

Model versus Type, the Shift of Modernism

Gérald Ledent, Olivier Masson

'It (type) is used as a synonym of model, although there is a difference between them quite easy to understand. The word type presents less the image of a thing to copy or imitate completely than the idea of an element which ought itself to serve as a rule for the model. (...)The model as understood in the practical execution of the art, is an object that should be repeated as it is; the type, on the contrary, is an object after which everyone can conceive works of art that may have no resemblance. All is precise and given in the model; all is more or less vague in the type.'

Quatremère de Quincy, Antoine Chrysostome, 1832¹

1_Introduction

Modernist housing is the most significant share of today's collective housing. Dwelling production has never reached such proportions in the history of mankind. Yet, if it is considerable, it remains very controversial and architectural reviews often speak of a housing crisis. *Pruit Igoe* in Saint-Louis, *Corviale* in Rome, the *Grands Ensembles* in France, ... are paradigmatic examples of this controversy. Buildings often age badly and their architecture is repeatedly linked to social failure. Once enjoying unanimous critical acclaim, most of them fail the test of time.

Martin Heidegger (1951) believes that this dwelling crisis is not a problem of building production. According to him, the human home has not been thought out of dwelling. Modernist thoughts on housing should thus be understood to address the housing plight. It enables us to learn how those dwellings can be inhabited, transformed and re-invested if necessary. Furthermore, this knowledge provides the tools to build on but also to pursue this pioneering experience.

Modernism affects a much larger spectrum than housing, such as institutions, city planning, ... However, our present study confines its scope to the specific range of collective housing.

Our intention is to identify the core of architectural modernism. Rather than the obvious formal revolution, the *modus operandi* in building design consists in a dramatic shift. It evolves from implicit types to reproducible building models. This rupture is probably the most significant feature of modernist architecture.

After defining both concepts, we shall try to understand how modernist theories have indeed modified the means of architectural design. Ernst May's *Siedlungen* in Frankfurt am Main will provide an explicit illustration of this (r)evolution.

2_Type and model

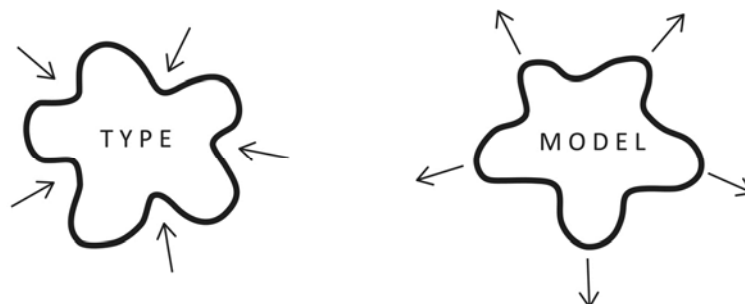
2_1_Characterization

The ambition of this study is to produce a critical tool clarifying the rupture of modernist architecture. It does not involve an etymological reconstruction of the concepts of type and model since authors such as Giulio Argan (1995), Philippe Panerai

¹ QUATREMERE DE QUINCY, A. C. 1832. *Dictionnaire historique d'architecture*, Paris, A. Le Clere. p.629 (author's translation)

(Demorgon et al., 2009), Anthony Vidler (1976, 1977), ... have investigated the issue of type in remarkable depth.

Type and model are both architectural conception procedures. Their purpose is to translate human needs into physical places to dwell. As design tools, they allow the emergence and transmission of built structures. Type is an abstract collection of characteristics that defines a particular group. Model is a formal – drawn – solution concluding a theoretical optimization journey. It serves as an example to be imitated. Type and model can be described through various features. A first parallel between the two ideas can be drawn regarding their relationship to function. Indeed, as Giulio Argan (1995) points out, type is not necessarily linked to a specific program. While this statement is probably a little restrictive, it provides a useful guideline. In other words, in typological schemes, programmatic issues are overwhelmed by other concerns such as sociocultural uses, customs and aesthetic sensibility. Program on the contrary, is essential to model. It nourishes it and makes it its fundamental core². The emergence of the two notions is dissimilar. Whereas type develops from a long sedimentation of uses and techniques (Demorgon et al., 2009), model relies on an utopian ideal. Model is created *ex novo* as a standard. Chronologically speaking, type arises *a posteriori*. Indeed, it can only exist once several buildings have been erected presenting formal or programmatic similarities. Time is therefore an imperative item for things to settle. Being idiosyncratic, model is a concept and it depends on the structures of creation. For that reason, it is a given, prior to building conception - *a priori*. Type is endogenous; it is a collectively created means. On the other hand, model is exogenous. It is a creation in itself and involves authorship. Formally speaking, type does not endorse a figure. It presents itself as a common root. It can be regarded as a grammar, a limited number of principles that are necessary. It is abstract - an *archetype* - and never a physical structure. On the contrary, model is a *prototype*. It is reproducible since it is in itself an objective concretion. Consequently, models can be drawn and built directly. Moreover, a distinction can be made in the resistance of both concepts to their contexts. Type is adaptable. It can vary and depends on the geographical, sociological and cultural contexts in which it is built. Model, on the other side, is inflexible. Isotropic, it does not respond to external circumstances. Instead, it molds its environment according to its own articulations.



Finally, there is a difference in the transformation process, from human needs into spatial structures. Type operates by composition. It orchestrates its basic principles according to circumstances. Conversely, reproduction is the procedure of the model.

² Françoise Choay speaks of model as a plain consequence of Alberti's *necessitas* (i.e. the basic human needs (shelter) and the physical structure). CHOAY, F. 1980. *La règle et le modèle: sur la théorie de l'architecture et de l'urbanisme*, Seuil.

The main characteristics of the two notions can be presented in a summary table. It is a reduction that could lead to stereotypes. Yet, by giving us a clear vision of the two concepts, it enables us to use them properly.

TYPE		MODEL
autonomous	PROGRAM	dependent
sedimentation	ORIGIN	idea(l)
<i>a posteriori</i>	TEMPORALITY	<i>a priori</i>
anonymous	AUTHORSHIP	personal
abstract - archetype	CONSTITUTION	real - prototype
alterable	RESISTANCE	dogmatic
composition	PROCESS	reproduction

2_2_Modus operandi

Type and model have been defined as architectural procedures translating human needs, at various levels, into spatial systems. They perform as means of a process that generates three-dimensional constructions from various kinds of human motivations.



In this basic formula, the *modus operandi* varies significantly with the means – type or model - at stake. The differences can be noticed both on the terms – needs / means / artifact - as on the articulations → between the terms.

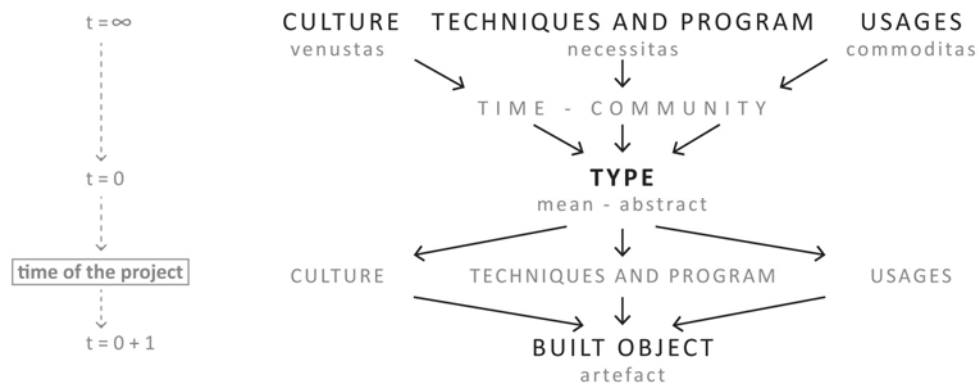
Regarding human needs, François-Joseph Ribart de Chamoust (Vidler, 1977, p.441), defines type as an ‘*attempt of man to master nature, render it propitious to his needs, suitable to his uses, and favourable to his pleasures*’. When stating those basic human requirements, Ribart de Chamoust undoubtedly refers to Alberti’s triad, *necessitas* (necessities), *commoditas* (uses) and *venustas* (pleasures). The permanence of the triad³ in the history of architecture allows us to characterize once again human needs in such a way. Once this description of human needs is enacted, the *modus operandi* of the two concepts can be depicted according to the characteristics listed above.

Type responds to three kinds of needs. As for *necessitas*, it has been stated that type is precisely an aggregated response to techniques and functions. On the level of *commoditas*, it is indeed altered by the social uses, customs and traditions of the society it emerges in. Finally, through the means of culture, it is influenced by human sensibility. This last feature can be classified in the *venustas* register.

The articulation between needs and means is sedimented in time. As pointed out, the constitution of a specific type from a specific set of needs occurs *a posteriori*. It is an anonymous answer from a particular community and it does not involve authorship. The means itself – type – is abstract. It is never a constructed figure.

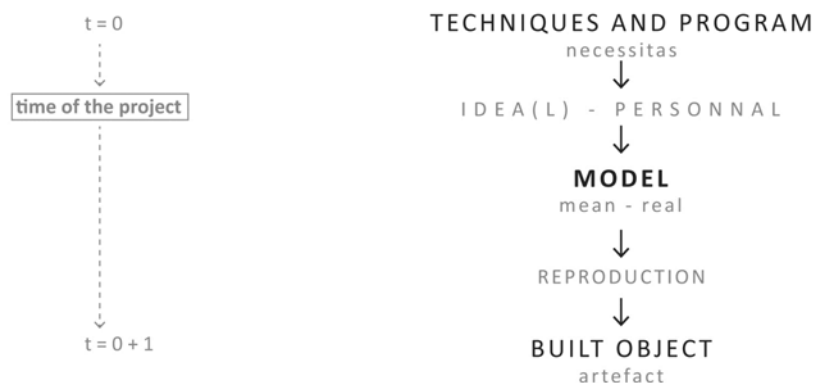
³ The threefold partition of human needs remains vivid, from Vitruvius’ *firmitas – utilitas – voluptas* to Leroy Gourhan’s *milieu techniquement efficace - cadre au système social – mise en ordre*.

The second transition leading from type to *artefact* is also influenced by the circumstances of a given time and place. In architecture, it is the time of the project. Even though a particular type emerges from needs of the past, the translation through composition from type to artefact is able to adapt to the needs of the present time.



Model behaves quite differently in the production of artefacts. The needs it attends to are largely confined to functions and techniques as it is closely related to programme. Hence, *necessitas* is overstated and it acts as a vacuum on the other two human needs. Moreover, the articulation between needs and means is characterized by its immediateness and keen authorship. Architecturally speaking, this is where the project takes place. It is strongly marked by utopian ideal.

The transition between means and artefact is even more direct. In a dogmatic system, the built object is the sheer replica of the model.



Type is nurtured by external influences and its scheme is highly branched. In the case of model, the procedure is much more straightforward, leaving little room for variation. In architectural terms, the time of the project is very different from one *modus operandi* to another. While with type, projects appear with the circumstances, with model they exist prior to context and are unaffected by it.

3_On the modernist rupture

3_1_Modernity

Modernity⁴ can be described as the tension between rationalization and subjectivation or individuation (Touraine, 1995). Reason and subject are the main figures of modern

⁴ Jürgen Habermas refers to several modern ruptures (the end of Roman times, Charlemagne, Renaissance (i.e. the beginning of the modern times), the Enlightenment, ...). Modernity, as a modern rupture, is born with the age of the machine and the industrialization. HABERMAS, J. 1991. *Modernity: an unfinished project*. In: HOUSE, P. (ed.) *Critical Theory, The Essential Readings*. New York.

ruptures. While rationalization develops significantly in the Renaissance and the Enlightenment, the spirit of the Reformation lies in individuation. In order for a modern ideology to be stable, the two figures should coincide (Touraine, 1995). The metanarrative of science (Lyotard, 1994) is the ideological ground of rationalization. Science arises as an alternative to religions and eliminates any idea of external power. The Promethean supremacy of science is stated. It is deemed to solve everything and lead to progress. Mankind is thought as part of a biotechnical structure (Colquhoun, 1995). Within rationalization, human needs are fulfilled through the regulation of a technical system.

Subjectivation, in contrast, places man at the centre of the world. He is entitled to singular thinking and detaches himself from his community and family. By definition the subject operates and thinks as an autonomous actor.

As Jürgen Habermas (1991) points out, modernism is an *'unfinished project'*. Indeed, rationalization has dramatically overwhelmed individuation in this specific modern rupture. Although rationalization should not be set aside, since there is no modernity without rationalization, it ought to be balanced with its complement, subjectivation. Nevertheless, modernist ideology consists in a complete *disequilibrium*. It can be reduced to the mere principles of rationalization.

3_2_Modernist ideology in architecture

In the 19th century, for the first time in architecture history, there is a complete depersonification of the future user. While being the case with most buildings, it is evident in the field of collective housing. Until then, architects knew who they were building for and could cater for their specific needs. With industrialization, collective – mass – housing becomes a major issue in western societies. To handle the absence of a concrete client, architects turn to modernist theories. Rationalization is almighty.

Driven by an unprecedented fascination for hygiene, machines and science, modernist creeds leave little room for differentiation, variety and irrationality. Subjectivation is set aside. The supremacy of reason initiates a major rift in architectural theory.

As a consequence of rationalistic thinking, human needs are regarded as universal. Reason, relying on science and techniques, provides a holistic structure for the human environment. It is a cosmic order. It does not allow variation. Man is no longer thought of as an individual but as a standard, the modern man. The revolution is particularly acute in the field of collective housing. It is the reason why most of the CIAM⁵ are devoted to this specific issue. From then on, collective housing becomes a heteronomous production for those who use it.

In addition, with the rise of reason, architecture ideology becomes profoundly functional. According to modernists, as residential functions become more and more intricate, the complexity of those new needs can only be resolved by the means of rationalization. The balance between form and function becomes uneven and the maxim *'form follows function'* turns out to be the common rule of production.

'The essence of the functional doctrine of the Modern Movement was not that beauty or order or meaning was unnecessary, but that it could no longer be found in the deliberate search for final forms.(...) Form was merely the result of a logical process by which the operational needs and the operational techniques were brought together.' (Colquhoun, 1995, p.252)

⁵ Congrès Internationaux d'Architecture Moderne.

3_3_Modernism, model

The active ideology of modernist housing theories rests on that of the model. It is quite explicit in terms of needs it attempts to respond to. By essence, reason and science refute any transcendental power⁶. Likewise, tradition, usage and culture are excluded. They are perceived as non-objective and can no longer be ruling human needs. On the contrary, modernist ideology presumes that reason can regulate everything. Dwelling, for instance, is considered a mere function along with work, recreation and transport. Modernist philosophy provides mankind with a technical solution for both structural and basic human needs (shelter). Rationalization does not address social practice and aesthetics. The latter - *venustas* - is no longer autonomous but a plain consequence of functions and mechanical solutions. On the other hand, usages and social relationships – *commoditas* - are thought of in terms of statistics. Human beings are passive and their social needs are reduced to functions and programs. In conclusion, in terms of human needs and before anything else, rationalist ideology offers essentially an answer to *necessitas*.



The translation of alleged human needs into means of production is also similar to the model concept. Despite its asserted omnipotence, biotechnical determinism remains unable to resolve everything. A functional analysis leaves a part of indeterminate, a number of equivalent solutions. According to modernism, the subjectivity of traditions and collective sensibility fostered in time – active in a *type* process - is in contradiction with rational ideology. They are not operative anymore and cannot operate as *media* converting needs into means of creation. The void left by traditions is filled by intuition and ideal which are, by nature, personal and dated in time.

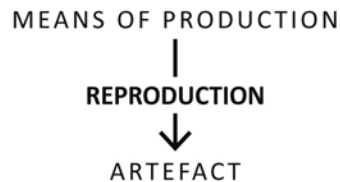


Both in terms of needs - human necessities - and transition medium - intuition and ideal - the ideology of modernism is easily compared to a model procedure. The means of modernist production themselves can be described as prototypes. They are crafted as tools. They are materialized and strictly defined. They intend to give a definite answer to human necessities. In the field of housing, the solutions brought up by the second CIAM in Frankfurt am Main (1929) and '*Die Wohnung für das Existenzminimum*' lead to very specific and time-related solutions. All domestic functions are analysed in order to precipitate into their most appropriate layout. Composition itself follows the rules of scientific diagrams in order for the *machine à habiter* to operate better.

MEANS OF PRODUCTION = PROTOTYPES

⁶ However, modernist architects are controversial. For instance, one can witness Le Corbusier's bounds to mysticism. Indeed, La Tourette, one of his mostly praised buildings, is also one of his most religious ones.

An analysis of modernist production completes the link between modernist and model processes. The translation of means of production into a spatial structure shows little signs of adjustment to either culture, social needs or topographic amenities. City schemes by Le Corbusier or Ludwig Hilberseimer clearly follow that ideology. In the age of the machine and industrialization, architecture functions mainly in a process of reproduction. There is no distinction between the means and the produced artefact.



The model process is very operative regarding institutional buildings which are meant to be built only once and act as references. They are a clear creation of a centralized power corresponding indeed to the welfare state of modernism. Yet, in the field of housing, mere reproduction is awkward for it allows neither variety nor difference. Françoise Choay (1980) proposes a similar distinction as she compares inaugural texts in architecture. She distinguishes two types of theories, the rule and the model, in a comparison between Alberti's *De re Aedificatoria* and More's *Utopia*. Choay enunciates a collection of criteria that define models: authorship, description of an ideal society, critique of the present society, existence of a theoretical scene elsewhere on earth (which can be interpreted as a *tabula rasa*) and invariability in time. Those criteria provide another evidence that modernist theories can definitely be located in the model category. It is the case, for instance, with *La Charte d'Athènes* (Le Corbusier, 1942)⁷. The text is rhetorical and clearly autographed. It describes a new society and believes historical space to be obsolete. It is a vivid critique of traditional pre-modern cities. It argues for better places for leisure and housing at the expense of the old cities. Finally, as an expression of scientific metanarratives, Le Corbusier believes that architecture should respond to an immutable cosmic order providing air, green and light for everyone. Accordingly, his scheme does not allow evolution in time. Modernist theories have set aside type as design method by rejecting the irrational principles of tradition, culture and individuation. They are replaced by intuition and utopian ideal. This operates the shift from type to model.

3_4_Modernism and type

The distinction between type and model is never wholly Manichean since modernist pioneers use time-tested typologies in their quest for explicit models. Besides, on occasion, the ratio between type and model stays even in a project. It is the case, for instance, in *Diar el Mahçoul* by Fernand Pouillon or *New Gournà* by Hassan Fathy. The 9th CIAM shows reactions to rationalization in architecture. Interest in the human subject rises again through a growing attention to psychoanalysis. Roland Simounet of the *Groupe d'Alger* states that architecture can no longer be regarded as a response to functions but should be considered as a cultural act (Tesoriere, 2006). By drawing the plans of Mahieddine slums and using those as a means of building composition, he revisits type *modus operandi*. *Groupe Maroc* will follow the same idea. Its architects

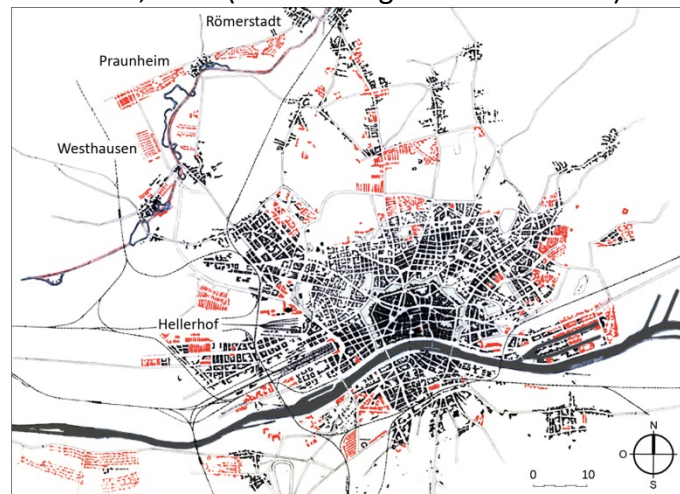
⁷ Published in 1942 by Le Corbusier, it states the modernist views of the 4th CIAM on city development.

depict real residents in front of their homes instead of collages of idealized people. Those reactions are still timid but they will trigger a renewed interest in type⁸.

4_Composition – Reproduction

Although the distinction between model and type can be identified in early treatises⁹, the shift has only been radical in housing production since the late 19th century. The *unité d'habitation* by Le Corbusier is undoubtedly a paradigmatic case of model *modus operandi*. Its genesis can be traced back to 1907 with the architect's visit to the Galluzzo monastery in Firenze. From there, the project develops as a context-free programmatic research. By 1935, the scheme is complete (Corbusier, 1935). According Le Corbusier, the design can – and will - be carried out as such with little variation. While the *unité d'habitation* is illustrative in the case of model processes, Ernst May's interventions in Frankfurt provide an example of type and model concepts.

Figure 1 Frankfurt am Main, 1933 (www.stadtgeschichte-ffm.de)



The *Siedlungen* of May in Frankfurt am Main are a clear illustration of the modernist evolution. It is a large-scale housing – 15 000 units - development program built from 1925 to 1930 during the golden age of the Weimar Republic. May's intention was to create a new type of living, outside the old city of Frankfurt. Within May's schemes the process will gradually shift from a great proportion of type to a high ratio of model.

4_1_Morphology

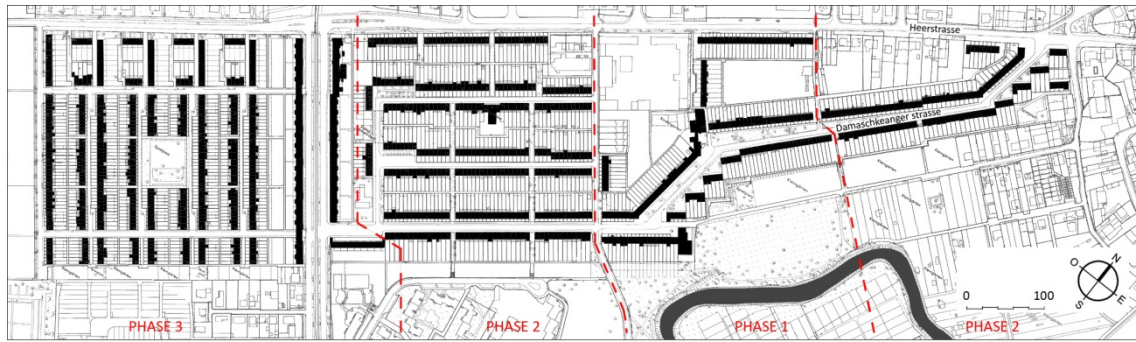
The results of model conception can be illustrated in May's housing projects both in their morphological and typological articulations. For the former, the distinction between the construction phases of *Siedlung Praunheim* is very revealing. The settlement was built in three stages from 1926 to 1929.

May's *Siedlungen* are created according to the *Trabantenprinzip* (Grassi, 1983), a dispersed development around the old city of Frankfurt. In a clear functional planning, the settlements are built within a reasonable distance of the old city. However, they do not relate to it formally. This gives a first hint of the rupture with a classic type process.

⁸ In the 1960s, type is reintroduced used by Italian urban planners, Muratori, Caniggia, Rossi, Aymonino, ... as a tool for analysing and regenerating cities. DEMORGON, M., DEPAULE, J.-C. & PANERAI, P. 2009. *Analyse Urbaine*, Mercuès, Parenthèse. pp. 116-120

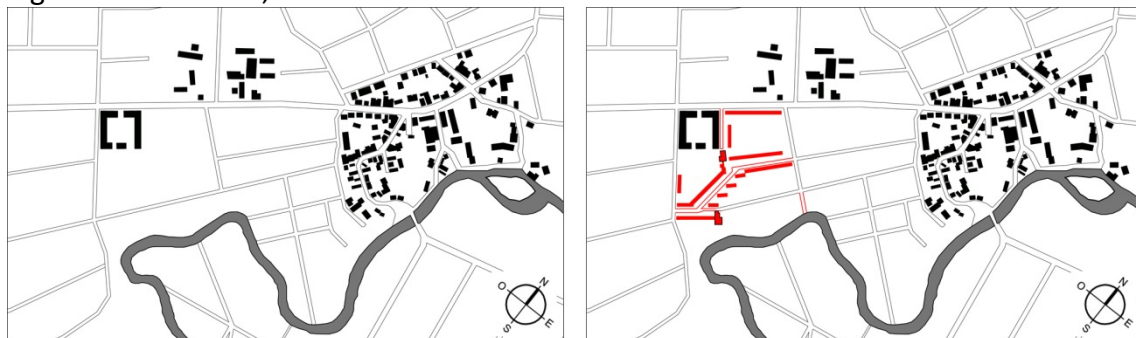
⁹ J.N.L. Durand in the early 19th portrays institutional buildings. He clearly illustrates prototypes meant to be reproduced. Others, such as E. L. Boullée, C.N. Ledoux, ... have a very similar kind of production.

Figure 2 *Siedlung Praunheim* (Dreyse, 1988)



However, in the first construction phase, the *Siedlung* still relates to the old village of Praunheim. As far as the former network goes, main roads are acknowledged. They are used as part of the composition. To the North, row houses are built on Heerstrasse. Parallel to this road, a new street, Damaschkeanger Strasse prolongs an older trail. It is bent to collide with a southern trail that becomes the border between private gardens and a new park on the Nidda river. East and west paths are maintained. The former is extended through the park to the river. The orphanage – an old farm structure - on the north road is integrated in the morphological conception. The river itself, thanks to the slope, has a role in the composition since almost all houses are directed to it. Finally, specific articulations on the site are attended to with specific programs or structures. A church – originally planned as a community centre – terminates the Damaschkeanger Strasse perspective. A restaurant – the Neue Adler – creates a hinge between the park and Am Ebefeldstrasse. Smaller articulations are also acknowledged such as changes in geometry that foster a specific kind of housing with shops on the ground floor. At the intersection of the main roads with the perpendicular footpaths, the houses are also different as they take advantage of their corner positions.

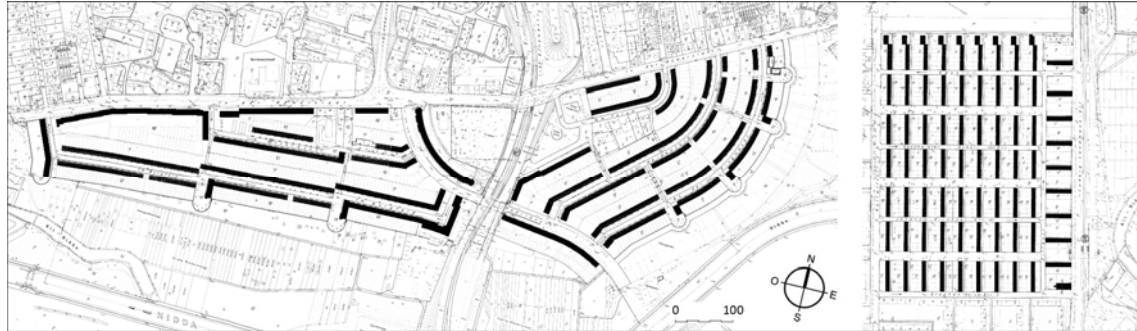
Figure 3 Praunheim, 1904 - 1926



In the third phase, although very close timewise, a lot of things have changed. The street network runs no longer east-west but north-south. Therefore, unlike the first phase, there is only one sort of housing on either side of the streets. The roads are narrower too. But there is a counterpart: a central garden and footpaths running in the perpendicular direction. In this phase there is no prominent building nor any specific articulations. All the buildings are the same apart from smaller houses on Heerstrasse. This last stage looks like the rehearsal of *Siedlung Westhausen*. Indeed, the settlement is designed as an autonomous fragment. It does not conform to exterior context such as road networks, hydrography – the Nidda river is very much absent in this design and

it is even more obvious in Westhausen despite its closeness - nor does it acknowledge thoroughly its own limits with specific building accents. Even though, the plot is flat on this edge of Praunheim, design procedures ignore topography as Westhausen proposes a similar answer - with more refinement – but on a sloping site.

Figure 4 *Siedlung Römerstadt*, 1927 vs *Siedlung Westhausen*, 1930 (Dreyse, 1988)



May's settlements display great changes in morphological composition in a very short time. Not only do they not relate to the city anymore, but they gradually become autonomous organisms that ignore external circumstances. In this gradual shift, *Siedlungen* Römerstadt and Westhausen are at two opposite ends. Römerstadt mainly obeys the traditional type regarding circumstances. Composition principles openly exploit topography such as the slope and the relation to the river. The settlement is rooted in the landscape it emerges in. Westhausen, contrariwise, could be built anywhere and pays little respect to its specific location.

4_2_Typology

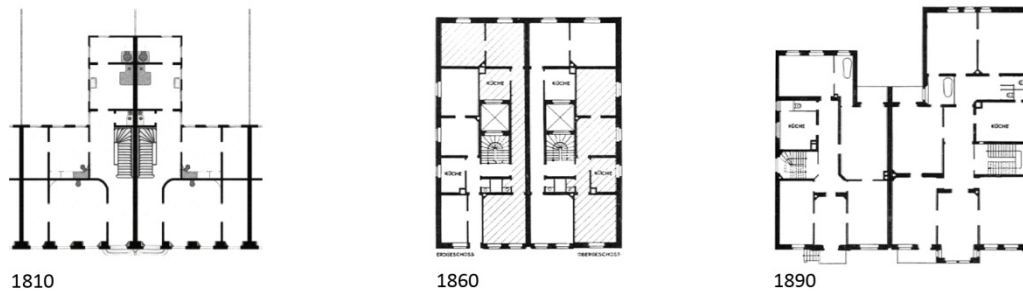
Concerning housing plans, modernism sees dwelling as the answer to a programmatic equation. It is the case with Otto Haesler's analyses (Teige, 2002). His equations unmistakably create housing units according to the number of tenants and their income level. Moreover, housing is conceived in terms of good or bad. With the rise of modernism, dwelling can be reduced to a mere diagram (fig. 6).

Figure 6 Alexander Klein, housing diagrams (Bauer, 1934)



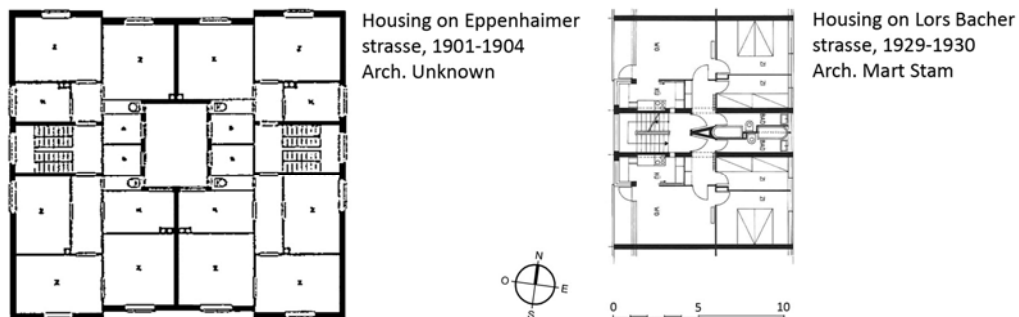
In Frankfurt, traditional typologies (fig. 7) evolve in the 19th century. Whilst façade openings remain systematic in order to respond to urban order rather than interior needs, collective housing typologies change dramatically. The *Bauwich* (Kaufmann, 1927) – space between two neighboring buildings - becomes mandatory in 1845, introducing a new grammar element in collective housing. The staircase shifts to the side, dividing the building into front – street – rooms and rear rooms. As a consequence, on one side of the streets, the main rooms are poorly sun oriented since the main streets in Frankfurt run from east to west.

Figure 7 Housing figures in Frankfurt (Kaufmann, 1927; Hunscher and Mohr, 1995)



In *Siedlung Hellerhof*, two very different public housing developments can be found. They were built 30 years apart. The differences can be traced back within the type-model couple. Indeed, the first settlement produces buildings relating directly to usual Frankfurter typologies: detached housing blocks, *Bauwich*, pitched roofs, of colourful brick patterns, high storey heights, ... Morphologically speaking, the buildings fit utterly in the traditional city fabric. Thirty years later, May's urban arrangement – built by Mart Stam – is very different. He produces a series of parallel building slabs. In this pattern, the architect provides every housing unit with the same amount of sun. There are no openings at the end of the slabs for instance. Housing everyone the same way is the starting point of the design. Moreover, the buildings' expression is very different from the first settlement and usual Frankfurter architecture: flat roofs, smooth façades, no colours and low ceiling heights. The latter operation draws its essence in values such as light, air and green rather than the traditional construction of the city.

Figure 8 Housing types in *Siedlung Hellerhof* (Dreyse, 1988; Heynen, 2000)



On a typological point of view, the first settlement proposes identical openings for all the major rooms and whatever orientation they face. In Stam's design, every room has a window appropriate to its orientation and function. But, as Hilde Heynen points out (Heynen, 2000), the major difference between the two schemes lies in the size of the rooms. In the first dwellings, the main spaces have approximately the same size. Architecture does not decide, for instance where the bedroom or the living room should be located. In Stam's design, and according to May's '*ration Gehäuse*', the prospect is entirely different since every room is designed to fit exactly its functional needs. In this case, it would be impossible for rooms to switch functions. May's designs show a gradual shift from types to models. However, type and model are theoretical and can never be expressed purely. Both concepts are co-present and their importance is just a matter of proportion. Indeed, while there is a greater proportion of type in the earlier schemes, model takes the upper hand in later schemes.

5_ Consciousness

Architectural modernism can be understood in the gradual shift of design *modus operandi*. Type and model are two opposite milestones of this conceptual rupture. There is no reason to judge one better than the other. Yet, the awareness of this rupture is valuable to grasp modernism.

In the field of collective housing, although model cannot be denied qualities, it is often mistaken for two of its avatars, product and monumentality. The former drifts from model but detaches itself from the original ideal. Product operates as a system without any ideological background. Therefore, ideal-free, it can be corrupted and adapted to a creed that does not relate at all to the one of its initial model.

Monumentality, on the other hand, was reserved for public buildings. With modernism, housing is erected as a monument. It creates a morphological confusion since monumentality makes public a private dimension.

The major opposition between type and model resides in the fact that type allows variety and change. Type acknowledges context, history and culture as a source of meaning. The depth that can be found in those values is no longer resourceful with the exclusion of typologies by modernist theories. Model finds its essence in the moral values of the present time. But the submission to those values becomes critical when they are no longer up to date.

Still, architecture is an ever '*unfinished project*'. It has the ability to evolve whatever its ideological origin. But the consciousness of its instituting principles is necessary in order to allow it to change and evolve.

References

- ARGAN, G. C. 1995. *On the Typology of Architecture*. In: NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture*. New York: Princeton Architectural Press,.
- BAUER, C. 1934. *Modern Housing*, Cambridge, The Riverside Press.
- CHOAY, F. 1980. *La règle et le modèle: sur la théorie de l'architecture et de l'urbanisme*, Seuil.
- COLQUHOUN, A. 1995. *Typology and design method*. In: NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture*. New York: Princeton Architectural Press,.
- CORBUSIER, L. 1935. *La ville radieuse*, Éditions de l'architecture d'aujourd'hui.
- DEMORGON, M., DEPAULE, J.-C. & PANERAI, P. 2009. *Analyse Urbaine*, Mercuès, Parenthèse.
- DREYSSE, D. W. 1988. *Les cités de Ernst May: guide d'architecture des cités nouvelles de Francfort, 1926-1930*, Frankfurt am Main, Dieter Fricke.
- GRASSI, G. 1983. *L'architecture comme métier et autres écrits*, P. Mardaga.
- HABERMAS, J. 1991. *Modernity: an unfinished project*. In: HOUSE, P. (ed.) *Critical Theory, The Essential Readings*. New York.
- HEIDEGGER, M. 1997. *Bâtir Habiter Penser. Essais et conférences*. Gallimard.
- HEYDEN, H. 2000. *Architecture and Modernity: A Critique*, Cambridge, The MIT Press.
- HUNSCHER, M. & MOHR, C. 1995. *Wohnen in Frankfurt am Main: Wohnformen, Quartiere, und Städtebau im Wandel der Zeit*, Frankfurt am Main, Campus Verlag.
- KAUFMANN, E. 1927. *Frankfurter Kleinwohnungstypen*. *Das Neue Frankfurt*, 113-118.
- LE CORBUSIER 1957. *La charte d'Athènes*, Paris, Points.
- LYOTARD, J.-F. 1994. *La condition postmoderne*, Lonrai, Les éditions de Minuit.
- QUATREMERE DE QUINCY, A. C. 1832. *Dictionnaire historique d'architecture*, Paris, A. Le Clere.
- TEIGE, K. 2002. *The minimum dwelling*, Cambridge, MIT Press.
- TESORIERE, Z. 2006. *De l'habitat au logement. Le logement et l'habitat comme objet de recherche*. IPRAUS / Université de Palerme.
- TOURNAINE, A. 1995. *Critique de la modernité*, Librairie générale française.

VIDLER, A. 1976. The Third Typology. *In*: HAYS, M. K. (ed.) *Oppositions*. The MIT Press.

VIDLER, A. 1977. The idea of type. The transformation of the accademic ideal, 1750-1830. *The Oppositions Reader*, 437-459.