as a gift from God. It is an effort against the temptations of falsely elevating our contexts and our personal mental configuration to the level of an absolute, i.e., believing that we fully grasp and understand all. Through an intellectual conversion we can recognize that always God’s self-communication exceeds reason. There is always an excess and a surplus that cannot be fully grasped by our intelligence. For that reason, we always need a negative theology that makes us aware of the limits of all systematics theologies. At the same time, this conversion encourages theologians to dialogue with all rationalities and to learn from others in order to see within a new mental horizon this world created by God’s *Logos*.

Moral conversion is a change of values, criteria, principles and norms that guide one’s decisions and choices²⁴⁵⁸. We are permanently tempted to make ourselves and our way of life the standard of good. Through moral conversion we dispose ourselves to learn from others. Theologians must constantly revise their intentions and their praxis that are always in the

²⁴⁵⁴ B. LONERGAN, *Method in theology*, p. 270.

²⁴⁵⁵ B. LONERGAN, *Method in theology*, p. 271.

²⁴⁵⁶ B. LONERGAN, *Method in theology*, p. 238.

²⁴⁵⁷ B. LONERGAN, *Method in theology*, p. 239-240.

²⁴⁵⁸ B. LONERGAN, *Method in theology*, p. 240.

background of their theological works. In addition, through moral conversion, the theologian realizes that he cannot be neutral with respect to inhumane and unjust social structures.

Religious conversion is an identification with Christ. This identification transforms us radically. Religious conversion is an acceptance of God's mystery of self-communication to the human person. Through it we accept the invitation to forge an interpersonal covenant with God. In addition, it is an invitation to hope, despite our limitations. According to Barth, a theologian is somebody who is surprised and challenged in an encounter with the Word of God²⁴⁵⁹. The religious conversion is a transformation of the human heart to revere God and desire his Will. It is the source of the desire to know God in all creation and in revelation. This religious conversion is a permanent purification of our heart and our desire to master and possess all objects of knowledge. This is not different from the idea of the sonorous silence of Saint John of the Cross and Xavier Zubiri. It is the effort to contemplate God's presence everywhere, to hear the voice of the ultimate foundation of reality in the echo of our consciousness.

V. A reminder to theologians: the humble acceptance of the theological rationality's limits

Ladrière has shown the limits of the theological endeavor. All languages, including theological languages, have their limitations. They are fragile, precarious, and relative to different contexts²⁴⁶⁰. Theologians must be vigilant because deformations could be introduced. As pointed out in chapter 4, we can be mistaken in our creation of meaning or in what we inherit from culture, history and language. These erroneous meanings can be deviated ways that separate us from reality and that bring us to the alienation and even destruction of our person. All comprehension of meaning requires a criticism of all idols and alienating ideologies that cover reality. Our theological effort to search and comprehend meaning must be permanently purified by hearing the ultimate voice of reality, the Word of God.

In addition, theologians, as all scholars, should accept that there are no absolute ultimate theological formulas. Each theological expression should be open to be re-interpreted in the future when there will be another different cultural and historical context²⁴⁶¹. We must be open to the likelihood that our theological systems will be surpassed by future systems.

²⁴⁵⁹ K. BARTH, *Evangelical Theology*, p. 76.

²⁴⁶⁰ J. LADRIÈRE, *L'articulation du sens II*, p. 106.

²⁴⁶¹ J. LADRIÈRE, *L'articulation du sens II*, p. 101.

VI. The never ending process of revision and the eschatological convergence

It is important to realize that in each field of knowledge there will be developments not predetermined in advance. The articulation process between the horizons of meaning takes into consideration the history of each partner in a dialogue carried out in freedom. All possible articulations are always precarious, provisional and in need of revision. They are a never-ending process that cannot arrive at an achieved final system. It must always stay open to further clarifications for the following reasons: (i) the cosmos continues its evolution process, it is not accomplished yet; (ii) natural and human sciences continue to develop; (iii) human reason and praxis continue their process of interpreting the meaning of the cosmos and human life, (iv) believers still wait for the fullness of Christ's recapitulation of salvation history, and (v) all articulations are grounded in languages and horizons where meaning is dynamic and changes with use, cultural and historical contexts.

Can we expect that these efforts of articulation converge to a total integrated system of the whole? According to Ladrière all horizons of meaning and all fields of knowledge exist in dynamic tension toward a future. Even when the fields of natural sciences, philosophy and theology experience moments of stagnation and even of retrogression, in time all of them develop a better control of their methodological approaches. They expand to new sectors and aspects of reality still unknown and deepen the intelligibility of their objects. Each horizon of meaning has a dynamic movement toward the totality as a formal goal, although unattainable in history: totality of the cosmos (science), totality of meaning and wisdom (philosophy), totality as a full achievement in God (theology). This dynamic movement implies that the formal goal of convergence and unity is present as a promise, as a hope, a call that guides all scientific, philosophical and theological efforts. Each particular dynamic process moves forward to a fulfillment that is being unfolded in a historical process that is not determined in advance and is not yet fully achieved. This fulfillment is the place (in the metaphorical sense) where the *logos* of the cosmos (in the sense of its intelligibility) through the human logos will recognize and adhere to the Divine *Logos*, who is the ultimate foundation of reality that makes possible, impels and grounds our history.

Meanwhile, we are not yet at the final times and we must accept the fact that we develop imperfect systems that articulate imperfectly these three horizons²⁴⁶². It is the poverty of theology to express something of Christian faith in limited and historical concepts²⁴⁶³. At the same time it

²⁴⁶² F. EUVÉ, *Penser la création comme jeu*, p. 17.

²⁴⁶³ J. LADRIÈRE, *L'articulation du sens III*, p. 99.

is the greatness of theology to be able to say something about faith “*while we wait for the blessed hope and the manifestation of the glory of our great God and Savior, Jesus Christ*”²⁴⁶⁴.

²⁴⁶⁴ TITUS 2, 13

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Appendix 1: Biblical Exegesis

A. The Priestly Narrative of Creation Genesis 1,1 - 2,4a

A.1 The world behind the text

The narrative of Genesis 1,1 - 2,4a is an etiology that provides an explanation for the creation of the world. This narrative of creation is not isolated from other cosmogonies in the Ancient Near East²⁴⁶⁵. It follows some representations born within the Babylonian cultural context²⁴⁶⁶. Societies and empires during the period that corresponds to the Ancient Near East were looking to validate and justify their way of life, their patterns of religious and social structures, through different narratives of creation. In concrete, the account of creation draws some aspects and models from the Mesopotamian cosmogonies, in specific the *Enuma Elish* and the Atrahasis' account²⁴⁶⁷. However, it must be stressed that even with these influences from Ancient Near East worldviews and religions, there are important differences concerning the purpose of creation, the role of humankind and the fundamental belief that creation is an act of the God of Israel, not of an assembly of deities.

Many scholars point to a Priestly source (P), a post-exilic writer, as the author of Genesis 1, 1 - 2,4a²⁴⁶⁸. This author was concerned with cultic practices of Israel after the destruction of the Temple of Jerusalem in 586 B.C.E. The question that we should ask is the following: what does the writer of this creation narrative in Genesis try to validate in the social and religious pattern of Israel during and after the exile?

A.2 The world of the text

The structure of this story is well defined with the expression of “creation of heaven and earth.” This expression indicates to the readers when this specific account starts and finishes²⁴⁶⁹. There is also a repetition of the formula of “creation of heavens and earth” in 2,1. It could also mean that this part of this specific narrative is the conclusion of the story. The writer could be letting the reader know that the end and the conclusion are there: the seventh day of creation and

²⁴⁶⁵ R.-J. CLIFFORD, *Genesis*, p. 8.

²⁴⁶⁶ A. WÉNIN, *D'Adam à Abraham*, p. 20.

²⁴⁶⁷ See E.A. SPEISER, *Genesis*, p. 9-11. T. LONGMAN III, *How to read Genesis*, p. 71-80. V.-H. MATTHEWS and D.C. BENJAMIN, *Old Testament Parallels*, p. 1-7.

²⁴⁶⁸ E.A. SPEISER, *Genesis*, p. 8.

²⁴⁶⁹ The end of this etiology and the start of the J narrative of creation is well establish: verse 2,4a has the formula “generations of the heavens and the earth,” meanwhile 2,4b starts in a reverse order: “the earth and the heavens.”

the establishment of the Sabbath. This is an important key to understand the whole narrative and the intention of P in writing it.

The author starts with the statement that only the God of Israel is involved in the act of creation²⁴⁷⁰. This is not an act of a pantheon or an assembly of deities that decides the fate of humankind. In verse 2, before creation, there is a formless void, the waters and night. All of this represents a chaos that is not able to sustain life. The writer (P) uses an image of God's wind (*rûah*) over the waters. This image shows that God masters the chaos. This image also appears in Gen 8,1 when God re-creates the earth after the flood. Two chaotic forces are mentioned explicitly: darkness and waters. In the whole account God does not destroy the darkness or the waters. The darkness is relegated to night and the waters are separated and localized in a proper place. This means that the original purpose of God is creation and not the destruction of anything. In addition, it seems to stress that neither God nor the elements of the cosmos are source of evil.

There is a basic structure of the creation found in every day. God creates by his word: "and God said *let...*" followed by the formula: "*and it was so...*" Another expression in this structure is "*God called...*" Moreover the expression "*and God saw that it was good*", which is found also in verses 10, 12, 18, 21, 25, and 31, highlights that creation is neither an act of violence nor a source of evil. On the contrary, all creation is good and is part of God's plan. Finally, there is another formula that appears at the end of every day: "*and there was evening and there was morning.*" This reflects the fact that for Jews all days start in the evening and continue during what we consider today the next day.

The structure of creation in seven days is highly symmetric and conveys part of what the writer wants to communicate. The first six days are arranged in two groups of three days. The

²⁴⁷⁰ For the act of creation of humanity and animals of the sea and air, the text uses the concept *bâra*'. This concept is related to *barak*, which is a word of blessing. It is a verb that is specific for the creation concept. It does not have any other subject than God. It is used to designate God's creative work in contrast to human's secondary products that use already existing material. We find it in the Priestly creation account in Gen 1, 1. In the creation of the human being in Gen 1, 27, P uses *bâra* three times. In P it also implies the creation as a whole. In Ex 34, 14, *bâra* is also associated with marvel and wonder. This verb does not denote an act that can be described, but it simply states that the action is unconditional; it does not require further intervention. Something comes into being through God's command, as in Ps 148, 5 "He commands and they were created." In Deutero-Isaiah, *bâra* denotes not only an act that is merely in a remote primitive time, but also Yahweh's act in the imminent future. The exile's change of fortune is interpreted as Yahweh's new creation act (Is 48, 7). This new creation is also extended to natural powers with the image of a wilderness wonderful transformation into a fruitful land (Is 41, 18f). Here *bâra* is related to novelty (as in Is 48, 6f; 65, 17; Jer 31, 22; Ps 51, 12; 102, 19; 104, 30). In postexilic prophetic texts, God's creative act in the historical realm, expressed by *bâra*, is transferred to the end of times (Is 4, 5; Jer 31, 22). In Trito-Isaiah, it includes the new creation of the whole cosmos (Is 65, 17f). A. WÉNIN, *D'Adam à Abraham*, p. 25. P. BEAUCHAMP, *Création : théologie biblique*, p. 340-342. G.J. BOTTERWECK and H. RINGGREN, "*bâra*", in *Theological dictionary of the Old Testament*, p. 242-249.

Other terms that are translated to "creation" are *yastar* and *âsah*. *yatsar* is a verb used to designate "to form", "to give shape", "to model" as in Gen 2, 7; Is 43, 1.7; 45, 7.18; Am 4, 13. It could mean dependency on God (Is 29, 15f). It is used to express that God forms the human race (Gen 2, 7), Israel (Is 43, 1.21; 44, 21-22.24) and the Servant in Isaiah (Is 42, 6; 49, 5; 49, 8). *âsah* is a verb that designates "to do", "to make" as in Is 41, 20; 43, 1.7; 45, 12.18; Am 4, 13. It is used in Gen 1:25 for the creation of animals and in Is 45, 12 for the creation (make) of the earth. G.J. BOTTERWECK and H. RINGGREN, "*bâra*", p. 246.

fourth day corresponds to the first with the creation of lights in heaven. The fifth day corresponds to the second with the creation of fish and birds to fill waters and the sky. The sixth day corresponds to the third in the creation of animals and humans to fill the earth. Finally, the end and conclusion is the seventh day where God rests. The fact that the Sabbath is the conclusion of the narrative is not an accident, as we will see.

Table A.1 the structures of days in Gen 1, 1- 2, 4a

Day 1: creation of light	Day 4: God fills the heavens with lights. God says “let them be for signs and for seasons and for days and years”.
Day 2: creation of heavens and the sea	Day 5: God fills the waters with living animals and the heavens with birds.
Day 3a: creation of the earth, Day 3b: God fills the earth with vegetation.	Day 6a: God fills the earth with animals. God creates the human being in his image and likeness. Day 6b: God commands that the plants be the food for the human being.
Day 7: The Sabbath, the day of cult, is a day apart.	

A creation in seven days is not an accident in the narrative. Clearly P accommodates such temporal structure (some days have more than one action). What is the purpose of this arrangement? The objective is to show that Sabbath is part of the original plan of creation. Another key to interpret the text and the purpose of creation is found in the fourth day, in verses 14 and 15. God creates the lights in the sky to separate day from night. First of all, there is a theological statement here: the sun, the stars and the moon are not gods but part of creation²⁴⁷¹. The other purpose of this narrative is found in “*and let them be for signs and for seasons and for days and for years.*” According to Wénin, the original Hebrew implies that these are signs that summon people in a place and in a specific time, which clearly refers to liturgical assemblies²⁴⁷². It is well known that the Israelites’s liturgical calendar was solar and lunar. The text suggests that the purpose of creation of lights in the sky for days and nights is to follow the liturgical calendar²⁴⁷³. Moreover, according to Beauchamp, the relevant temporal moments of the first, the fourth and the seventh day are related to the moments that the light, the heavenly bodies and the Sabbath appear. All of this is related to the liturgical calendar²⁴⁷⁴, which is an important motif in the Priestly account.

In the sixth day God creates humankind. The creation of humankind, found in verses 26 to 31, is a long section when compared to the rest of the narrative. The purpose of this is probably to

²⁴⁷¹ This is different from the stories of creation found in Ancient Near East where the sun is identified with a deity. In the Enuma Elish story Ea sang the following referring to Marduk: “*My son who is the sun. He is the sun in the sky. Clothed with the powers of ten gods, Marduk excelled them all ...*” V.-H. MATTHEWS and D.-C. BENJAMIN, *Old Testament Parallels*, p. 9-10.

²⁴⁷² A. WÉNIN, *D’Adam à Abraham*, p. 18.

²⁴⁷³ J. BLENKINSOPP, *The Pentateuch*, p. 62.

²⁴⁷⁴ P. BEAUCHAMP, *Testament Biblique*, p. 21.

show the importance and the climatic aspect of this element in the whole account²⁴⁷⁵. The expression of making human beings in the image and the likeness of God is a way of expressing that there is something different about humanity from the rest of creation. In Genesis, humanity comes from a free act of the only God of Israel²⁴⁷⁶. As a consequence, for the Priestly account humanity is not an accident but part of God's original plan²⁴⁷⁷.

As mentioned before the structure of the narrative suggests that the conclusion of the story is the establishment of the Sabbath. There is a clear break between this day and the structure of creation as found in the previous six²⁴⁷⁸. Day one gives the daily rhythm and day four provides the rhythms of seasons. However, the Sabbath provides a weekly rhythm provided only by God. Why did this narrative finish with the justification of the Sabbath? Through this last day the text insinuates the purpose of creation. The Priestly account with the notion of creation as separation²⁴⁷⁹, the liturgical calendar motif, and now the Sabbath, seems to suggest that creation is a temple to worship God. Although the Temple of Israel was destroyed, the whole of creation is a temple that validates the religious pattern of the People of Israel.

Another fundamental structure of this text is found in the ten divine words, "*God said*", in verses 3, 6, 9, 11, 14, 20, 24, 26, 28 and 29. The first eight words are related directly to the creative act: "*God said let there be...*" The ninth word is only addressed to an explicit interlocutor, the plurality of human being. It has already a form of commandment. The tenth word addressed to humanity has also the form of a commandment that refers to a dietary prescription.

A.3 The world before the text

There is something astonishing in the text: someone narrates an event that nobody has witnessed²⁴⁸⁰. The narrator evidently constructs this "fiction" from his own mentality influenced by the cultural heritage and his own observation. However, the reader enters into a world ordered by God that he recognizes as his own. The reader goes from "the world of the text" to his own "world before the text". As a result, the reader interprets his own reality by interpreting the

²⁴⁷⁵ R.J. CLIFFORD, *Genesis*, p. 11.

²⁴⁷⁶ R.J. CLIFFORD, *Genesis*, p. 11.

²⁴⁷⁷ In the accounts of Atrahasis, Belet-ili, the goddess of birth, with the help of the wise god Enki, killed one lesser god, We-ila, and mixed his blood with clay to make humanity. In the Enuma Elish the god Marduk made humanity from the blood of the executed god Kingu. According to these etiologies humanity has the remains of the gods and was created from violent acts from other gods. T. LONGMAN, *How to read Genesis*, p. 75-76. V.-H. MATTHEWS and D.-C. BENJAMIN, *Old Testament Parallels*, p. 13-15 and 18-19.

²⁴⁷⁸ A. WÉNIN, *D'Adam à Abraham*, p. 22.

²⁴⁷⁹ This is a cultic concern: separate the pure from the impure.

²⁴⁸⁰ A. WÉNIN, *D'Adam à Abraham*, p. 32

narrative²⁴⁸¹. Thereby, God transcends the limits of fiction and He appears as a personage that makes an impact on the reader's reality.

B. 2 Maccabees 7,1-42. God did not make from what already existed.

B.1 The world behind the text

The Second Book of Maccabees, written in Greek, covers the history of the Maccabean revolt from the reign of Seleucus IV to Judas Maccabeus' defeat of the Seleucid general Nicanor (187 B.C.E – 175 B.C.E.)²⁴⁸². The redaction of the text is placed between 124-63 B.C.E. Details from the text denote that the writer is familiarized with Greeks institutions and the Hellenistic style of writing.

Israelites in Judea grew up with the belief that God's chosen people has nothing to fear if they keep God's Law²⁴⁸³. This bears the trace of a Deuteronomistic theology. However, under the Seleucid Antiochus IV from 167-164 B.C.E., the obedience of God's Law became a crime punished severely. This became a test of the Israelites' faith and the background of the 2 Maccabees' theology.

B.2 The world of the text

The text has a clear progression in its theology of God's action for the sake of the just²⁴⁸⁴. The first five brothers gave successive speeches (verses 2, 9, 11, 14, 16-17 and 37-38) that reflect a theology of God's Kingship over the whole universe in opposition to earthly kings. Verse 11 affirms that everything comes from Heavens, i.e., from God²⁴⁸⁵. Through these verses the author proclaims that God is the ultimate source of everything.

In between these speeches, the mother utters some theological affirmations about the ultimate origin of the youngest son.

"I do not know how you came into being in my womb. It was not I who gave you life and breath, nor I who set in order the elements within each of you. Therefore the Creator of the world, who shaped the beginning of humankind and devised the origin

²⁴⁸¹ A. WÉNIN, *D'Adam à Abraham*, p. 19 and 33.

²⁴⁸² R. DORAN, *2 Maccabees*, p. 734.

²⁴⁸³ J.-A. GOLDSTEIN, *II Maccabees*, p. 3 and 13.

²⁴⁸⁴ Here is the progression: (i) the just rather dies than commits a sin (7,2), (ii) God will vindicate the just (7,6), (iii) God will raise the just (7,9), (iv) the just will rise with bodies fully restored (7,11), (v) for the wicked there will be no resurrection to life (7,14), (vi) God will punish the wicked (7,17), (vii) the just suffers because of his sin, as will the wicked (7,18-19) and (viii) the death of the saints has an expiatory value (7,37-38).

²⁴⁸⁵ J.A. GOLDSTEIN, *II Maccabees*, p. 306.

of all things, will in his mercy give life and breath back to you again, since you now forget yourselves for the sake of his laws.” (2 Macc 7, 22-23).

The mother declares that the origin of life and breath (reference to the creation of Adam in Gen 2) is beyond her understanding. However, she makes a confession of faith that could be formulated as follow²⁴⁸⁶: *God the Creator is the ultimate origin of all things and of humankind and God will raise the just by giving them their life and breath.* Later, in a second affirmation the mother tells her son the following:

“I beg you, my child, to look at the heaven and the earth and see everything that is in them, and recognize that God did not make them out of things that existed. And in the same way the human race came into being. Do not fear this butcher, but prove worthy of your brothers. Accept death, so that in God’s mercy I may get you back again along with your brothers.” (2 Macc 7, 27-28).

The notion of heaven and the earth refers to the beginning and the end of the Priestly account of creation. In 7,28 there is an expression that was translated as *ex nihilo*²⁴⁸⁷ in the Vulgate and passed to later Christian theology as the root of the doctrine of creation *ex nihilo*. The Greek formulation is *ouk ex ontôn*. It has two possible translations²⁴⁸⁸:

- (i) “not from things that existed”,
- (ii) “from things that did not exist”.

The first possible translation could be interpreted as follows: “*Though no individual things existed, God created the world from undifferentiated raw matter.*”²⁴⁸⁹ The second possible translation implies that nothing existed before creation²⁴⁹⁰. Both translations are grammatically correct and possible. Does this mean that creation *ex nihilo* is affirmed in this text? Goldstein and Gibert affirm that the theology of creation *ex nihilo* is not really affirmed here. However, this affirmation could serve as a foundation for a posterior theology of creation *ex nihilo*, such as the one developed by the Fathers of the Church²⁴⁹¹.

B.3 The world before the text: the impact on the reader:

²⁴⁸⁶ P. GIBERT, *Bible, mythes et récits de commencement*, p. 143.

²⁴⁸⁷ “*peto nate aspicias in caelum et terram et ad omnia quae in eis sunt et intellegas quia ex nihilo fecit illa Deus et hominum genus.*” 2 Mac 7, 28.

²⁴⁸⁸ J.A. GOLDSTEIN, *II Maccabees*, p. 307. Pierre Gibert considers both translations as possible. (i) “*Dieu a tout fait non à partir de ce qui était (déjà)*”, (ii) “*Dieu a tout fait à partir de ce qui n’était pas.*” P. GIBERT, *Bible, mythes et récits de commencement*, p. 143.

²⁴⁸⁹ J.A. GOLDSTEIN, *II Maccabees*, p. 307.

²⁴⁹⁰ P. GIBERT, *Bible, mythes et récits de commencement*, p. 143.

²⁴⁹¹ J.A. GOLDSTEIN, *II Maccabees*, p. 308. P. GIBERT, *Bible, mythes et récits de commencement*, p. 144.

The righteous Jews faces a dilemma; whether they obey or disobey they will face a severe punishment. For that reason they need instruction and consolation. The mother is the figure that points to the source of consolation: God the Creator will recreate them at their resurrection. The text has the objective of bringing hope to Jews in the Diaspora and encouraging them to be faithful to God's Law even in the middle of persecution. It proposes to imitate the brothers in Palestine who had preferred death to damnation.

C. The Hymn of Colossians 1,15-20.

C.1 The world behind the text

Today the majority of exegetes agree that Paul was not the author of this hymn²⁴⁹². Nevertheless, the unknown writer seems to be a member of the Pauline churches, possibly a collaborator, due to the theological proximity with the apostle. In terms of the date, if the letter was written meanwhile the apostle was alive, a possible time of redaction would be between 53 and 55 A.D. But, if the letter was written after the apostle's death then the date would be between 70 and 80 A.D.²⁴⁹³.

The text of Colossians 1,15-20 seems to be a liturgical hymn known already by the community. It seems too that the writer of the letter modified an original version by adding some elements, e.g., "the church" in v.18a and "through the blood of his cross" in v.20b²⁴⁹⁴. These additions enable the author to address some conflicts within the community²⁴⁹⁵.

C.2 The world of the text

The text is structured in two stanzas: 1,15a-17b and 1,18a-20c. There is a parallelism between both stanzas as we will show with the following table²⁴⁹⁶:

Table A.2 Colossians 1,15-20

Assertions	First stanza	Second stanza
Subject 1	15a: He is the image of the invisible God.	18b: he is the beginning
Subject 2	15b: the firstborn of all creation	18c: the firstborn from the dead
Ground of his supremacy	16a: for in him all things were created 16b: heaven and on earth, 16c: things visible and invisible, 16d: whether thrones or dominions	19: For in him all the fullness of God was pleased to dwell,

²⁴⁹² A. DETTWILER, *L'épître aux colossiens*, p. 290.

²⁴⁹³ A. DETTWILER, *L'épître aux colossiens*, p. 295.

²⁴⁹⁴ A. DETTWILER, *L'épître aux colossiens*, p. 295.

²⁴⁹⁵ The letter was addressed to a community that was in the middle of a conflict due to a "philosophy" (2,8).

²⁴⁹⁶ We adapt and transform David Hay's interpretation of the two stanzas. See D.-M. HAY, *Colossians*, p. 51.

	16e: or rulers or powers— 16f: all things have been created through him and for him.	
Preeminent	17a: He himself is before all things,	18d: so that he might come to have first place in everything.
Unification	17b: in him all things hold together	20a: and through him God was pleased to reconcile to himself all things,
Peace and stability	18a: He is the head of the body, the church	20b: whether on earth or in heaven, by making peace through the blood of his cross.

Separating the hymn into two stanzas enables us to note that the verses 15-17 refer to Christ's relation with the creation of the cosmos and its continuing existence²⁴⁹⁷. Meanwhile the verses 18 to 20 are about redemption: the Church, the cross, resurrection²⁴⁹⁸, reconciliation and peace, even when 18a fits the first stanza. The relationship and parallelism between the two stanzas shows the intention of the author to make explicit the connection between creation and redemption as unified in Christ²⁴⁹⁹.

The concept of "image" in 15a does not imply a figurative representation. It is a proclamation that Christ Himself reveals the invisible God²⁵⁰⁰. The second stanza (18b) affirms that Christ is the beginning in a parallelism with Genesis's similar affirmation about God. In addition, Christ is related to the Cosmos because He is the firstborn of creation and the firstborn of the new creation (through his resurrection). The fact that the expression of "heavens and earth" (16b) is in parallel with the affirmation that the fullness of God dwells in the Risen Christ (19) suggests a relation between the historical event of Christ and creation. Creation was not a remote act in a far-distant past. On the contrary, it continues in Christ's life, death and resurrection²⁵⁰¹.

The text also distinguishes Christ, the firstborn who is the image of God, from the rest of the world expressed by "all things"(17a). This suggests a distinction between Christ and creation. That counteracts any pantheistic interpretation²⁵⁰². However, Christ is present in creation because "all things were created in Him"(16a) and "in Him all things hold together"(17b). These two expressions (16a and 17b) suggest that Christ is a cosmic agent that assimilates two acts: the act of creation and the act of preserving and keeping up all created things²⁵⁰³.

The expression "before all things" may be interpreted as a priority in time (preexistence) or a priority in rank. The first one is sustained through the formula that Christ is the "beginning" (18b). The second interpretation is possible in light of the affirmation that Christ is the agent of

²⁴⁹⁷ D.-M. HAY, *Colossians*, p. 52.

²⁴⁹⁸ That is the interpretation of the firstborn from the dead in 18c. M. BARTH and H. BLANKE, *Colossians*, p. 209.

²⁴⁹⁹ M. BARTH and H. BLANKE, *Colossians*, p. 215.

²⁵⁰⁰ M. BARTH and H. BLANKE, *Colossians*, p. 195.

²⁵⁰¹ M. BARTH and H. BLANKE, *Colossians*, p. 199.

²⁵⁰² M. BARTH and H. BLANKE, *Colossians*, p. 199-200.

²⁵⁰³ M. BARTH and H. BLANKE, *Colossians*, p. 205.

creation (16a)²⁵⁰⁴. Finally the affirmation that Christ brings peace to heavens and earth is a clear sign that Christ has the messianic and divine power to achieve the eschatological and cosmic peace²⁵⁰⁵.

C.3 The world before the text: the impact on the reader:

The hymn encourages the reader vis-à-vis the spread Hellenistic view that the cosmos is a place of permanent conflict among its elements and powers²⁵⁰⁶. The hymn comes up against the idea of an unstable and fragile world with the conviction that the Cosmic Christ reconciles everything in Him²⁵⁰⁷.

D. The Prologue of John's gospel: Jn 1.

D.1 The world behind the text

The prologue (1,1-18) seems to be an early hymn originated in Johannine circles that was adapted to be the overture of the Gospel narrative²⁵⁰⁸. It refers to the pre-existence of the creative Word. Due to the fact that the rest of the Gospel does not make reference to this pre-existence, some experts think that the prologue was added after the rest of the Gospel was completed²⁵⁰⁹.

D.2 The world of the text

The objective of this section is not to expose all aspects of the Prologue's theology but only those that refer to creation. First of all, it seems that there is some parallelism between the Prologue of John and the first chapter of Genesis:

Table A.3 John 1 and Genesis 1,2-2,4a

John 1,1-18	Genesis 1,2-2,4a
Introduction (v. 1-2): “ <u>In the beginning</u> was the Word, and the Word was with God, and the Word was God. He was in the beginning with God.”	Introduction (v. 1-2): “ <u>In the beginning</u> when God created the heavens and the earth”
A. Light (v.4-5): “in him was life, and the life was the <u>light of all people</u> . The <u>light shines in the darkness</u> , and the <u>darkness</u> did not overcome it”	A. Light (v. 3-5): “Then God said, “Let there be <u>light</u> ; and there was <u>light</u> . And God saw that the <u>light was good</u> ; and God separated the <u>light</u> from the <u>darkness</u> .”
B. Creation through God's <i>Logos</i> (v. 3 and 10) “All things came into being through him, and	B. Creation through God's word. God's ten divine words: “ <i>God said</i> ” in verses 3, 6,

²⁵⁰⁴ M. BARTH and H. BLANKE, *Colossians*, p. 203-204.

²⁵⁰⁵ M. BARTH and H. BLANKE, *Colossians*, p. 217.

²⁵⁰⁶ A. DETTWILER, *L'épître aux colossiens*, p. 296.

²⁵⁰⁷ M. BARTH and H. BLANKE, *Colossians*, p. 194.

²⁵⁰⁸ R. BROWN, *An Introduction to the Gospel of John*, p. 298.

²⁵⁰⁹ P. PERKINS, *The Gospel according to John*, p. 943-944.

without him not one thing came into being" (1,3). "He was in the world, and the world came into being through him" (1,10).	9, 11, 14, 20, 24, 26, 28 and 29.

The expressions "in the beginning", "word", "lights" and "darkness" and even the word "*Logos*" show an intentional overlap between Gen 1 and John 1. John wants to stress that the *Logos* was in the origin of creation. This origin does not refer to a temporal beginning but to a principle or fundamental origin. This *Logos* has three divine activities: creation (1,1-5), revelation (1,5.9-12.18) and salvation (1,12-14.16-17)²⁵¹⁰. In terms of the creative activity, the *Logos* plays a fundamental role in the "coming into being of all things". The *Logos* of God refers to the Hebrew Bible's notion of God's creative word. The verb used in the expression "all things came into being through him" is *egeneto*, which is used for creation in Gen 1 in the LXX version²⁵¹¹. In conclusion, the Prologue transfers God's creative activity to the pre-existing Christ. The *Logos* is the Creator-Agent, but this is not expressed in the categories of a platonic demiurge.

However, there are some differences between both texts that point to a development of the Prologue with respect to the first chapter of Genesis. The light was the first element in the creative act of God²⁵¹². In the Prologue, the light is integrated in the revelation of the *Logos*. Light and darkness in the Prologue and in the whole Gospel have a symbolic meaning of the opposition between the act of welcoming the *Logos* and the act of rejecting it.

Furthermore, there are other parallelism between the Prologue and the notion of Lady Wisdom²⁵¹³ as shown in the following table.

Table A.4 John 1,1-18 and Wisdom Literature

John 1,1-18	Wisdom Literature
Jesus Christ is the Word of God.	"I came forth from the mouth of the Most High, and covered the earth like a mist. (Sirach 24, 3).
"In the <u>beginning</u> was the Word, and the Word was with God, and the Word was God. 2 He was in the beginning with God." (Jn 1, 1-3)	"The Lord created me at the <u>beginning</u> of his work, the first of his acts of long ago. Ages ago I was set up, at the first, <u>before the beginning of the earth.</u> " (Prov 8,22-23). "I will tell you what wisdom is and how she came to be, and I will hide no secrets from you, but I will trace her <u>course from the beginning of creation</u> " (Wis 6,22)
And the Word became flesh and lived among us, and we have seen his <u>glory</u> , the <u>glory</u> as of a father's only son, full of grace and truth. (John 1, 14).	"Whoever holds her fast inherits <u>glory</u> , and the Lord blesses the place she enters." (Sirach 4, 13). "For she is a breath of the power of God, and a pure emanation of the <u>glory of the Almighty</u> ; therefore nothing defiled gains entrance into her." (Wis 7,26)
"in him was life, and the life was the <u>light</u> of all people. 5 The <u>light shines</u> in the darkness, and	"I loved her more than health and beauty, and I chose to have her rather than <u>light</u> , because <u>her radiance never</u>

²⁵¹⁰ J.-A. DU RAND, *The Creation Motif in the Fourth Gospel*, p. 39.

²⁵¹¹ J.-A. DU RAND, *The Creation Motif in the Fourth Gospel*, p. 39-40.

²⁵¹² P. GIBERT, *Bible, mythes et récits de commencement*, p. 265.

²⁵¹³ See R. BROWN, *An Introduction to the Gospel of John*, p. 261.

the darkness did not overcome it.” (Jn 1, 4-4)	<u>ceases.</u> ” (Wis 7,10). She is <u>more beautiful than the sun</u> , and <u>excels every constellation of the stars</u> . Compared with the <u>light</u> she is found to be superior, (Wis 7, 29)

D.3. The world before the text

There is a clear affective narratological response: the writer seeks to affect the reader by showing God’s commitment through the *Logos*’s mission who brings light and a new life to those who receive Him. It is an invitation to become children of God through the reception of Christ.

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