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XXXIII

Power, Religion, and Wisdom. Orthodoxy and Heterodoxy in al-Andalus and Beyond



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126 · M. Dapsens, *Les* Masā'il Khālid li-Maryānus al-rāhib *dans leurs versions arabe et latine*. Éditions critiques et traductions, 2024

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Orthodoxy and Heterodoxy
in al-Andalus and Beyond



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TABLE OF CONTENTS

vii *Acknowledgments*

POWER, RELIGION, AND WISDOM.
ORTHODOXY AND HETERODOXY
IN AL-ANDALUS AND BEYOND

3 Godefroid de Callataÿ – Sébastien Moureau, *Introduction*

Part I
ANDALUSĪ CHANNELS OF TRANSMISSION

17 Miquel Forcada, *Rational and More Than Rational Sciences in the Umayyad Caliphate: Dialogue, Debate, and Confrontation*

65 Paul Walker, *Intense Rivalry, Sectarian Secrecy, and Doctrinal Recourse to Reason: Obstacles to the Fourth-/Tenth-Century Transmission of Ismāʿīlī Thought to al-Andalus*

Part II
CONTEXTUALIZING THE ORIENT

91 Travis Zadeh, *Tracing the Sorcerer's Circle: Demons, Polysemy, and the Boundaries of Islamic Normativity*

155 Regula Forster, *To What Extent Is Alchemy an Esoteric Science? A Case Study of Ibn Arfaʿ Raʾs (fl. sixth/twelfth century)*

179 Pierre Lory, *Jābir b. Ḥayyān's Alchemy, Ibn ʿArabī, and the Reading of the Book of Nature*

207 Elaine van Dalen, *Who are the Sethians in the* Nabatean Agriculture?

Part III

AROUND THE CORPUS OF THE IKHWĀN AL-ṢAFĀʾ

249 Janne Mattila, Fihrist *of the* Rasāʾil Ikhwān al-Ṣafāʾ: *Textual Variants and Their Relation to* al-Risāla al-Jāmiʿa

275 Carmela Baffioni, *The Andalusī Reception of Ontological Options and Cosmological Descriptions in the Ikhwān al-Ṣafāʾ and* al-Risāla al-Jāmiʿa: *A Case Study*

301 Gabriele Ferrario, *In a Hidden Place: Traces of Bāṭinism in the Fragments of the Cairo Genizah*

335 Laura Tribuzio, *Restoring Harmony through the Propaedeutic Science of Music: A Reconsideration of the Brethren of Purity's Epistle on Music and Its Relation with the Epistle on Proportions*

369 Nader El-Bizri, *The Mathematical Orders of Architecture: Seeing Madīnat al-Zahrāʾ from the Perspective of the Ikhwān al-Ṣafāʾ*

Part IV

TWO NEWLY EDITED TEXTS ON MAGIC

393 Liana Saif – Charles Burnett, *The* Book on Attracting the *Rūḥāniyya* of Every Animal: *A Pseudo-Aristotelian Hermetic Text*

421 Godefroid de Callataÿ – Sébastien Moureau, *An Arabic Version of Qusṭā b. Lūqāʾs* De Physicis Ligaturis?

Part V

KNOWLEDGE ORGANIZATION

489 Godefroid de Callataÿ – Rémy Baranx – Hubert Naets, *M*-Classi: *A New Digital Tool for the Classification of the Sciences, in Islam and Beyond*

INDEXES

513 *Index of Names of People (only ancient)*

519 *Index of Titles of Works (only ancient)*

523 *Index of Manuscripts*

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Godefroid de Callataÿ
Sébastien Moureau

POWER, RELIGION, AND WISDOM. ORTHODOXY AND HETERODOXY IN AL-ANDALUS AND BEYOND

Godefroid de Callataÿ – Sébastien Moureau

INTRODUCTION

"The origin and early development of philosophy in tenth-century al-Andalus: the impact of ill-defined materials and channels of transmission" (hereafter, PhilAnd) is an Advanced Grant ERC project funded by the European Research Council and conducted at UCLouvain and the Warburg Institute (University of London)[1]. PhilAnd aims to provide new insights into an important chapter in the history of Islamic speculative thinking. It is concerned with the time and the form under which philosophy – in the sense of a rational, scientific, and comprehensive system to approach the reality of the world around us – appeared for the first time in al-Andalus, and with the role played by this formative stage in the history of philosophy as later developed in the Iberian Peninsula among the three monotheistic communities.

PhilAnd pursues three main objectives, namely:

(1) to determine if the emergence of philosophy in al-Andalus did not significantly predate the time ordinarily acknowledged in modern scholarship;

(2) to establish if the impact of this early phase on later developments of rational thinking in al-Andalus was not considerably greater than has usually been assumed thus far;

(3) to provide evidence in order to assess, on a scientific basis, the originality of the first Andalusī philosophers with respect to their predecessors in the Orient.

The project stands at the crossroads of several major lines of inquiries in modern scholarship: the overall history of Arabic sci-

1. ERC Grant Agreement number 740618 (under the European Union's H2020 ERC MGA Programme). The project started in October 2017 and was extended to March 2024: https://sites.uclouvain.be/erc-philand/.

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ences in al-Andalus; the development of libraries and cultural centers in al-Andalus; the interaction of politics, religion, and science in the Peninsula; the common threads of Islamic and Jewish philosophy and mysticism in and outside the Peninsula; Greek-Arabic philosophy across the Mediterranean or more specifically in the context of Shīʿism and Ismāʿīlism; Arabic translations into Latin and the legacy of Arabic sciences in medieval Europe; and the reception of Jewish literature in the Latin Middle Ages. Although the project was designed to develop and stimulate a network of collaborations with other related projects (see below, especially under SP6-8), PhilAnd is different from any of them and is fundamentally original in two crucial respects.

First, this project emphasizes the fourth/tenth century. This is a period that has often been disregarded by historians of Arab-Islamic philosophy concerned with al-Andalus on the assumption that philosophy in al-Andalus only emerged with the Jew Salomon Ibn Gabirol (Avicebron) (d. 450/1058) in the fifth/eleventh century or, even later, with the Muslims Ibn al-Sīd al-Baṭalyawsī (d. 521/1127) and Ibn Bājja (Avempace) (d. 533/1139) in the sixth/twelfth century. To a very large extent, the disregard of modern scholarship for the philosophical achievements of fourth-/tenth-century al-Andalus is the result of a series of confusions, misconceptions, and erroneous dating related to three authors (or possibly a group of authors, in one case), namely, the Ikhwān al-Ṣafāʾ, Ibn Masarra (d. 319/931), and Maslama b. Qāsim al-Qurṭubī (d. 353/964). The role of these three figures in the transfer of philosophy between the eastern and the western parts of *dār al-islām* was in reality decisive, and this is why they are at the core of the present exploration.

Second, the project is resolutely focused on a major re-evaluation of "ill-defined" material and channels of transmission. This also requires some justification.

It has long been stressed that, among the sources that have been used by the author of the *Ghāyat al-ḥakīm* the three most important are (1) the above-mentioned Ikhwān al-Ṣafāʾ and their *Rasāʾil*; (2) the corpus of works traditionally ascribed to the alchemist Jābir b. Ḥayyān (supposed to have lived in the second/eighth century) and therefore usually referred to as the *Corpus Jābirianum*; and (3) the *Nabatean agriculture* or, more exactly, the corpus of Nabatean writings ascribed to Ibn Waḥshiyya (written in 318/930-1), which are

thus commonly referred to as the *Nabatean Corpus*. These three corpora show a number of remarkable similarities that inspire us to study them from a common perspective – something which has not been done so far. All three were produced in the Orient. All three show a marked tendency toward disciplines such as astrology, magic, and alchemy, which today are disdainfully qualified as "occult", although in the Middle Ages they were regarded as part and parcel of the bulk of the "rational/philosophical sciences". All three appear to have been significantly influenced by Ismā'īlism, although the relation with Ismā'īlism, and more generally with Shī'ism, remains to be clarified in each case. All three present themselves as compilations whose elaboration may have extended over several generations, posing major problems with dating and authorship. All three are extremely syncretic compositions with a common Neoplatonic background to which a huge quantity of material of various provenance – in particular Hermeticism, Ṣābianism, and mysticism – has been superimposed. As a result of their Ismā'īlism bias, all three works show a common, and distinctly *bāṭinī*, way of interpreting religious scriptures, and in particular the Qur'ān. It is also particularly worth noting that these three corpora of writings appear to have been introduced into al-Andalus around the same period, and quite possibly by the same man, namely Maslama b. Qāsim al-Qurṭubī, the author of the *Rutbat al-ḥakīm* and the *Ghāyat al-ḥakīm*. How can we account for this fact? What prompted such a sudden interest in fourth-/tenth-century al-Andalus for doctrines so clearly at odds with the model imposed there by the Sunnī-Mālikī traditionalists? Was there anything like an Ismā'īlī *da'wa* (propaganda) in al-Andalus? In the reception of this type of knowledge, what role was played by the regime itself? And how profoundly did the introduction of heterodox material affect the subsequent development of Neoplatonism and mysticsm as cultivated in al-Andalus among the three monotheistic communities? These questions, which remain largely unexplored, are at the core of the present project.

In order to explore these issues with the best prospects of achieving ground-breaking results, eight sub-projects (SP) have been defined, which are briefly presented here. Five of these SP specifically deal with aspects of the three above-mentioned eastern *corpora* – the Jābirian (SP1), the Ikhwānian (SP2), and the Nabatean (SP3) – as well as with Ibn Masarra (SP4) and Maslama b. Qāsim al-Qurṭubī

(SP5). In addition to the five linear sub-projects, the project also includes three transversal SP to reinforce its interdisciplinary and cross-cultural approach, and to address wider and more complex cultural issues. Although these three are intimately connected with the former five SP, these latter three are conducted in the form of cross-disciplinary and international conferences held in the second phase of the project, namely:

– *Power, religion and wisdom: Orthodoxy and heterodoxy in al-Andalus and beyond* (SP6, at the Institute for Advanced Study, Princeton, from 29 March to 1 April 2022);

– *Interconnections between Jewish and Islamic rationalistic forms of thought during the Middle Ages* (SP7, at UCLouvain, Louvain-la-Neuve, from 5 to 7 September 2023);

– *Science and Craft: The relations between the theoretical and practical sides of the occult and esoteric sciences in the Islamic world* (SP8, at the Warburg Institute, London, from 10 to 13 January 2023).

Most of the contributions to this special journal issue are reworked and extended versions of papers originally presented at the conference held at the IAS in Princeton. We have grouped the fourteen contributions in this issue as articles under five headings, respectively entitled *Andalusī Channels of Transmission*, *Contextualizing the Orient*, *Around the Corpus of the Ikhwān al-Ṣafā'*, *Two Newly Edited Texts on Magic*, and *Knowledge Organization*.

The first section of the volume, on the channels of transmission, opens with a contribution by Miquel Forcada on *Rational and More Than Rational Sciences in the Umayyad Caliphate: Dialogue, Debate, and Confrontation*. In this article, Forcada presents an extensive overview of the postures of the Umayyad rulers in al-Andalus vis-à-vis the rational sciences, with a particular focus on the occult disciplines. Tracing the links between men of power and men of science, he reveals the somewhat ambivalent attitudes of the former on certain occasions. Periods of persecution frequently alternated with moments of greater tolerance and even support, as is the case first, with the emir ʿAbd al-Raḥmān II, who encouraged the importation of books from the East and their dissemination through al-Andalus, and then with the caliphs ʿAbd al-Raḥmān III and al-Ḥakam II, the two sovereigns most favorable to rational thinking. This article concludes with important and original reflections about alchemy in

Umayyad al-Andalus and the central figure of Maslama b. Qāsim al-Qurṭubī in line with Ibn Bishrūn's alchemical epistle. In *Intense Rivalry, Sectarian Secrecy, and Doctrinal Recourse to Reason: Obstacles to the Fourth-/Tenth-Century Transmission of Ismāʿīlī Thought to al-Andalus*, Paul Walker explores the rivalry between the Fāṭimids and the Umayyads of the West, and tackles the issue of a possible transfer of *bāṭinī* Ismāʿīlī doctrines from Fāṭimid sources to al-Andalus. To discuss this, Walker starts by reconsidering the concepts of *bāṭin* vs. *ẓāhir*, and *taʾwīl*, among Ismāʿīlī thinkers such as al-Sijistānī. According to the esoteric doctrine of the Ismāʿīlīs, part of knowledge is accessible only to the agents of *daʿwa* (the *dāʿī*) and therefore was kept under a seal of secrecy. Walker argues that various factors impeded the transmission of the Fāṭimid doctrine into al-Andalus. First, he contends, the rivalry between the Fāṭimids and the Umayyads in al-Andalus was extreme, especially after the proclamation of the caliphate by ʿAbd al-Raḥmān III, and in direct competition with Umayyad claims. Second, the doctrine of secrecy imposed on *dāʿīs* did not favor the propagation of doctrinal tenets. Finally, the very content of these doctrines must have hindered their dissemination in al-Andalus. As far as we know, and according to Walker's conclusions, there is no concrete evidence of any transfer of Fāṭimid doctrine to Umayyad al-Andalus.

The second section of the volume focuses on issues related to specific sciences. In *Tracing the Sorcerer's Circle: Demons, Polysemy, and the Boundaries of Islamic Normativity*, Travis Zadeh offers a panoramic overview of the use of circles and related diagrams in the practice of Islamic ritual magic to subjugate intermediary beings in a variety of contexts. Indeed, the purposes of such rituals are multiple, as they "range from the therapeutic, prophylactic, divinatory, and revelatory, to diverse forms of love magic, the incitement of enmity, and the infliction of harm on enemies". Tracing the genealogy and history of the *mandal* across various cultural and linguistic areas, Zadeh explores an extensive number of sources, with particular emphasis on handbooks of practical magic such as those produced in the East by Fakhr al-Aʾimma al-Ṭabasī, Fakhr al-Dīn al-Rāzī, and Sirāj al-Dīn al-Sakkākī between the fifth/eleventh and the seventh/thirteenth century. Normativity is a central question of Zadeh's contribution: in what sense can these rituals and practices be felt or defined as Islamic, given their origins and their transcultural history?

The next two articles lead us to the alchemical arts – arts which, like Maslama b. Qāsim al-Qurṭubī in his *Rutbat al-ḥakīm*, various thinkers in Islam have considered the pinnacle of all sciences. This was no doubt the case for Ibn Arfaʿ Raʾs, as Regula Forster amply demonstrates in her *To What Extent Is Alchemy an Esoteric Science? A Case Study of Ibn Arfaʿ Raʾs (fl. sixth/twelfth century)*. Ibn Arfaʿ Raʾs was a Morrocan scholar, poet, and alchemist, known in particular for a collection of poems entitled the *Shudhūr al-dhahab*, which inspired a host of commentaries throughout the nineteenth century. Taking as a case study one of these commentaries, namely the *Ḥall mushkilāt al-Shudhūr* that the Morrocan author wrote on his own *dīwān*, Forster examines whether alchemy can genuinely be considered an esoteric science, insofar as the opposition between *ẓāhir* and *bāṭin* so dear to the Ismāʿīlīs does not figure in this work, nor, it would seem, in most alchemical writings. Along the same lines, she concludes by asking about the function of the commentary in relation to the work commented on: how is it so that the "esoteric" *Shudhūr* enjoyed a far greater popularity than the supposedly more "exoteric" *Ḥall*? The other contribution on alchemy is by Pierre Lory. His *Jābir b. Ḥayyān's Alchemy, Ibn ʿArabī and the Reading of the Book of Nature* is an exploration of the notion of transmutation in alchemy and mysticism. Lory first outlines Jābir's doctrine of transmutation. Jābir's world is one in which the possibilities of transmutation are innumerable and the elemental properties, to which the elements can be reduced, are constantly fluctuating. Lory identifies two types of transmutation: a "horizontal" transmutation, namely, of one matter into another, and a "vertical" one that consists of "the intensification or weakening of the energy in the substance, as well as the distribution of these energies of the soul according to the qualities of each". What is of interest to Lory is the oft-debated issue of whether a philosophical and mystical vocation should be attached to alchemy, and whether the answer to this question can be found in the theory of knowledge. The authors of Jābir's corpus distinguished between two kinds of knowledge: one based on the senses, and the other based on the intellect, which is the path of wisdom in which man is transformed. Alchemy and the science of balances, that is, the proportion of elemental qualities in substances, give access to this knowledge through the contemplation of the secrets of this alchemical "mesocosm". The second part of the article presents a compari-

son of Jābir's doctrine with that of Ibn ʿArabī, who, according to Lory, does not give alchemy the same central place in the elevation of man, but rather uses it as an explanatory comparison. If certain convergences can be observed, it must be said that the differences are more numerous. In her article, *Who Are the Sethians in the Nabatean Agriculture?*, Elaine van Dalen provides a rich synthesis of the Sethian (Banī Ishīthā) sect in the famous *Filāḥa nabaṭiyya*, the *Nabatean agriculture*. She first presents the Sethians in classical Arabic sources, where they are described as communities living in southern Iraq and referred to by the generic term Ṣābians. Van Dalen also highlights the links and contrasts between the Sethians and the Mandaeans, who are also referred to in literature as Ṣābians. In the *Nabataean agriculture*, the Sethians are the hegemonic people of Qūthāmā's time in Babylon, Syria, and al-Jazīra. Van Dalen details the beliefs and practices attributed to them in *Filāḥa nabaṭiyya*, and thus draws out precise elements of their doctrine, which contribute to a better identification of this sect's cult. After dealing at some length with the figure of Seth, van Dalen finally tackles the question of how to identify the Sethians in the *Nabatean agriculture*. Having dismissed the Mandaean hypothesis (that the Mandaeans were described in the fourth/tenth century as the sons of Seth), she argues instead: "these indications tentatively place the Nabatean Sethians in the first to third century CE in either the Parthian or early Sassanid period, but similarity with Kentaeans pushes them to the fourth–fifth century". She concludes by addressing the question of the origin of these Sethians and their evolution up to the fourth/tenth century.

The third section of the volume is entirely devoted to the encyclopedic corpus of the Ikhwān al-Ṣafāʾ, a field that has probably never attracted as much interest as it does today. This interest is no doubt stimulated at least in part by the current editorial project at Oxford University Press in association with the Institute of Ismaili Studies (OUP-IIS) to provide the first critical edition of the entire corpus of the *Rasāʾil Ikhwān al-Ṣafāʾ*. The volumes published to date in the series reveal that the process of redaction of the *Epistles* and their transmission was far more complex than previously assumed, and the exact relation between the *Rasāʾil* and the *Risāla jāmiʿa*, which was thought to crown the corpus, remains to be established.

In a continuation of his previous studies on the relation between the parts of the Ikhwān's corpus, in his article, *the* Fihrist *of the* Rasāʾil Ikhwān al-Ṣafāʾ: *Textual Variants and Their Relation to* al-Risāla al-Jāmiʿa, Janne Mattila provides the first in-depth investigation on the Ikhwān's *Fihrist*. This introductory section, which consists of a table of contents of the *Rasāʾil* and a final section, is found in the majority of the manuscripts, although it was more likely composed later than the original collection of the *Epistles*, as Mattila explains. Based on an examination of nearly twenty witnesses, a substantial number of which are not part of the current OUP-IIS series, his survey reveals new features that may contribute to a better understanding of the process of redaction of the corpus. Regarding the table of contents itself, Mattila distinguishes three variants in the manuscript tradition and shows that these versions correspond to three different phases in a process of redaction during which the original text was progressively expanded. As for the final section, a part of the *Fihrist* designed to teach readers how to use the *Epistles* in practice, Mattila demonstrates that it also involves three versions, but, remarkably, in this case the process of expansion does not follow the same pattern. By extending his investigation to the *Jāmiʿa*, Mattila also shows that large parts of it are textually dependent on the latest version of the *Fihrist*, the only one characterized by the presence of Ismāʿīlī elements. He concludes, "this supports the claim of an Ismāʿīlī contest for the genesis of the *Jāmiʿa* as well". With *The Andalusī Reception of Ontological Options and Cosmological Descriptions in the Ikhwān al-Ṣafāʾ and* al-Risāla al-Jāmiʿa: *A Case Study*, Carmela Baffioni reopens the question of the impact left by the philosophy of the Ikhwān al-Ṣafāʾ in al-Andalus. Her investigation focuses on two passages of the *Rasāʾil* that inspired the Neoplatonist scholar Ibn al-Sīd al-Baṭalyawsī to write his *Kitāb al-ḥadāʾiq*, also known as *Kitāb al-dawāʾir*, a treatise that proved to be most influential to many Jewish intellectuals in al-Andalus. By extending the textual comparison to the *Jāmiʿa*, Baffioni brings to light important doctrinal variations between the works under consideration in her case study. As she contends, the resolutely Ismāʿīlī turn found in the interpretation of the *Jāmiʿa* is not present in the *Kitāb al-ḥadāʾiq*; this prompted her to conclude that al-Baṭalyawsī's "*Kitāb al-dawāʾir* (Book of circles), although rich in the influence of the Ikhwān, is some distance removed from Ismāʿīlī sentiment – at least with regard to the exam-

ination of its references to the Ikhwān al-Ṣafāʾ". Another contribution largely focused on the influence of the Ikhwān al-Ṣafāʾ on the Jewish world is provided by Gabriele Ferrario. In his article, *In a Hidden Place: Traces of Bāṭinism in the Fragments of the Cairo Genizah*, Ferrario shows that, along with alchemical fragments that mention titles of works from the Jābirian corpus, the Cairo genizah of the Ben Ezra Synagogue also contains several manuscripts that explicitly refer to the Epistles of the Ikhwān. Most remarkably, some copies even preserve entire passages from the *Rasāʾil*, either in Arabic or in Judeo-Arabic. A diplomatic edition of two sections in Judeo-Arabic, respectively from Epistles 19 (on minerals) and 21 (on plants) is provided in the appendix of this contribution. In *Restoring Harmony through the Propaedeutic Science of Music: A Reconsideration of the Brethren of Purity's Epistle on Music and Its Relation with the Epistle on Proportions*, Laura Tribuzio offers a thorough reconsideration of how to understand the Ikhwān al-Ṣafāʾ's approach to music. By placing the discourse in the framework of the Greco-Arabic tradition on music, yet in sharp contrast with previous scholarship on the Ikhwān, which is almost exclusively focused on *Epistle* 5 (*On Music*), Tribuzio demonstrates that this treatise and the one that follows it in the collection must have been conceived, originally, as two facets of same subject, namely, harmony. Whereas *Epistle* 6 ("Arithmetical, Geometrical, and Harmonic Proportions") is concerned with the quantitative dimensions of harmony (that is, with its divine essence), *Epistle* 5 presents itself as a study of the qualitative aspects of the "art of harmony", that is, with music, to form some sort of a human counterpart to divine harmony. The interest and originality of the Brethren's perspective, Tribuzio contends, lies in the fact "that the relationship between "music" and "harmony" was never formalized in the supposedly well-structured Greek tradition transmitted to the Arabic scientific literature". *Epistle* 6 of the Ikhwān al-Ṣafāʾ is at the core of another contribution of the volume, but this time in line with another two of the sciences making up the mathematical quadrivium that opens the encyclopedia. Indeed, in *The Mathematical Orders of Architecture: Seeing Madīnat al-Zahrāʾ from the Perspective of the Ikhwān al-Ṣafāʾ?*, Nader El-Bizri deals with the Epistle on proportions, complemented by the Ikhwān's teachings found in epistles 1 (*On Arithmetic*) and 2 (*On Geometry*). El-Bizri's contribution shows

how such treatises by the Ikhwān – along with others in the continuation of the Greek tradition of Euclid and Nicomachus of Gerasa – may help us better understand the geometric principles that guided the architects of the Madīnat al-Zahrā' complex near Córdoba, and more especially the principles at work in the Salón Rico of the caliph 'Abd al-Raḥmān III. As El-Bizri reminds us, in addition to their enlightening views on construction techniques, the esoteric perspective of the Ikhwān's doctrine allows us to better understand the symbolic significance of architectural designs such as the palatine complex of the Umayyads.

The fourth section of the volume includes the edition of two previously unpublished Arabic texts dealing with magic and the spiritual forces it involves. The first one, *The Book on Attracting the* Rūḥāniyya *of Every Animal: A Pseudo-Aristotelian Hermetic Text*, prepared by Liana Saif and Charles Burnett, is the *Kitāb istijlāb rūḥāniyya al-bahā'im kullihā*, a chapter of the *Kitāb al-ustuwaṭṭās* pertaining to the corpus of Pseudo-Aristotelian Hermetica and which, like other parts of this collection, purports to record the conversations between Aristotle and his disciple Alexander the Great. The Arabic original, established on the basis of the available manuscript copies, is accompanied by an annotated English translation, as well as an edition of the Latin version of the same treatise as found in one surviving manuscript. In line with the previous section of this special issue, Saif and Burnett observe that a version of the Arabic original is also found in some manuscripts of *Epistle* 52b, one of the three known variants in which the epistle *On Magic* ascribed to the Ikhwān al-Ṣafā' is known to have reached us. Rather coincidentally, the other edition presented in this section is also concerned with a passage of the same version of *Epistle* 52 attributed to the Brethren of the Purity. The passage in question, which is found in other manuscripts than those featuring the *Kitāb istijlāb rūḥāniyya*, is concerned with the placebo effect, the power of imagination, and medical recipes involving spells suspended from different parts of the body. As Godefroid de Callataÿ and Sébastien Moureau, the editors of this text, argue in their contribution, *An Arabic Version of Qusṭā b. Lūqā's* De Physicis Ligaturis?, this passage, if not the source itself, is an Arabic text very closely related to the *De Physicis Ligaturis*, a work by Qusṭā b. Lūqā's that was, until now, only known in its Latin version. The edition of the Arabic variant is accompanied by an

English translation and preceded by various textual comparisons that show the similarities and the dissimilarities between the Arabic and the Latin texts. It is also preceded by an introduction that contextualizes this passage in the long 52b variant of the *Epistle* on Magic. This edition is soon to be published, along with the 52c variant, in the OUP-IIS series.

The final section (*Knowledge Organization*), includes a paper of a different kind. In *M-Classi, A New Digital Tool for the Classification of the Sciences, in Islam and Beyond*, Godefroid de Callataÿ, Rémy Baranx, and Huberts Naets describe the main functionalities of a newly created device designed to unite and boost future research on the organization of knowledge and, more specifically, the classifications of the sciences in and around the Islamicate world.

Part I

ANDALUSĪ CHANNELS OF TRANSMISSION

Miquel Forcada

RATIONAL AND MORE THAN RATIONAL SCIENCES IN THE UMAYYAD CALIPHATE: DIALOGUE, DEBATE, AND CONFRONTATION

Introduction[1]

The Umayyads shaped the scientific activity of al-Andalus to a considerable extent. However, their influence was limited by many factors, not least of which was the religious sensibility of society, as proven by the fact that the formative period of the Andalusī scientific legacy occurred between two contrary religio-political phenomena. On the one hand, the initial flourishing of these activities during the first half of the third/ninth century took place when controversial disciplines like astrology and rational theology were promoted by the Umayyad dynasty against the opposition of religious scholars. On the other, the crisis of the late fourth/tenth century, when al-Manṣūr b. Abī ʿĀmir, in order to consolidate his de facto rule by gaining support from religious sectors, destroyed the books in al-Ḥakam II's library that dealt with astrology and philosophy, and persecuted a good number of scholars for practicing rational disciplines and for their heterodox religious ideas[2]. For a more in-depth understanding of the scientific culture of the period, we examine the presence of science and philosophy in the circles of

1. This article has been commissioned as part of the project *Aspectos sociales en fuentes astrológicas árabes medievales: herencias y discontinuidades respecto a la tradición griega / Social aspects in medieval Arabic astrological sources: their legacy and discontinuity in the Greek tradition* (PID2021-126415NB-I00, MCIN/AEI /10.13039/501100011033/FEDER,UE).

2. Maribel Fierro names this episode, which concerned many scholars, «the trial of Ibn al-Iflīlī». On this, see M. Fierro, *La heterodoxia en al-Andalus durante el período omeya* (Madrid 1987), 162-66; M.-Th. Balty-Guesdon, *Médecins et hommes de sciences en Espagne musulmane: 2ème/8ème-5ème/11ème siècles* (PhD diss., Université de la Sorbonne 1988), 240-46.

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power and the ideal space defined by the actions and interactions of the producers, transmitters, and receivers of knowledge of any kind in Andalusī society. The issue is especially relevant in fourth-/tenth-century al-Andalus for two reasons. First, a significant part of the intellectual activity of scholars focused on the most controversial disciplines: astrology and the study of the *bāṭin* (the occult), in both its religious and scientific senses. Second, the Umayyad caliphate was experiencing a particularly active period in which the process of building a scientific culture culminated under the leadership of the most learned ruler in al-Andalus history, al-Ḥakam II, who played a decisive role in fostering scientific activity, some of which clashed with religious sensibilities. I analyze both questions in light of known and new evidence, paying special attention to the implicit and explicit debates that were generated by religio-politically and epistemologically controversial disciplines.

An Excursus on Controversial Disciplines *and* Bāṭinism

The following pages I focus on the specific form of the dialectic between reason and faith in a particular phase of Andalusī Islam. While the subject is very complex, for the purposes of this chapter, some essential points should be outlined. The so-called *ʿulūm ʿaqliyya* or *ʿulūm al-awāʾil* ("rational sciences" or "sciences of the forerunners," the Greek scientific and philosophical legacy enriched by Indo-Iranian contributions) do not always fit into orthodox Sunnī Islam, essentially defined, in al-Andalus, by the Mālikī school. Narratives about the episodes of persecution against those practicing the rational sciences agree that astrology and philosophy were the controversial disciplines par excellence[3]. In contrast, medicine was well accepted in religious sectors. Like medicine, the eminently practical disciplines such as calculus, engineering, and so on, which provide

3. As is well known, the most relevant episodes are the reaction against the introduction of scientific texts during the emirates of al-Ḥakam I and ʿAbd al-Raḥmān II (third/ninth century); the expurgation of al-Ḥakam II's library (fourth/tenth century); and the persecution of Ibn Rushd and his disciples (sixth/twelfth century). See the eloquent lines about the two latter episodes written by Ibn Saʿīd al-Maghribī in the seventh/thirteenth century; al-Maqqarī, *Nafḥ al-ṭīb*, ed. M. ʿA. Makkī (Beirut 1968), 1:221 and 3:185–86.

useful services for everyday life, were accepted because they did not question religious beliefs. Some aspects of the rational sciences that focus on teaching students abstract knowledge of the world that God has created may have been well accepted. Speculative theology, inasmuch as it is related, in many aspects, to the sciences of reason, may have been problematic throughout the Umayyad period, and Mu'tazilī thought was one of the most controversial religious currents. Marginal disciplines such as magic and alchemy, which were directly identified with sorcery, presented greater conflicts than astrology or rational theology. Though the reasons for conflicts related to these should be more systematically studied, they are well known in general. These reasons include the denial of natural causality and the autonomy of reason; the affirmation of divine omnipotence and omniscience; and the prohibition of sorcery and divination, and others. This broad subject is beyond the scope of the current article, but it is always interesting to read and reread what one of the most brilliant minds of western Islam, Ibn Khaldūn (732-808/1332-1406), wrote about magic, alchemy, philosophy, and astrology. In his most famous *Muqaddima*, these disciplines are harshly criticized for their religious and epistemological flaws[4]. Ideology and philosophy are two sides of the same coin, as we see here. The social acceptance (or tolerance) of a discipline is well reflected in the statistics of scientific practice between the third/ninth and the fourth/tenth centuries in al-Andalus[5]: the number of people who knew or practiced mathematics and medicine was relatively similar[6] and these figures were far greater than the number of scholars

4. Ibn Khaldūn, *Kitāb al-'Ibar* [«*Muqaddima*»], ed. Suhayl Zakkār and Khalīl Shahāda (Beirut 2001), 1:664-95 on magic, divination, and similar procedures, and 1:695-727 on alchemy, astrology, and philosophy. About Ibn Khaldūn's arguments, see M. Asatrian, «Ibn Khaldūn on Magic and the Occult», in *Iran & the Caucasus* 7 (2003), 73-123; and the bibliography given in M. Melvin-Koushki, «Magic in Islam between Religion and Science», in *Magic, Ritual, and Witchcraft* 14 (2019), 261.

5. Balty-Guesdon, *Médecins*, 733-34. Even though the figures in these tables should be revised in line with the research conducted in the last two decades, they still give an accurate overview of the scientific practice of the period.

6. That is, 58 in medicine and 63 in mathematics. This is due to the fact that the scholars specialized in the division of inheritance (a legal discipline that utilizes both arithmetic and law) were considered mathematicians.

devoted to astronomy and astrology[7]. By contrast, those who knew philosophy were a minority[8], and those familiar with magic and alchemy made up the smallest group[9]. This statistical snapshot of scientific activity, which matches similar figures for other Muslim societies, only gives a superficial approach to what really happened. Many factors may affect the accuracy of the data, not least the secrecy that characterized the essence of alchemy and magic[10]. However, we can see that, first, scholars who knew the controversial disciplines were not so few in number and, second, astrology was widespread despite religious qualms.

The search for the hidden meanings (*bāṭin*) in the Qur'ān is a phenomenon that characterizes Shī'ī thought and some branches of Sufism[11]. It was present in fourth-/tenth-century al-Andalus with the Neoplatonic mystic Ibn Masarra (d. 319/931) and his followers[12]. "Religious esotericism" is beyond the scope of this study; however, there is another kind of esotericism, namely "scientific esotericism," which is not so different from the religious kind and is part of the

7. That is, 26 in astrology and 17 and astronomy. Mathematical astronomy was, to a great extent, subordinated to astrology in the sense that it provided the astrologer the exact data that he needed to cast horoscopes.

8. In total, 9. However, it is difficult to discern the exact meaning of «philosophy» when it appears in a biographical entry. Most times it refers to a general knowledge of the rational sciences. There were also a relevant number of scholars (16) who knew logic. The discipline of logic was particularly relevant from the mid-fourth/tenth century onward; see below section 8.

9. That is, 6 in alchemy and 2 in magic.

10. The alleged obligation to secrecy is beyond the scope of this study. There were, however, good reasons for keeping the undertakings of alchemists and magicians secret; these include their purported economic and social consequences, and the fear of reactions in specific social environments. See Ibn Khaldūn, *al-'Ibar*, 1:706, about secrecy in alchemy; Y. Marquet, «Sabéens et Ikhwān al-ṣafā' (suite et fin)», in *Studia Islamica* 25 (1966), 107, for the reasons the Ikhwān remained silent about the mysteries of the Ṣābians; and R. Forster, «Reaching the Goal of Alchemy or What Happens When You Finally Have Created the Philosophers' Stone», in *Studia Humana* 9 (2020), 43, about the economic reasons for not speaking about alchemy, according to al-Fārābī.

11. With respect to *bāṭin*, I follow the essential ideas contained in D. de Smet, «Esotericism and Exotericism», in *EI*³, online: http://doi.org/10.1163/1573-3912_ei3_COM_26230 (consulted 25 January 2023); and L. Saif, «What is Islamic Esotericism?», in *Correspondences* 7 (2019): 1-59.

12. See de Callataÿ, «Philosophy and Bāṭinism in al-Andalus: Ibn Masarra's *Risālat al-i'tibār* and the *Rasā'il Ikhwān al-Ṣafā'*», in *JSAI* 41 (2014), 300-1 n. 116 for an explanation of why the term *bāṭini* applies to Ibn Masarra.

very nature of alchemy and magic. As Holmyard points out, alchemy has a dual nature[13]: on the one hand, it is exoteric, for example, if confined to the material procedures for obtaining the "philosopher's stone"; on the other, alchemy is esoteric if it is performed with the belief that the philosopher's stone can only be obtained by divine grace. In Holmyard's words, alchemy "gradually developed into a devotional system where the mundane transmutation of metals became merely symbolic of the transformation of sinful man into a perfect being through prayer and submission to the will of God." The aspects of alchemy related to belief are expressed in the Arabic tradition in the language of the Neoplatonism and Gnosticism inherited from the Greek tradition and the language of Shīʿī esotericism that characterizes the most outstanding figure of the first epoch of Arabo-Islamic alchemy, Jābir b. Ḥayyān[14]. Alchemy and its conceptual cognate, magic, are therefore a relevant part of what Saif calls "intellectual esotericism"[15], which is characterized by the belief that the initiate will be able, through intellectual effort and the guidance of a master instructor, to reach the hidden truths of the physical and metaphysical worlds. Maslama b. Qāsim al-Qurṭubī (d. 353/964)[16] epitomizes this way of thinking, as we can see from two important and well-known works attributed to him[17]: *Ghāyat al-ḥakīm* on magic and *Rutbat al-ḥakīm* on alchemy. In addition, Maslama seems to have introduced the famous *Rasā'il* (*Epistles*) of

13. E. J. Holmyard, *Alchemy* (Harmondsworth 1957), 13-14; see a similar consideration on Arabo-Islamic alchemy in M. Ullmann, *Die Natur - Und Geheimwissenschaften Im Islam* (Leiden 1972), 145.

14. On this complex issue, see the recent works by P. Lory in which he reviews the ideas of Kraus, Corbin, and Marquet: P. Lory, «Aspects de l'ésotérisme chiite dans le Corpus Ǧābirien: Les trois *Livres de l'Elément de fondation*», in *al-Qanṭara* 37 (2016), 279-98; and P. Lory, «Ésotérisme shiʿite et alchimie. Quelques remarques sur la doctrine de l'initiation dans le Corpus Jābirien», in *L'ésotérisme shiʿite, ses racines et ses* prolongements (Turnhout 2016), 411-22.

15. Saif, «What is Islamic Esotericism?», 37-42.

16. On the author, see M. Fierro, *Historia de los autores y transmisores de al-Andalus*, https://www.eea.csic.es/red/hata/enlaces.php, Hadiz ID, 84, Mística ID, 55, Historia ID, 84, Astronomía ID 14, Alquimia ID 1, Filosofía ID 7, Otros ID 94 (consulted 25 January 2023).

17. M. Fierro, «Bāṭinism in al-Andalus. Maslama b. Qāsim al-Qurṭubī (d. 353/964), author of the *Rutbat al-Ḥakīm* and the *Ghāyat al-Ḥakīm* (*Picatrix*)», in *SI* 84 (1996), 87-112.

the Ikhwān al-Ṣafā' to al-Andalus[18]. In these, De Smet remarks, «the distinction between *ẓāhir* and *bāṭin* occupies a central place"[19]. According to Maslama's *Ghāyat al-ḥakīm*, alchemy is subsumed in magic[20], and are two special ways to achieve knowledge of the occult and, more importantly, to transform the physical world through this knowledge. Magic (and alchemy with it), despite its eminently practical nature stands out from other disciplines because magic requires the most thorough knowledge of other philosophical subjects and it enables the practitioner to do what most people would deem impossible[21]. Magic and alchemy were scientific disciplines for the Ikhwān al-Ṣafā' and Maslama, since both are based on natural philosophy, though their theoretical principles are not always Aristotelian[22]. In

18. G. de Callataÿ, «Magia en al-Andalus: *Rasā'il Ikhwān al-Ṣafā'*, *Rutbat al-Ḥakīm* y *Ghāyat al-Ḥakīm* (*Picatrix*)», in *al-Qanṭara* 34 (2013), 297-343; and de Callataÿ, «*Rutba* vs *Ġāya*: A Reconsideration of the Impact of the *Rasā'il Iḫwān al-Ṣafā'* on Maslama b. Qāsim al-Qurṭubī», in *Arabica* 68 (2021), 1-15, which includes (2 n.2) a thorough bibliography about the subject.

19. D. de Smet, D., «Esotericism and Exotericism», in *EI³*, online.

20. Maslama b. Qāsim, *Ghāyat al-ḥakīm*, ed. H. Ritter (Leipzig 1933), 6 last line to 7 line 7: magic is made up of *nīranjāt*, talismans, and alchemy; on this idea, see Ch. Burnett, «The Three Divisions of Arabic Magic», in *Islamicate Occult Sciences in Theory and Practice*, ed. Liana Saif, Francesca Leoni, Matthew Melvin-Koushki, and Farouk Yahya (Leiden 2021), 43-56.

21. On magic according to the Ikhwān, see the edition and translation by G. de Callataÿ and B. Halflants of epistle 52a, *On Magic I: An Arabic Critical Edition and English Translation of Epistle 52a* (Oxford 2011), introduction.

22. On magic and alchemy in the classifications of the sciences by the Ikhwān and Maslama, see D. de Callataÿ, «Encyclopaedism on the Fringe of Islamic Orthodoxy: The *Rasā'il Ikhwān al-Ṣafā'*, the *Rutbat al-ḥakīm* and the *Ghāyat al-ḥakīm* on the Division of Science», in *Asiatische Studien – Études Asiatiques* 77 (2014), 857-77; and de Callataÿ, «Dividing Science by Ten», in *SI* 115 (2020): 1-32. With respect to magic as a discipline based on the sciences of nature according to the Ikhwān al-Ṣafā', see P. Lory, «La magie chez les Iḫwān al-ṣafā'», in *BEO* 44 (1992), 147-59. For a wider perspective that includes *Ghāyat al-ḥakīm*, see L. Saif, «*From Ġāyat al-ḥakīm* to *Šams al-maʿārif*: Ways of Knowing and Paths of Power in Medieval Islam», in *Arabica* 64 (2017), 297-345: and Saif, «A Study of the Ikhwān al-Ṣafā''s Epistle on Magic, the Longer Version (52b)», in *Islamicate Occult Sciences in Theory and Practice* (Leiden 2021), 162-204. On magic according to *Ghāyat al-ḥakīm*, see T. Fahd, «Sciences naturelles et magie dans *Ghāyat al-Ḥakīm* du Pseudo-Maǧrīṭī», in *Ciencias de la naturaleza en al-Andalus. Textos y Estudios. I*, ed. Expiración García Sánchez (Granada 1990), 11-22; J. Samsó, *Las ciencias de los antiguos en al-Andalus* (Almería 2011), 261-64, and the bibliography mentioned there. Regarding the echoes of the Arabic tradition in medieval Europe, see Ch. Burnett, «Talismans: Magic as Science? Necromancy among the Seven Liberal Arts», in *Magic and Divination in the Middle Ages*, ed. Ch. Burnett (Aldershot 1996); and Ch. Burnett, «Arabic Magic: The Impetus for

this regard, alchemy and magic may be seen as esoteric insofar as they go beyond and delve more deeply into the very limits of the usual paradigms, particularly Aristotelian natural philosophy.

What was the opinion of those who did not belong to the circle of initiates? The status of the controversial disciplines was also highly contentious epistemologically among the most outstanding philosophers[23]:

(1) al-Kindī accepted magic and astrology but not alchemy[24];
(2) Ibn Sīnā accepted magic but neither alchemy nor astrology[25];
(3) al-Fārābī accepted alchemy but not astrology[26];
(4) Ibn Bājja did not accept astrology[27]; and
(5) Ibn Rushd criticized astrology[28].

Translating Texts and Their Reception», in *The Routledge History of Medieval Magic*, ed. Sophie Page and Catherine Rider (New York 2019), 71-84.

23. Besides the bibliography that follows, see a summary of the ideas of some outstanding scholars regarding alchemy in Ullmann, *Die Natur*, 249-55; and, regarding astrology, in G. Saliba, «The Role of the Astrologer in Medieval Islamic Society», in *BEO* 44 (1992), 45-47.

24. As is well known, al-Kindī, in his *De Radiis*, one of the sources of the *Ghāyat al-ḥakīm*, gives the theoretical fundamentals of talismans (Samsó, *Las ciencias*, 263). With respect to al-Kindī and astrology, P. Adamson, «Abū Maʿšar, al-Kindī and the Philosophical Defense of Astrology», in *Recherches de théologie et philosophie médiévales* 69 (2002), 245-70. Regarding al-Kindī and alchemy, see T. Inoue, «Al-Kindī's Attack on Alchemy and his Perfume Making», in *Orient* 52 (2017), 79-92.

25. On Ibn Sīnā and magic, see M. S. Noble, *Philosophising the Occult: Avicennan Psychology and «The Hidden Secret» of Fakhr al-Dīn al-Rāzī* (Berlin 2021), 22; and Burnett, «Three Divisions», 43-45. On Ibn Sīnā and alchemy, see G. Anawati, «Avicenne et l'alchimie», in *Oriente e Occidente nel Medioevo: filosofia e scienze* (Rome 1971), 285-341. About Ibn Sīnā and astrology, see Y. Michot, *Avicenne: Réfutation de l'astrologie* (Beirut 2006).

26. Regarding astrology and al-Fārābī, see T. A. Druart, «Astronomie et astrologie selon al-Fārābī», in *Bulletin de Philosophie Médiévale* 20 (1977), 43-47; T. A. Druart, «Le second traité de Fārābī sur la validité des affirmations basées sur la position des étoiles», in *Bulletin de Philosophie médiévale* 21 (1979), 41-51; and D. Janos, *Method, Structure, and Development in al-Fārābī's Cosmology* (Leiden 2012), 44-57. On al-Fārābī and alchemy, see Forster, «Reaching the Goal», 43-44; and Ullmann, *Die Natur*, 250.

27. M. Forcada, «Astrology in al-Andalus during the 11th and 12th Centuries: Between Religion and Philosophy», in *From Masha'allah to Kepler: The Theory and Practice of Astrology in the Middle Ages and the Renaissance* (Ceredigion, Wales 2015), 169.

28. Saliba, «The Role of the Astrologer», 46-47; Forcada, «Astrology in al-Andalus», 169-70; and M. Forcada, «Didactic Poems on Medicine and Their Commentaries in Medieval al-Andalus and Western Islam», in *Suhayl*, 18 (2020-21), 174-75.

We still lack a study contrasting the arguments employed in these criticisms and defenses. However, it seems that, first, a discipline that does not fit exactly into a preconceived idea of what science should be was easy to question from the perspective of Aristotelian natural philosophy and the scientific method. Moreover, it appears that the nature and content of the criticism depends as much on ideology and belief as it does on philosophical reasoning. The portrayal of sciences and scientists given by Ibn Juljul (ca. 332-84/943-94) is a good source by which to evaluate the opinion of Andalusī scientists on the controversial disciplines. Ibn Juljul is one of the best examples of the scholars who contributed the most to the sciences that flourished during the Umayyad caliphate. He was a well-trained physician who served the dynasty, along with many other outstanding physicians. Ibn Juljul and his peers, like Ḥasdāy b. Shaprūṭ, Aḥmad b. Yūnus al-Ḥarrānī, Muḥammad b. ʿAbdūn al-Jabalī, Ibn al-Kattānī, and others followed the ideal of the "physician-philosopher" defined by Galen in *Quod optimus medicus sit quoque philosophus*. As such, they studied and practiced not only medicine but other rational sciences like astronomy, mathematics, and logic. As is well known, in 377/987, Ibn Juljul wrote *Kitāb ṭabaqāt al-aṭibbāʾ wa-l-ḥukamāʾ*, a bio-bibliographical treatise on physicians, philosophers, and other scholars such as Ptolemy, dating back to antiquity. The treatise provides a unique testimony on Andalusī scientists who lived between the third/ninth and fourth/tenth centuries[29]. Thus, it may be seen to reflect what a significant number of Andalusī scholars considered good science. Notably, magic is absent from this book[30], and alchemy and astrology are only referred to marginally[31]. The biog-

29. On this book, see J. Vernet, «Los médicos andaluces en el *Libro de las generaciones de los médicos* de Ibn Ŷulŷul», in *Anuario de Estudios Medievales* 5 (1968), 445-62, reprinted in Vernet, *Estudios sobre historia de la ciencia medieval* (Barcelona 1979); Balty-Guesdon, *Médecins*, 40-48; M. Forcada, «Biografías de científicos», in *Estudios onomástico-biográficos de al-Andalus 8* (Madrid 1997): 201-48; and C. Álvarez Millán, «Medical Anecdotes in Ibn Juljul's Biographical Dictionary», in *Suhayl* 4 (2004), 141-58.

30. See particularly the biographies of al-Kindī and Thābit b. Qurra, in which there is no reference at all to books like al-Kindī's *De Radiis* or Thābit's *De Imaginibus*; Ibn Juljul, *Kitāb ṭabaqāt al-aṭibbāʾ*, ed. F. Sayyid (Cairo 1953), 73-75.

31. Ibn Juljul, *Ṭabaqāt al-aṭibbāʾ*, 10, 73, and 75-78: alchemy and astrology are mentioned in passing in the biographies of Hermes III and Abū Bakr al-Rāzī (alchemy), and Thābit b. Qurra and Qūsṭā b. Lūqā (astrology, *tanjīm*). Regarding al-Kindī, Ibn Juljul mentions *hayʾa* and *ʿilm al-nujūm* (cosmology and astronomy) but not *tanjīm*.

raphy of the "three Hermes," which is the sole concession to the most esoteric authors and sources, is said to have been borrowed from Abū Maʿshar's *Kitāb al-ulūf*[32], as if Ibn Juljul wanted to make it clear that he did not read these kinds of books. The fact that Ibn Juljul wrote *Ṭabaqāt al-aṭṭibāʾ* around the time al-Manṣūr (shortly before 379/989)[33] was destroying books seems to be particularly significant. One may assume that the author was forced to censor himself, but in fact, he wrote at length about the philosophers whose books were being destroyed. Considering Balty-Guesdon's hypothesis that the *Ṭabaqāt aṭibbāʾ* was a deliberate manifesto against al-Manṣūr's attitude and in favor of the cultural policy of ʿAbd al-Raḥmān III and al-Ḥakam II[34], Ibn Juljul's reluctance to approach the controversial disciplines was probably conscious and deliberate. Ibn Juljul's and Maslama b. Qāsim's conceptions of *ḥakīm* and *ḥikma* were by no means the same, as shown in the introduction of the *Rutba*. Maslama wrote about those who pretended to be philosophers but were not; that is[35], those who studied mathematics and astronomy and considered themselves "philosophers" but ignored everything about true knowledge; those who warned students against true knowledge because they believed that they would infringe on the limits of religion; and those who claimed to be philosophers but only understood a small number of books. In addition, he considered Hermes to be the embodiment of symbolic and transcendent knowledge. These "mediocre philosophers" might have been physicians such as Ibn Juljul and his colleagues. Maslama acknowledged that they represented the majority that dictates what science is. More than two centuries later, Ibn Ṭufayl said more or less the same about the scholars of the fourth/tenth century[36]. However, it is worth noting that, thirty years before Ibn Juljul's *Ṭabaqāt* was written, Maslama b. Qāsim wrote his treatises for a community that

32. Ibn Juljul, *Ṭabaqāt al-aṭibbāʾ*, 5; K. Van Bladel, *The Arabic Hermes: From Pagan Sage to Prophet of Science* (New York 2009), 123-27 and 159-61.

33. Balty-Guesdon, *Médecins*, 240.

34. Balty-Guesdon, *Médecins*, 46-47; and M-Th. Balty-Guesdon, «Les *Ṭabaqāt al-aṭibbāʾ wa-l-ḥukamāʾ*: une condamnation du régime amiride», in *Cahiers d'Onomastique Arabe (1988-1992)* (Paris 1993), 49-59.

35. Maslama b. Qāsim, *Rutbat al-ḥakīm*, ed. W. Madelung (Zurich 2016), 16-20.

36. M. Forcada, *Ética e ideología de la ciencia. El médico filósofo en al-Andalus (siglos X-XII)* (Almería 2011), 14-16.

firmly believed (or perhaps tended to believe) in the scientific nature of magic and alchemy. As we see below, it is likely that most members of this community had a sound knowledge of the rational sciences[37].

The Precedents

From the early third/ninth century onward, Umayyad society developed a relatively rich scientific and philosophic culture based on the works translated or written in the main intellectual centers of Islam, especially Baghdad and Kairouan. The leader of this process was the emir ʿAbd al-Raḥmān II (r. 206-38/822-52), who ordered that books be brought to al-Andalus and disseminated among his subjects[38]. Astrology was the most important subject for the emir, but he also brought books on other disciplines, such as medicine, music, and philosophy, and his courtiers also studied and disseminated works on philosophy and rational theology. Since these disciplines were spread within the framework of a general policy based on the imitation of the ʿAbbāsid court in Baghdad, the emirs were likely driven by political motives. Such motives might have included the legitimizing role that the ʿAbbāsids attributed to astrology, and the replication of the policies implemented by al-Ma'mūn (r. 198-218/813-33) to strengthen caliphal authority over religious discourses by disseminating disciplines based on reason[39]. Andalus religious scholars reacted rapidly and harshly and the followers of reason eventually lost. The successor of ʿAbd al-Raḥmān II, Muḥammad (r. 238-73/852-86), dramatically changed the court's attitude toward astrology and strongly emphasized piety and religion[40]. The general situation of al-Andalus worsened in comparison

37. We speak more about the practice of magic and alchemy in sections 8 and 9. For the moment, suffice it to remark that it is difficult to refute Maslama b. Qāsim's status as the preceptor of the Umayyad emirs. About Maslama's role as a preceptor, see J. Ch. Coulon, *La Magie en terre d'islam au Moyen Âge* (Paris 2018), 158-62; he characterizes *Ghāyat al-ḥakīm* as a treatise on *adab* addressed to the court.

38. Forcada, «Astronomy», 1-74; see below section 6.

39. M. Forcada, «Books from Abroad: The Evolution of Science and Philosophy in Umayyad al-Andalus», in *Intellectual History of the Islamicate World* 5 (2017), 59-60.

40. M. Forcada, «Ibn ʿAbd Rabbihi: *Adab* and the Rational Sciences», in

to the preceding epoch and then became even worse when the infamous *fitna* of the Banū Ḥafṣūn started in 264/878[41]. The worse the circumstances became, the less money the emir had for patronage, and the more he needed the support of religious scholars; this led to less support for controversial disciplines. After the emirate of the short-lived al-Mundhir (r. 273-5/886-8), another of Muḥammad's sons, ʿAbdallāh (r. 275-300/888-912), ruled at the most difficult time in the history of the Umayyad period. In a context of general rebellion and low tax revenues, the emir faced enemies who promoted an alternative religiosity against the established religion. ʿAbdallāh bore the brunt of Ibn Ḥafṣūn's *fitna*, which put Cordoba in serious jeopardy. Moreover, ʿAbdallāh faced the threat of the Fāṭimid caliphate that emerged in Ifrīqiya in 296/909. The Fāṭimids tried to spread their movement into al-Andalus by allying themselves with the Banū Ḥafṣūn[42]. Furthermore, Ibn al-Qiṭṭ (d. 288/901), a descendant of the Umayyad emir Hishām I (r. 172-80/788-96), proclaimed himself the *mahdī* and tried to overthrow ʿAbdallāh under the inspiration of the ascetic Abū ʿAlī l-Sarrāj (fl. between late third/ninth and early fourth/tenth century) and with the material support of Berber troops[43]. In this context, ʿAbdallāh did the same as his father: he projected an image of himself as a very pious man and sought the support of religious scholars[44]. As a consequence, the controversial

Connected Stories: Contacts, Traditions and Transmissions in Premodern Mediterranean Islam, ed. Cristina de la Puente and Mohamed Meouak (New York 2022), 133-34.

41. The word *fitna* refers, in general, to phenomena of civil war or serious internal dissension. There are many events that can be considered a *fitna*, but between the late third/ninth and the early tenth/ fourth century there were two major *fitna*s in al-Andalus: first, the *fitna* of the Banū Ḥafṣūn, hereinafter the «first *fitna*», which lasted until 303/916; and second, the *fitna* that put an end to the Umayyad dynasty at the beginning of the fifth/eleventh century, hereinafter the «second *fitna*». See section 6.

42. V. Martínez Enamorado, «Fatimid Ambassadors in Bobastro: Changing Religious and Political Allegiances in the Islamic West», in *JESHO* 52 (2009), 267-300.

43. On Ibn al-Qiṭṭ, see Fierro, *Heterodoxia*, 106-11; M. Fierro, «¿Hubo propaganda fatimí entre los Kutāma andalusíes?» in *al-Qanṭara* 25 (2004), 239-43; E. Manzano, *La frontera de al-Andalus en época de los Omeyas* (Madrid 1991), 253-57; and Martínez Enamorado, «Fatimid Ambassadors», 274-75. Even though Ibn al-Qiṭṭ was a messianic leader it is unclear whether or not he adopted Fāṭimid views.

44. Ibn Ḥayyān, *Muqtabis III*, ed. M. M. Antuña (Paris 1937), esp. 33-38.

disciplines were not mentioned in the court, nor in connection with the courtiers, and Ibn Masarra had to flee al-Andalus under accusations of heresy[45]. The dynasty's capacity for patronage collapsed and poets left Cordoba for Seville because the local ruler, Ibrāhīm b. Ḥajjāj (d. 298/910), paid them better[46]. Although this flight of talent was attributed to the emir's tight-fistedness, Ibn Ḥayyān openly stated that the reason for his reputation of stinginess was the lack of revenue caused by the *fitna*[47].

These circumstances suggest another reading of the passage of *Rutbat al-ḥakīm* used by Dozy in his effort to refute that Maslama al-Majrīṭī (d. 395 or 398/1005 or 1007-8) wrote the *Ghāyat* and *Rutbat al-ḥakīm*[48]. Maslama b. Qāsīm said that he wrote the *Rutba* between 339/950 and 342/953[49], when, after the *fitna*, the "mediocre philosophers" hegemonized intellectual activity and many scholars abandoned Cordoba. Dozy assumed that Maslama b. Qāsim meant the second *fitna*, which caused a sudden decline in the living conditions of Cordobans and tragic episodes such as the ransacking (in 403/1013) perpetrated by mercenaries fighting for the pretender to the throne al-Musta'īn, during which a significant number of scholars were killed and most others, particularly Jews, fled. In consequence, Dozy concluded that Maslama al-Majrīṭī could not be the author, but rather it had to be someone who was active in the mid-fifth/eleventh century. The *fitna* Maslama b. Qāsim mentioned does not necessarily refer to the dramatic setting of the second *fitna*, but rather to the particular combination of several negative circumstances of the first *fitna* that lasted nearly forty years (264-303/878-

45. Ibn al-Faraḍī, *Tārīkh 'ulamā' al-Andalus*, ed. I. al-Abyārī (Cairo/Beirut 1989), 1:687, no. 1202; Fierro, *Heterodoxia*, 113-18.

46. Ibn Ḥayyān, *Muqtabis III*, 12; see R. Dozy, *Histoire des musulmans en Espagne* (Leiden 1932), 2:90-91.

47. Ibn Ḥayyān, *Muqtabis III*, 39. The *fitna* alluded to here may be that of Ibn af n, but the historian may also have been referring more generically to the large number of smaller rebellions that 'Abdallāh faced.

48. Maslama b. Qāsim, *Rutbat al-ḥakīm*, 16. Regarding this passage, see Forcada, «Books», 63-64.

49. R. Dozy, «Nouveaux documents pour l'étude de la religion des Harraniens», in *Actes du sixième Congrès international des orientalistes tenu en 1883 à Leide* (Leiden 1985), 285-89. Other manuscripts state 439/1047 and 442/1050. About these dates and Dozy's argumentation see Fierro, «Bāṭinism», 93-94 and section 8 below.

916). Therefore, Maslama expressed the contrast between the idealized memory of the good times of ʿAbd al-Raḥmān II and the less prosperous times of the following emirs that are analyzed below[50].

The Rational Sciences between the First Fitna *and the Advent of the Caliphate: At the Margins*

As we saw in the previous section, although there were no significant reactions against the rational sciences like al-Manṣūr's persecution or the active opposition of religious scholars in the epoch of ʿAbd al-Raḥmān II, these disciplines were marginalized and attributed to marginal individuals. The best testimony of what could be considered an official discourse on the rational sciences appears in the works of Ibn ʿAbd Rabbihi (246-328/860-940)[51]. He was more than just a court poet; he had received sound religious training from many teachers, including Andalusī disciples of Aḥmad b. Ḥanbal. From his position as head of the court poets, he cultivated a remarkable influence over learned Cordobans, for whom he wrote one of the most important treatises on *adab* in Arabic literature, *al-ʿIqd al-Farīd*. The work may have been written around the time ʿAbd al-Raḥmān III proclaimed the caliphate (316/929). Given that Ibn ʿAbd Rabbihi joined the court in the last days of the emirate of Muḥammad, the *ʿIqd* may be considered a reflection of the cultural atmosphere of ʿAbdallāh's emirate and the beginning of the reign of ʿAbd al-Raḥmān III. The work refers to the rational sciences in several passages. On the one hand, Ibn ʿAbd Rabbihi deals at some length with certain medical subjects, particularly diet, saying that a good Muslim subject of the ruler should be knowledgeable about these matters[52]. Ibn ʿAbd Rabbihi also used positive terms when mentioning Greek astronomy describing the heavens[53]. On the other hand, philosophy, rational theology, alchemy, and astrology

50. See below sections 4-5.

51. On Ibn ʿAbd Rabbihi's stance toward the rational sciences, see Forcada, «Ibn ʿAbd Rabbihi».

52. Ibn ʿAbd Rabbihi, *al-ʿIqd al-Farīd*, ed. Aḥmad Amīn, Aḥmad al-Zayn, and Ibrāhīm al-Abyārī (Cairo 1940-53), 6:277-80 and 6:290-97; and Forcada, «Ibn ʿAbd Rabbihi», 141-43.

53. Ibn ʿAbd Rabbihi, *al-ʿIqd*, 3:405; Forcada, «Ibn ʿAbd Rabbihi», 144.

were criticized in general terms[54]. Ibn ʿAbd Rabbihi also wrote two poems of an anti-astrological nature[55]. One refers to an astrological session held in the private home of a notable Umayyad general, Muḥammad b. al-Jahwar al-Bukhtī, at some time in the late third/ninth century. Another poem criticizes an Andalusī Shāfiʿī religious scholar named Abū ʿUbayd al-Balansī (d. 295/907 or 304/916) and nicknamed "Ṣāḥib al-Qibla." Our interest in these poems is the way they speak of astrology in a marginal context. In the poem, a glorious general consults astrologers (away from the curious eyes and ears of the court, perhaps clandestinely in the general's home) on a subject related to governance at home. A young Ibn ʿAbd Rabbihi, who finds out about this meeting by chance, admonishes the veteran general about the futility of astrology. Abū ʿUbayd al-Balansī had a thorough knowledge of astronomy, natural philosophy, and theology and was probably able to determine with some accuracy the direction of the *qibla*[56]. Ibn ʿAbd Rabbihi criticizes him for practicing astrology and professing his belief in Muʿtazilī thought. Abū ʿUbayd did not belong to courtly circles nor was he a relevant religious scholar of his time. He was only a member of a secondary school in al-Andalus, a Shāfiʿī, to whom Ibn ʿAbd Rabbihi taught what is lawful and unlawful in rational disciplines[57].

Ibn Masarra is another good example of the general association of astrology and other controversial disciplines to what is considered marginal in the broad sense of the word. The biographer Ibn al-Faraḍī (351-403/962-1013) described him as a "wise philosopher, physician, astrologer and astronomer" (*kāna … faylasūfan ʿalīman wa-ṭabīban wa-munajjiman falakiyyan*)[58]. This statement is consistent

54. Ibn ʿAbd Rabbihi, *al-ʿIqd*, 2:208, and 2:257; Forcada, «Ibn ʿAbd Rabbihi», 146-48. See also the section on Muʿtazilism and, more particularly, the text borrowed from al-Kindī in *al-ʿIqd*, 2:382-83; Forcada, «Ibn ʿAbd Rabbihi», 149-50.

55. J. Samsó, «Alfonso X y los orígenes de la astrología hispánica», in *Estudios sobre historia de la ciencia árabe*, ed. J. Vernet (Barcelona 1980), 100-1; Forcada, «Ibn ʿAbd Rabbihi», 136-41.

56. J. Samsó, *On Both Sides of the Strait of Gibraltar: Studies in the History of Medieval Astronomy in the Iberian Peninsula and the Maghrib* (Leiden 2020), 131-32.

57. The poem is transmitted by Saʿīd al-Andalusī, *Kitāb Ṭabaqāt al-umam*, ed. Ḥ. Bū ʿAlwān (Beirut 1985), 160-61. Saʿīd criticizes the critic, implying that Ibn ʿAbd Rabbihi was ignorant.

58. Ibn Ḥayyān *Muqtabis V*, ed. P. Chalmeta (Madrid 1979), 31 quoting Ibn al-Faraḍī's *Tārīkh ʿulamāʾ al-Andalus*, where this sentence does not appear.

with the intellectual background of Ibn Massara's works and the ultimate purposes of "religious *bāṭinī* thought"[59]. Yaḥyā b. Yaḥyā b. al-Samīna (d. 315/927)[60] is yet another religious scholar with a similar intellectual profile. He was a Muʿtazilī theologian with a sound knowledge of astronomy, astrology, and medicine who, like Ibn Masarra, went to the East and returned. The abovementioned Ibn al-Qiṭṭ was a different type of outsider. In his novelistic biography, the controversial disciplines are an essential element, as summarized by Ibn al-Abbār[61]:

He belonged to the people interested in science and art (*ṣināʿa*)[62], astrology (*nijāma*) and the configuration of the heavens (*hayʾa*). He appeared in the days of the emir ʿAbdallāh b. Muḥammad, [days] that were so shaken by the *fitna*, [in which he] claimed the throne for himself, manifested the *ḥiṣba* and the wish to fight the infidels[63], even though he made predictions (*yatakahhanu*) and he pretended to be another (*yumawwihu*)[64].

Ibn al-Abbār's text pieces together several passages from Ibn Ḥayyān's *Muqtabis III*, whose sources are authors who flourished in the fourth/tenth century. In particular, Ibn al-Abbār's mention of Ibn al-Qiṭṭ's knowledge of astronomy and astrology stems from the lost *Kitāb al-nasab*[65] written by a historian who, like Ibn al-Qiṭṭ, was descended from emir Hishām, Muʿāwiya b. Hishām al-Marwānī

59. With respect to the philosophical background of Ibn Masarra, see R. Ramón Guerrero, «Ibn Masarra, gnóstico y místico andalusí», in *Las raíces de la cultura europea*, ed. José Solana Dueso Elvira Burgos Díaz and Pedro Luis Blasco Aznar (Zaragoza 2004), 224-40; P. Garrido Clemente, «¿Era Ibn Masarra de Córdoba un filósofo?», in *Anaquel de estudios árabes* 21 (2010), 123-40; and the recent article by J. Bellver, «The Beginnings of Rational Theology in al-Andalus: Ibn Masarra and His Refutation of al-Kindī's *On First Philosophy*», in *al-Qanṭara* 41 (2020), 323-71, which contributes very interesting nuances.

60. Ibn al-Faraḍī, *Tārīkh*, 3:913, no. 1578; Ṣaʿīd al-Andalusī, *Ṭabaqāt al-umam*, 161-62; Fierro, *Historia de los autores*, Corán, ID 40, Dogmática, ID 12, Historia, ID 43, Otros, ID 54.

61. Ibn al-Abbār, *al-Ḥulla al-siyarāʾ*, ed. Ḥ. Muʾnis (Cairo 1963), 2:368, no. 199.

62. Balty-Guesdon, *Médecins*, 29-30, understands art as alchemy. See below note 64.

63. He died while laying siege to the Christian city of Zamora.

64. Balty-Guesdon interprets *yumawwihu* as gilding or silvering an object made of bronze, from this she suggests that Ibn al-Qiṭṭ knew alchemy. In my opinion, the meaning «to pretend to be another» makes more sense because Ibn al-Qiṭṭ pretended to be the *mahdī*.

65. Ibn Ḥayyān, *Muqtabis III*, 139.

l-Shabānisiyya, or al-Shabīnasī (fl. from the late third/ninth century to the early fourth/tenth century)[66]. Ibn al-Abbār's mention of Ibn al-Qiṭṭ's abilities to make accurate predictions appears in two passages of the *Muqtabis*, in which it is said that the pretender would make predictions to convince the Berbers of his charismatic leadership and to encourage them in important battles, such as the siege of Zamora[67]. In spite of the legendary background of these stories, there must be an element of truth behind them, considering that Ibn Hishām al-Shabānisiyya lived around the time of the events and would have had knowledge of the Umayyad context. Ibn al-Qiṭṭ and al-Shabānisī are descendants of the first emir who had an astrologer in his service[68]. Therefore, Ibn al-Qiṭṭ's practice of astrology and possibly other controversial arts is not a tale invented to embellish or tarnish a reputation, but rather a story that describes a common activity of the Umayyad elite, one which was, however, disapproved of in this period, as also shown by the story of Muḥammad b. al-Jahwar al-Bukhtī.

The Rational Sciences between the First Fitna *and the Advent of the Caliphate: The Uncontroversial Disciplines*

The data on scientific activity in the emirate of ʿAbdallāh and the periods that immediately preceded and followed it are consistent with the situation described above. There were few scholars and the vast majority of them knew or practiced uncontroversial disciplines such as the division of inheritance or medicine[69]. Under ʿAbdallāh, a new generation of physicians emerged and went on to flourish in the period of ʿAbd al-Raḥmān III. The most important of these, Saʿīd b. ʿAbd Rabbihi (d. 332/942-3, or 342/953-4, or 356/966-7), is mentioned for the first time as a poet in the court of ʿAbdallāh[70].

66. J. Lirola, «Ibn Hišām al-Marwānī, Muʿāwiya», in *Biblioteca de al-Andalus* (Almería 2004-12), 3:468-70.

67. Ibn Ḥayyān, *Muqtabis III*, 133 and 135, quoting ʿĪsā b. Aḥmad al-Rāzī (fl. second half of the fourth/tenth century).

68. Samsó, *Las ciencias*, 29.

69. See the following works: Balty-Guesdon, *Médecins*, 597-638 (general); D. Lamrabet, *Introduction à l'histoire des mathématiques maghrébines* (Rabat 2014), 49-66 (mathematics and astronomy); M. al-Khaṭṭābi, *al-Ṭibb wa-l-aṭibbāʾ fi l-Andalus al-Islamiyya* (Casablanca 1988), 1:39-48 (medicine).

70. Ibn Ḥayyān, *Muqtabis III*, 47.

Besides being a professional physician skilled in the practice and theory of medicine, with a good knowledge of natural philosophy, he was a religious scholar of some note[71]. Another good example of how science may have fit in a religiously oriented context is *Kitāb al-hay'a*, the cosmological treatise written by the religious scholar Qāsim b. Muṭarrif, who flourished in the first half of the fourth/tenth century[72]. The contents of the book[73] are compatible with accepted religious norms: first, there is a description of the heavens based on Ptolemaic astronomy with hints of natural philosophy; second, there are procedures and devices for determining the time. Saʿīd b. ʿAbd Rabbihi and Qāsim b. Muṭarrif are good examples of the "mediocre philosophers" alluded to by Maslama b. Qāsim in his *Rutbat al-ḥakīm*.

71. See R. Kuhne Bravant, «Ibn ʿAbd Rabihhi, Abū ʿUṯmān», in *Biblioteca de al-Andalus* (Almería 2004-12), 1:629-33. He wrote a didactic poem on medicine addressed to ʿAbd al-Raḥmān III that was probably intended to make the fundamentals of Galenic medicine accessible to the learned circles of the court. Ibn Saʿīd al-Maghribī, *al-Mughrib fī ḥulā l-Maghrib*, ed. Sh. Ḍayf (Cairo 1955), 1: 121, gives a funny story about Saʿīd b. ʿAbd Rabbihi: ʿAbd al-Raḥmān III summoned him to study the sciences of the ancients together. However, Saʿīd addressed him using coarse and colloquial language and the caliph expelled the physician from his presence. The anecdote does not seem very credible, but it suggests the caliph's interest in the sciences.

72. The author is identified as the traditionist Abū Muḥammad Qāsim b. Muṭarrif b. ʿAbd al-Raḥmān al-Qaṭṭān, whose biography is given in Ibn al-Faraḍī, *Tārīkh*, 616, no. 1074. Or he may be Qāsim b. Muṭarrif al-Ṭulayṭūlī mentioned by Ibn Ḥajar al-ʿAskalānī, *Lisān al-mīzān*, ed. ʿA. Abū Ghudda (Beirut 2002), 6:383, no. 6133. According to Ibn Ḥajar, he went to Egypt (to al-Qulzum), where he studied under the religious scholar Khayr b. ʿArafa (d. 283/896-97). Ibn Ḥajar also says that Maslama b. Qāsim was in some way a disciple of Qāsim b. Muṭarrif. It is by no means certain that the two Qāsim are one and the same person. Ibn al-Faraḍī says that Qāsim was a Cordoban born in Málaga whereas Ibn Ḥajar says that he was from Toledo. The list of Qāsim's teachers differs in the two sources. He lived long enough to know Maslama al-Majrīṭī because his *Kitāb al-hay a* mentions astronomical observations made by «Maslama b. Aḥmad» at a date that is most uncertain (on the date, see Samsó, *On Both Sides*, 504-5). According to M. Comes, «Ibn Muṭarrif al-Qaṭṭān, Qāsim», in *Biblioteca de al-Andalus*, ed. Jorge Lirola Delgado and José Miguel Puerta Vílchez (Almería 2004-12), 4:304, in which there is an extensive discussion of the dating of Qāsim b. Muṭarrif, he may have lived between 261/875 and 364/975.

73. J. Casulleras, «The Contents of Qāsim ibn Mutarrif al-Qaṭṭān's *Kitāb al-hay'a*», in *The Formation of al-Andalus, Part II: Language, Religion, Culture and the Sciences*, ed. Maribel Fierro and Julio Samsó (Aldershot 1998), 339-58.

The Rational Sciences in the Caliphate: ʿAbd al-Raḥmān III and the Influence of al-Ḥakam

Ibn Juljul says that the sciences flourished again in al-Andalus under ʿAbd al-Raḥmān III[74]. The author seems to suggest that, after the troubles of the first *fitna*, Cordoban society and the court stabilized and their economic situation improved; this positively influenced scientific practice[75]. The attitude of the caliph toward the controversial sciences was contradictory. Astrology was still absent from the palace but the sons of the caliphs received a good education[76] and most of the royal preceptors, including Maslama b. Qāsim, knew the rational sciences[77]. The followers of Ibn Masarra were persecuted by the caliph, not for practicing astrology or philosophy, but in relation to complex religious issues that were only indirectly connected with the rational sciences. There was only one case of persecution for the practice of controversial disciplines, that of Idrīs b. Maytham (or al-Haytham)[78]. Al-Zubaydī (d. 379/989) says that he knew logic, had read the books of the ancients (*awā'il*), was an expert in arithmetic (*ḥisāb*) and astrology (*tanjīm*), and that he was accused of deviating from the religion (*kāna yurmā bi-l-khurūj ʿan al-milla*). Al-Zubaydī therefore relates that he was accused of practicing the rational sciences, although not explicitly. We do not know anything more about this persecution, which may have been a local phenomenon in which the ruling dynasty or the religious scholars of Cordoba were not involved[79]. Finally, it should be noted that, in

74. Ibn Juljul, *Ṭabaqāt al-aṭibbā'*, 97-98.

75. Forcada, «Books», 74-76.

76. See, for example, Ibn Ḥayyān, *Muqtabis V*, ed. P. Chalmeta (Madrid 1979), 15-16: ʿAbd al-Raḥmān was the most educated prince of the Umayyads and his sons were even more educated. The passages only mention religious and literary matters (*ḥadīth*, *sunna*, *ādāb*) but the training included the scientific disciplines.

77. Forcada, «Books», 71.

78. Al-Zubaydī, *Ṭabaqāt al-naḥwiyyīn*, ed. M. A, Ibrāhīm (Cairo 1973), 306-7, no. 286, names him Idrīs b. Maytham; al-Ḥumaydī, *Jadhwat al-muqtabis*, ed. B.ʿA. Maʿrūf and M. B. ʿAwwād (Tunis 2008), 239, no. 313, Idrīs b. al-Haytham; see more on him in M. L. Ávila et al., *Prosopografía de los ulemas de al-Andalus*, https://www.eea.csic.es/pua/ (Granada, s.a.), ID 2127 (consulted 25 January 2023).

79. Al-Zubaydī, who is the original source from whom other biographers quote, says that Ibn Maytham/al-Ḥaytham moved from Seville to Cordoba but

the ruined remains of Madīnat al-Zahrā', traces of the practice and symbolic use of the most controversial disciplines have been found[80].

Although ʿAbd al-Raḥmān III was an active and learned caliph, the flourishing of the sciences is closely associated with the figure of his son, al-Ḥakam II. Ṣāʿid al-Andalusī (d. 462/1070) says that al-Ḥakam, while still a prince, promoted the importation of books to al-Andalus, imitating the most enlightened kings, particularly the ʿAbbāsids[81]. Ṣāʿid dates this process "to the end of the first part of the fourth/tenth century," which roughly coincides in time with the proclamation of the Umayyad caliphate (316/929) and the building of the palace city of Madīnat al-Zahrā' (started in 325/936), when the future al-Ḥakam II was about twenty years old. Coincidence or otherwise, after 325/936, Maslama b. Qāsim returned from his long travels in search of knowledge. Perhaps it is no coincidence that some of the most important elements that make up the history of the sciences during the reign of ʿAbd al-Raḥmān III occurred in the period when prince al-Ḥakam exerted a decisive influence on the cultural life of the dynasty. Among these elements, we can cite the following.

(1) The revision of the Arabic translation of Dioscorides' *Materia Medica* was the most important scientific project of the caliphate of ʿAbd al-Raḥmān III and is a unique example of international and interfaith collaboration[82].

(2) The appearance at court of a man of science as notable and influential as Ḥasdāy b. Shaprūṭ (d. ca. 364/975) led the process of creating a scientific and philosophical culture in the Jewish community and collaborated with the Umayyads and their relations with the Jews of Kairouan and other communities[83].

does not specify where he was accused. The date of the birth and death of the author are not included in any source. However, since al-Zubaydī includes him in the sixth and last generation of Andalus grammarians, it is likely that most of his life coincided with the caliphate of ʿAbd al-Raḥmān III.

80. M. Acién, «Materiales e hipótesis para una interpretación del salón de ʿAbd al-Raḥmān III al-Nāsir», in *Madīnat al-Zahrā'. El Salón de ʿAbd al-Raḥmān III* (Cordoba 1995), 179-95; S. Calvo Capilla, «The Reuse of Classical Antiquity in the Palace of Madīnat al-Zahrā' and Its Role in the Construction of Caliphal Legitimacy», in *Muqarnas* 31 (2014), 1-33.

81. Ṣaʿīd al-Andalusī, *Ṭabaqāt al-umam*, 162; Forcada, «Books», 73-76.

82. Samsó, *Los ciencias*, 111-15.

83. Balty-Guesdon, *Médecins*, 182-88; S. Stroumsa, «Between Acculturation and Conversion in Islamic Spain: The Case of the Banū Ḥasdāy», in *Mediter-*

(3) The *qibla* of the mosque of Madīnat al-Zahrā', built by 'Abd al-Raḥmān III, seems to have been oriented by an expert in mathematical astronomy[84]; he also might have been an astrologer.

Al-Ḥakam II is considered the wisest ruler in the history of al-Andalus and is associated with a library that was thought to have had as many volumes as the library of Alexandria[85]. As indicated, the education of the princes was a matter of the great importance at the court, and al-Ḥakam was renown for his special passion for learning and collecting books. An intellectual biography of al-Ḥakam II has not yet been written[86] and the sources, besides Ṣā'id al-Andalusī, offer scant information about the caliph's contribution to the development of the sciences of the ancients. However, there is some evidence regarding the caliph and the controversial disciplines. For example,

(1) The historian Ibn 'Idhārī (fl. late seventh/thirteenth to early eighth/fourteenth centuries)[87] explains that al-Ḥakam possessed a knowledge of the future (*'ilm al-ḥidthān*)[88] that enabled him to know

ranea: International Journal for the Transfer of Knowledge 1 (2016), 11-36; A. López López, «Ibn Ḥasdāy, Abū l-Faḍl», in *Biblioteca de al-Andalus*, ed. Jorge Lirola Delgado and José Miguel Puerta Vílchez (Almería 2004-12), 3:303-9.

84. Samsó, *On Both Sides*, 139-40, and below, section 7.

85. É. Lévy-Provençal, *Histoire de l'Espagne musulmane, Tome III. Le siècle du Califat de Cordoue* (Paris 1967), 493-50; D. Wasserstein, «The Library of al- akam al-Mustan ir and the Culture of Islamic Spain», in *Manuscripts of the Middle East* 5 (1990-1), 99-105; C. Sánchez-Moliní, «Las bibliotecas y al-Andalus», in *El Saber de al-Andalus. Textos y Estudios II*, ed. J. Carabaza Bravo and A. T. Mohamed Essawy (Seville 1999), 87-89.

86. M. Martínez Antuña, *La Corte literaria de Alhaquen II en Córdoba* (San Lorenzo del Escorial 1929), is still a good approach to the subject; for a recent summary, see M. G. al-Wasif, «al-Mustanṣir al-Ḥakam», in *Biblioteca de al-Andalus*, ed. Jorge Lirola Delgado and José Miguel Puerta Vílchez (Almería 2004-12), 6:590-98.

87. Ibn 'Idhārī, *Bayān*, ed E. Lévi-Provençal and G. S. Colin (Paris 1949-51), 2:257-58.

88. Ibn 'Idhārī, *Bayān,* 2:257, has *naẓar bi-l-ḥadathān* and mentions the procedure described by M. Marín, «*'Ilm al-nuŷūm* e *'ilm al-ḥidṯān* en al-Andalus», in *Actas del XII congreso de la UEAI (Málaga 1984)* (Madrid 1986), 509-35, at 514: foreknowledge of future events is sometimes gained through the interpretation of external signals that exist in the body of the person to whom these facts are attributed. Al-Ḥakam reads the future in the body al-Manṣūr; see also J. Samsó, «Astrology, Pre-Islamic Spain and the Conquest of Al-Andalus», in *Revista del*

that al-Manṣūr would usurp the power of the dynasty and build the palace of Madīnat al-Zāhira[89]. Ibn ʿIdhārī mentions that al-Manṣūr likely took note of al-Ḥakam's predictions and acted in accordance with them. This part of the story may have an element of truth behind it because it was said that al-Manṣūr continued to consult astrologers after persecuting those who practiced astrology. Clearly, this is a fabricated story that indicates that posterity attributed something more to the caliph than mere erudition. The text is symbolically important because it connects the toughest critic of the controversial sciences with its most conspicuous promoter of the same.

(2) There are several references to astrology, alchemy, and philosophy which are, in general, more objective.

• The caliph had a personal astrologer, Aḥmad b. Fāris[90], who was especially well established in the court in the 360s/970s[91], and around him the caliph's astrology began to flourish[92].

• Al-Ḥakam II tried to hire the services of ʿAbdallāh al-Sarī, a mathematician who knew alchemy, but he did not accept to work for the court[93].

• Ibn Juljul gave a detailed description of the death of Ḥunayn b. Isḥāq, which he claimed to have taken from a minister of al-Ḥakam

Instituto Egipcio de Estudios Islámicos 23 (1985-86), 79-94; and J. Samsó, «¿Fue Mūsà ibn Nuṣayr un astrólogo», in *Medievalia* 9 (1990), 231-36, on other figures to which this knowledge (or power) is attributed.

89. This is the palace al-Manṣūr built for himself and his personal court. Ibn ʿIdhārī explains that al-Ḥakam knew that there was a particular spot of land on which a palace would be built from which al-Andalus would be ruled and tried to seize it for himself.

90. M. Forcada, «Astrology and Folk Astronomy: The Mukhtasar min al-Anwāʾ of Aḥmad ibn Fāris», in *Suhayl* 1 (2000), 107-205; and M. Forcada, «Ibn Fāris, Aḥmad», in *Biblioteca de al-Andalus*, ed. Jorge Lirola Delgado and José Miguel Puerta Vílchez (Almería 2004-12), 3:149-50.

91. Al-Umawī l-Qurṭubī, *al-Mustawʿib al-kāfī*, ed. Yūsuf al-Samadī (Rabat 2019), 217: al-Ḥakam, in 358/968-69, ordered Ibn Fāris to check if Canopus is visible from the shore of Málaga. Ibn Ḥayyān, *Muqtabis VII*, ed. ʿA. R. ʿAlī l-Ḥajjī (Beirut 1965), 112: in 1 Rabīʿ al-Awwal 363 (30 November 973), ʿAbd al-Karīm, the son of Aḥmad b. Fāris became a valet of the court at the request of his father. Ibn Bassām, *al-Dhakhīra fī maḥāsin ahl al-jazīra*, ed. I. ʿAbbās (Beirut 1979), 4:79; Ibn al-Abbār, *al-Ḥulla*, 1:270; Ibn Saʿīd, *al-Mughrib fī ḥulā l-Maghrib*, ed. Sh. Ḍayf (Cairo 1955), 1: 212-13; Ibn Fāris cast the natal horoscope of al-Muẓaffar, Almanzor's son, born in 364/975.

92. J. Vernet, *El islam de España* (Madrid 1993), 180; Forcada, «Astrology in al-Andalus», 153-54.

93. Ṣaʿīd al-Andalusī, *Ṭabaqāt al-umam*, 166.

II, who learned of it from the caliph himself[94]. If al-Ḥakam knew these details about Ḥunayn's death, we can assume that he was also well acquainted with his work, which mostly consisted of the translation of medical and philosophical treatises.

• Less convincing than the previous data, but nonetheless appealing is a letter purportedly written by an emperor of Byzantium to al-Ḥakam II. The emperor states that he sent books on philosophical subjects to a high courtier of the caliph[95]. This letter appeared in a manuscript on the cosmological treatise attributed to Apollonius (Ar. Balīnūs) of Tyana entitled *Kitāb sirr al-khalīqa* or *Kitāb al-ʿilal*. The letter was likely spurious but it fits well in the context of the time: books were sent from Byzantium to al-Andalus, as demonstrated by the revision of the Arabic translation of Dioscorides' *Materia Medica* mentioned above; moreover, the treatises attributed to Apollonius of Tyana and, among them, the *Kitāb sirr al-khāliqa*, are cited in the *Rutbat* and *Ghāyat al-ḥakīm*[96]. *Kitāb sirr al-khāliqa* is a pseudepigraphic treatise possibly written in the time of al-Ma'mūn (r. 198–218/813–33)[97]; thus, it is almost impossible that it was one of the treatises alluded to in the letter. Even if we assume that the letter was added to the manuscript accidentally, it is difficult to take it at face value. However, the fact that an unknown forger thought that some readers may believe what the letter said indicates that al-Ḥakam and his circle had a reputation for having knowledge of the controversial disciplines and that this was well established.

(3) Third, we can cite the introduction of the sciences of the ancients by ʿAbd al-Raḥmān II. The account of this event, which is mentioned in the fifth/eleventh century by the historian Ibn Ḥayyān[98], stems from the historian al-Ḥasan b. Mufarrij (b. 343/954–

94. Ibn Juljul, *Ṭabaqāt al-aṭibbāʾ*, 69–70.

95. S. M. Stern, «A Letter of the Byzantine Emperor to the Court of the Spanish Umayyad Caliph al-Ḥakam», in *Al-Andalus* 26 (1961), 37–42.

96. E. J. Holmyard, «Maslama al-Majrîṭî and the Rutbatu'l-Hakim», in *Isis* 6 (1924), 299–300; Maslama b. Qāsim, *Ghāyat al-ḥakīm*, 107 and 110.

97. Van Bladel, *The Arabic Hermes*, 170–71.

98. Ibn Ḥayyān, *Muqtabis II/1*, ed. M. ʿA. Makkī (Riyadh 2003), 278. Another version of this passage appears in Ibn Faḍlallāh al-ʿUmarī, *Masālik al-abṣār fī mamālik al-amṣār*, ed. K. S. al-Jubūrī and M. al-Najm (Beirut 2010), 24:366. On these texts, see M. Forcada, «Al-Mu'taman ibn Hūd in Context: Kingship and Philosophy in al-Andalus (10th–11th Centuries)», in *SI* 118 (2023), 13–18: and Forcada, «Books», 55. In summary, ʿAbd al-Raḥmān II funded his astrologer,

5 or 348/959-60, d. after 430/1038-9), who quotes from an almost unknown author from the first half of the fourth/tenth century named Muḥammad b. Ḥafṣ b. Faraj. Al-Ḥakam contributed to recovering the memory of his predecessor. Ibn Ḥayyān transmits from Ibn al-Faraḍī a text written by al-Ḥakam II himself in which he explains that ʿAbd al-Raḥmān II was knowledgeable in the literary and religious disciplines and "philosophy, astronomy, and astrology"[99]. The passage, which seems to refer more to al-Ḥakam himself than to his ancestor, links the caliph with a Cordoban tradition of studying the ancient sciences. It seems as though some Cordobans strove to recover the memory of a society, after the first *fitna*, in which the sciences of the ancients flourished; and that this memory was revitalized after the second *fitna* or after the expurgation of al-Ḥakam II's library. It is worth noting that the narrative about ʿAbd al-Raḥmān II strongly resembles the stories about the activities of the ʿAbbāsid caliph al-Maʾmūn.

All in all, there is much more information on the relationship between al-Ḥakam II and the controversial disciplines than there is between him and the uncontroversial disciplines. Therefore, there is little doubt that al-Ḥakam II's vast erudition included matters such as astrology, philosophy, and alchemy, which were practiced by a significant number of scholars, and that they were tolerated, if not promoted, by his father. Al-Ḥakam II was not alone. His brother ʿAbdallāh was as learned as he was. It is rightly said that initiatives such as the revision of the translation of *Materia Medica* or establishing the library of al-Ḥakam II were devised to affirm the political status of Cordoba and al-Andalus in relation to other centers of power[100], particularly Baghdad and Kairouan. However, there may be other reasons. Fierro speaks of the impulse toward "Umayyad esotericism," in which Maslama b. Qāsim was a central author, intended to counter Fāṭimid esotericism[101]. The image of a caliph

poet, and courtesan ʿAbbās b. Nāṣiḥ to bring books from Baghdad on astronomy, astrology, music, medicine, and other disciplines of the ancients; ʿAbd al-Raḥmān II, the crown prince, disseminated them among the people of Cordoba.

99. Ibn Ḥayyān, *Muqtabis II/1*, 279; and Forcada, «Astronomy», 10.

100. Wasserstein, «The Library», 101-3; and Balty-Guesdon, *Médecins*, 158-75.

101. Fierro, «Plants»; and Fierro, «Heresy and Political Legitimacy in al-Andalus», in *Heresy and the Making of European Culture: Medieval and Modern Perspectives*, ed. Andrew P. Roach and James R. Simpson (Farnham 2013), 52-76.

(and a state) endowed with the widest possible knowledge, both religious and rational, may have been thought to counterbalance, on a symbolic level, the presumption of omniscience attributed to the Shīʿī imam. In this regard Fierro says that " ʿAbd al-Raḥmān III may have allowed ʿAbd Allāh – and perhaps others among his sons – to be initiated in the wisdom Maslama was an expert on as a way of ensuring that his successor could rival the Fatimid caliph's"[102]. However, ʿAbdallāh tried to use his reputation to rise up against his father and so he was executed in 338/950 or 339/951[103]. The persecution of the Masarrīs and other scholars started immediately afterward; Fierro considers it a consequence of ʿAbdallāh's rebellion, which forced the caliph to reconsider his attitude toward the controversial disciplines and make concessions to the orthodox[104]. Thus, according to Fierro, the *fitna* alluded to by Maslama would have been in this period[105]. Although Maslama was not persecuted, he belonged to the wrong party; while no source says that he was a Masarrī, he could identify with them. Regardless of whether the *fitna* alluded to by Maslama is this one or the "first *fitna*"[106], the execution of ʿAbdallāh was a decisive turning-point in Maslama's life. He was not al-Ḥakam's man since the caliph profoundly disliked his religious works. Ibn Ḥajar (773-852/1372-1449), one of the best sources on Maslama b. Qāsim[107], mentions in this regard that Maslama held (in his *Kitāb al-ṣila*) an opinion about al-Karābīsī's beliefs on the createdness of the Qur'ān that was contrary to al-Ḥakam's opinion, and that "the caliph criticized this [opinion] of Maslama and said obscenities about the truth of Maslama through-

102. Fierro, «Plants», 138-39.

103. The death of ʿAbdallāh is a curious chapter in the secret and «esoteric» history of the Umayyads, as shown in Fierro «Plants», 139-43. ʿAbd al-Raḥmān III executed ʿAbdallāh personally.

104. Fierro, «Bāṭinism», 109.

105. Fierro «Bāṭinism», 98-99; and Fierro, «Plants», 130-31.

106. Fierro's hypothesis is a good solution to the problem posed by the *fitna* and makes sense in the biography of Maslama. However, Maslama says that he began the *Rutbat al-ḥakīm* after the *fitna*, and the execution of ʿAbdallāh and the writing of the book were almost concurrent. Maslama refers to a span of time that started with the *fitna* when the «mediocre philosophers» monopolized the discourse of rational sciences. A process of this kind needs some time, the period between the first *fitna* and the middle of the fourth/tenth century.

107. Ibn Ḥajar, *Lisān*, 8:61-62, no. 7737; and Fierro, «Bāṭinism», 89.

out his book"[108]. After the execution of ʿAbdallāh, al-Ḥakam acquired his books[109]; thus he took symbolical possession of the intellectual legacy of his brother. It is no coincidence that Maslama began to write the *Rutbat al-ḥakīm* in 339/950, the same year ʿAbdallāh was executed. There are two possible interpretations of this fact. First, together with the library of his brother, al-Ḥakam acquired the services of his staff, including Maslama, despite al-Ḥakam's poor opinion of Maslama. Second, Maslama retired to private life and devoted his time to organizing his notes and previous works on alchemy, in order to write *Rutbat al-ḥakīm*[110]. Whatever the case, Maslama's life and work was respected by the Umayyads and he was able to live in peace surrounded by his disciples. Alchemy and magic were, after all, matters that, like astrology, most interested the powerful, if kept in secret.

The Rational Sciences in the Caliphate: The Public Light

We have very scarce evidence that directly associates ʿAbd al-Raḥmān III to the controversial disciplines. As we have seen, the religious politics of ʿAbd al-Raḥmān III were a complex game in which the caliph tried to maintain a balance between several parties[111]. In order to achieve his goals, the caliph had to satisfy the religious scholars with measures and public gestures, such as the proclamation of the Mālikī school as the official school of the state, the persecution of the disciples of Ibn Masarra (Masarrīs), and the public display a degree of discretion with respect to the controversial disciplines. In many aspects, including religion, the governance of al-Ḥakam follows the lines established by his father, but in the field of the sciences, he took a step further by allowing the sciences

108. Ibn Ḥajar, *Lisān*, 3:198. On the doctrines of al-Karābīsī that are the subject of this discussion, see A. Osman, *The Ẓāhirī Madhhab (Third/Ninth-Tenth/Sixteenth Century): A Textualist Theory of Islamic Law* (Leiden 2014), 29-30; and N. Hurvitz, *The Formation of Hanbalism: Piety into Power* (New York 2002), 152-57.

109. Ibn al-Abbār, *al-Ḥulla*, 1:201.

110. Maslama b. Qāsim, *Rutbat al-ḥakīm*, 21: the author says that he wrote the book on the basis of preceding works.

111. Moreover, see M. Fierro, *ʿAbd Al-Rahman III. The First Cordoban Caliph* (London 2005), 125-31; and Fierro, «Heresy», 60-70.

of the ancients a greater presence in public life. The policy in favor of all rational sciences, including those considered controversial, initiated during the caliphate of ʿAbd al-Raḥmān III, was clearly reaffirmed during the caliphate of al-Ḥakam II. As noted, "Umayyad esotericism" and, in general, the promotion of the rational sciences, may have been a good strategy in terms of foreign politics, but it was equally effective, or even more so, in domestic politics. Having both religious and rational knowledge was an affirmation of the caliph's moral and symbolic authority over the experts in both areas; this was particularly important vis à vis the religious scholars, since most of the experts in rational sciences served the ruling power directly or indirectly. It makes sense that, in the projects of dynasty (namely, better political strategy), caliphs took policy positions similar to those of al-Ma'mūn of Baghdad, who tried to impose rational discourse in religious matters. There are two indications of this.

The first is the vindication of ʿAbd al-Raḥmān II, as mentioned earlier, in which al-Ḥakam II participated. The emir was described by many authors, including al-Ḥakam II, as a ruler who knew the rational and the religious disciplines as well as the experts did. The implicit message seems to be the claim of an Andalusī al-Ma'mūn who disseminated rational knowledge. The second and most important indication is the orientation of mosques, in which al-Ḥakam II challenged the old procedures of establishing the *qibla* with the methods of mathematical astronomy[112]. The stories reported by al-Maqqarī and al-Wansharīsī regarding the reform of the *qibla* of the Great Mosque of Cordoba are particularly eloquent[113]. Al-Ḥakam wanted to move the *qibla* of the Cordoba mosque to the east because astronomers said that the old one was misaligned to the west[114]. In response, religious scholars, particularly a certain "Abū Ibrāhīm"[115], told him that the traditions must be respected and that a change in

112. M. Rius, *La alquibla en al-Andalus y al-Magrib al-Aqṣà* (Barcelona 2000), 174; and Samsó, *On Both Sides*, 141–43.

113. See the translation of the texts in Samsó, *On Both Sides*, 141.

114. Al-Maqqarī, *Nafḥ*, 1:561–62, says, in addition, that ʿAbd al-Raḥmān III did the same in the mosque of Madīnat al-Zahrāʾ.

115. He may be identified with Abū Isḥāq Ibrāhīm b. Masarra al-Tujībī, d. 352/963, Ávila et al., *Prosopografía de los ulemas de al-Andalus*, ID 2152. It is worth noting that Ibn Farḥūn, *al-Dhībāj al-mudhhib*, ed. M. al-Aḥmadī Abū Nūr (Cairo 1972), 1:296–97, no. 1, says that al-Ḥakam held Abū Isḥāq in high esteem even though (or because) he had little fear of the kings.

the *qibla* would be a heretical innovation (*ibtidāʿ*). In al-Wansharīsī's version, it was the "people" (*ʿāmmat al-nās*) who opposed the change[116] and, in both texts, al-Ḥakam avoided escalating the tension and he did not change the *qibla*. Shortly after acceding to the throne[117], the caliph brought the sciences of reason to public light regarding the particularly delicate issue of the *qibla*, arguing implicitly, but clearly, that reason should guide religion. Despite opposition, the caliph insisted and did not surrender to the religious scholars. A few years after the episode of the Great Mosque, al-Ḥakam II sent his astrologer Aḥmad b. Fāris to Malaga to check whether Canopus (Suhayl), whose rising point in winter determined the direction of the *qibla* according to folk procedures, that the religious scholars accepted with few qualms, was really visible from al-Andalus[118]. Aḥmad b. Fāris discussed the case with the religious leaders of the city. Thus, the caliph did not hesitate to send the man who cast his horoscopes to solve a religious problem. As shown by this and other similar anecdotes about Aḥmad b. Fāris and the stories of al-Ḥakam and the controversial matters, the caliph not only supported the normalization of astrology but he also supported debates about rational disciplines. There is an interesting text on this written by al-Zubaydī[119] about his teacher, the linguist Abū ʿAbdallāh al-Rabāḥī (d. 358/969).

He attentively read the books of the theologians, which he mastered, and studied logic (*manṭiqiyyāt*), in which he was proficient. He did not follow, however, any theological school nor [did he] opt for

116. Aḥmad al-Wansharīsī, *al-Miʿyār al-muʿrib*, ed. M. Ḥajjī (Rabat 1981), 1:118. Note that other chronicles mention the participation of the people and religious scholars in opposition to astrology, philosophy, or magic. See al-Maqqārī, *Nafḥ*, 1:221 and 3:185-86, on the purpose of expurgating al-Ḥakam's library; Ibn Ḥayyān, *Muqtabis II/1*, in several passages analyzed in Forcada, «Astronomy», 38-42, on the reason for persecuting the astrologers and philosophers who worked for ʿAbd al-Raḥmān II. Since these episodes are unrelated, we can reasonably surmise that there is some truth behind these stories.

117. As is well known, al-Ḥakam began to renovate the Great Mosque in 350/961.

118. M. Forcada, *Ibn ʿĀṣim (m. 403/1013): Kitāb al-anwāʾ wa-l-azmina, al-qawl fī l-šuhūr* (Madrid 1993), 82-86, and note 92 above.

119. It is worth noting that al-Zubaydī was an opponent of the controversial disciplines. He not only wrote a refutation of Ibn Masarra, but he was also al-Manṣūr's consultant in the case of the expurgation. Fierro, *Heterodoxia*, 162.

any of their principles. He decided for himself based only on what caught his attention at any one time, and *on what he preferred because of the presence* [*of an interesting person to debate with*][120]. Although he reached pure error and blatant absurdity, he could neither refrain from it nor stop debating it. He discussed [it] with experts on *fiqh*, according to the method of argumentation and [also discussed] with physicians and astrologers their subtle concepts and elevated questions, [and dared to] discuss [it] with anyone who had spent a long time studying this science[121].

Al-Rabāḥī[122] was one of the librarians of al-Ḥakam II and also the teacher of two sons of ʿAbd al-Raḥmān III, al-Mughīra and al-Ḥakam. In addition, he taught grammar to numerous disciples, including several who were associated with the rational sciences and Muʿtazilī theology.

(1) Ibn Juljul, with whom he learned Sībawayh's *Kitāb* in 358/968[123].

(2) ʿAlī b. Sulaymān al-Zahrāwī, a religious mathematician and doctor, and a disciple of Maslama al-Majrīṭī[124].

(3) Muḥammad b. Faḍlallāh b. Saʿīd[125], a follower of Ibn Masarra and a Muʿtazilī who was the nephew of the well-known al-Mundhir b. Saʿīd al-Ballūṭī (d. 355/966), one of the most outstanding judges

120. Or, *wa-yu'thiruhu (yu'aththiruhu) bi-l-ḥaḍra*. Here I have tentatively translated the equivocal clause. It must be understood from the context that al-Rabāḥī chose the subjects and the doctrines he studied and discussed rather arbitrarily, following the inspiration of the moment. The next lines of the text suggest that what al-Rabāḥī most liked were discussions with other scholars. The Spanish translation in F. Velazquez Basanta, «al-Rabāḥī, ʿAbd Allāh», in *Biblioteca de al-Andalus*, ed. Jorge Lirola Delgado and José Miguel Puerta Vílchez (Almería 2004-12), 7:137, interprets the passage as «or preferred it [the subject] due to the presence of [God]», which is a possible alternative.

121. Al-Zubaydī, *Ṭabaqāt al-naḥwiyyīn*, 310.

122. On the life and works of this author, see D. A. H. Deheidel, «El gramático andalusí Muḥammad ben Yaḥyà al-Rabāḥī», in *Miscelánea de Estudios Árabes e Islámicos* 51 (2002), 3-17; and Velázquez Basanta, «al-Rabāḥī».

123. Ibn al-Abbār, *al-Takmila li-Kitāb al-Ṣila*, ed. ʿA.S. al-Harrās (Casablanca 1990), 4:47, no. 3119.

124. Ṣaʿīd al-Andalusī, *Ṭabaqāt al-umam*, 171; Ibn al-Abbār, *al-Takmila*, 3:321, no. 2671; and see additional references in Ávila et al., *Prosopografía de los ulemas de al-Andalus*, ID 6502.

125. Ibn al-Abbār, *al-Takmila*, 2:38, no. 1058; Fierro, *Heterodoxia*, 155; and Ávila et al., *Prosopografía de los ulemas de al-Andalus*, ID 10263.

and religious scholars of the epoch who was believed to be a Muʿtazilī[126].

(4) Muḥammad b. Fatḥūn b. Mukram al-Tujībī, a grammarian who fled Cordoba during the second *fitna*. He was the brother of Saʿīd b. Fatḥūn[127], a philosopher who was persecuted in the campaign against Ibn al-Iflīlī[128].

(5) Muḥammad b. ʿĀṣim al-ʿĀṣī[129], a linguist, expert in logic[130], and a victim of the campaign against Ibn al-Iflīlī.

Al-Ḥakam II's library transcended the caliph's private sphere[131] and, consequently, his librarians, did as well. Al-Rabāḥī's closeness to power makes him a good example of the affinities of the ruling power. Due to his broad intellectual profile, al-Rabāḥī appears to be a kind of alter ego of his lord al-Ḥakam. The debates on theology, law, medicine, and astronomy, in which heterodox opinions were expressed, reflected activity in intellectual circles close to power that the ruling power not only tolerated but encouraged. The substrate of these exchanges was a well-trained, multifaceted, and curious class of learned people who spoke about many subjects with little or no hindrance. Another story reflects a radically opposite attitude. It was transmitted by al-Ḥumaydī and referred to a Mālikī religious scholar, Abū ʿUmar Aḥmad b. Muḥammad b. Saʿdī (active at the end of the fourth/tenth century), who born in Seville and moved to the Maghrib[132]. The text was first discussed by Dozy[133], who translated

126. Fierro, *Heterodoxia*, 140ff. Al-Mundhir was a Zāhirī scholar but not a Muʿtazilī.

127. Fierro, *Heterodoxia*, 161-65, esp. 163; and Balty-Guesdon, *Médecins*, 240-46, esp. 242-43.

128. See above note 2.

129. Ibn Bashkuwāl, *Kitāb al-Ṣila*, ed. I al-Abyārī (Cairo and Beirut 1989), 3:700-1, no. 1041; see additional references in Ávila et al., *Prosopografía de los ulemas de al-Andalus*, ID 9195.

130. Fierro, *Heterodoxia*, 163; and Balty-Guesdon, *Médecins*, 243-44.

131. Wasserstein, «The Library», 101.

132. Al-Ḥumaydī, *Jadhwa*, 161-62, no. 185; see another biography in al-Ḍabbī, *Bughyat al-multamis*, ed. I. al-Abyārī (Cairo and Beirut 1989), 1:199-201, no. 342, who borrows the text from al-Ḥumaydī. Ibn Bashkuwāl, *al-Ṣila*, 1:69-70, no. 67 places the story around 380/990; more references on the nephew of al-Saʿdī, Aḥmad b. Muḥammad al-ʿĀmirī appear in ʿAbd al-Malik al-Marrākushī, *al-Dhayl wa-l-takmila*, ed. I. ʿAbbās et al. (Tunis 2012), 1:594-95, no. 628, but do not provide further information.

133. R. Dozy, review of E. Renan's *Averroès et l'averroïsme*, in *Journal Asia-*

it in his review of the famous book by Renan, *Averroès et l'Averroïsme*, and was then addressed by other scholars[134], who were misled by it on occasion[135].

Al-Ḥumaydī explains a dialogue between al- Saʿdī and his teacher in Kairouan, Ibn Abī Zayd al-Qayrāwānī (d. 386/996), who was one of the most influential Mālikī religious scholars of his time[136]. The teacher asked the disciple about a meeting of rationalist theologians (*ahl al-kalām*) that he attended in Baghdad. Al-Saʿdī explained to him, with deep contempt, that he had been invited to a session of theologians (*ahl al-kalām*) in Baghdad in which orthodox Muslims (*ahl al-sunna*) sat together with heretical Muslims (*ahl al-bidʿa*), Zoroastrians (*mājūs*), eternalists (*dahriyya*)[137], heretics (*zanādiqa*), Jews, Christians, and all kinds of infidels. He goes on to say that one of these infidels stated that they had met to debate, but no one could use arguments borrowed from the Qurʾān and the *sunna*, because only rational arguments would be admitted. Al-Saʿdī swore that he would not attend a session like this again. Just as interesting as this account is the response of Abū Zayd al-Qayrāwānī, who was shocked that Muslims had seen such things.

tique, fifth series, vol. 2 (1853), 90–96; al-Ḥumaydī's text is translated into French on p. 93.

134. Fierro, *Heterodoxia*, 164–65, quotes Asín Palacios and Makkī and gives Asín's translation of al-Ḍabbī's version; see M. Asín Palacios, *Algazel. Dogmática, moral, ascética* (Zaragoza 1901), 116–18.

135. D. A. Macdonald, *Development of Muslim Theology, Jurisprudence and Constitutional Theory* (London 1903), 194, gives a most fantastic version of Dozy's text without mentioning him; he imagines that the Andalusī traveler, not mentioned by name, attended a meeting of the Ikhwān al-Ṣafāʾ. An echo of this version may be seen in M. Kacimi, «La relación de Maslama al-Maŷrīṭī con las obras *Rasāʾil Ijwān al-Ṣafāʾ*, *Risālat al-ŷāmiʿa, Rutbat al-Hakīm* y *Gāyat al-ḥakīm*», in *Anaquel de Estudios Árabes* 25 (2014), 31–32. On this basis, some authors speculate about a journey of Maslama al-Majrīṭī (that he confuses with al-Saʿdī) in the course of which he brought the *Epistles* of the Ikhwān to al-Andalus.

136. On him, see M. Muranyi, «Ibn Abī Zayd al-Qayrawānī», in *EI*³. On his influence in al-Andalus, see M. Fierro, «The Polemic about the *Karāmāt al-Awliyāʾ* and the Development of Ṣūfism in al-Andalus (Fourth/Tenth-Fifth/Eleventh Centuries)», in *BSOAS* 55 (1992), 236–49; and J. M. Fórneas, «Recepción y difusión en al-Andalus de algunas obras de Ibn Abī Zayd al-Qayrawānī», in *Homenaje al profesor Darío Cabanelas Rodríguez O.F.M.* (Granada 1987), 1:315–44.

137. Lit., those who believe in the eternity of the world, therefore, followers of Aristotle.

Religious scholars are losing themselves and with them [we are losing] the sanctity of Islam and its truths. How can Muslims tolerate the debate between Muslims and infidels? This should not be done between [orthodox] Muslims and heretical Muslims ["innovators," *ahl al-bid'a*], who accept Islam and the Prophet. These heretics who profess Islam must be invited to return to the *sunna* and the consensus of the community and, if they do so, let them be accepted; if they refuse, let their heads be cut off. The infidels must be invited to Islam and, if they accept, [it is better that] we stay away from them and, if they refuse but pay the *jizya*, it is lawful to accept them but we must stay away from them. It is absolutely unlawful for them to forbid [Muslims] from arguing according to our books and our prophets. From God we come, and to Him we will return[138]!

The session described by al-Sa'dī is consistent with the cosmopolitan atmosphere of Būyid Baghdad as described by Kraemer[139]; the reaction of al-Sa'dī is also consistent with the attitude of those in the religious sectors who led the expurgation of al-Ḥakam's library. There is no evidence that meetings such as the one described by al-Sa'dī were frequent in al-Andalus, though the story about the debates of al-Rabāḥī suggests that there was something of this kind[140]. The expurgation of al-Manṣūr's library provides evidence that most religious scholars of al-Andalus considered that the concessions to heterodox discourses had gone too far.

The Exchange of Knowledge in the Disciplines: Alchemy in the Circle of Maslama

Exchange and debate also took place between the scholars devoted to the rational disciplines, though the evidence is scant. The nineteenth-century historian Conde mentioned sessions on natural philosophy, mathematics, and astronomy held in the homes of "wazir Izá ben Ishaq and Chalaf ben Abês el Zahrawi," whom he considered

138. I translate al-Ḥumaydī's version, which is slightly more complete.

139. J. L. Kraemer, *Humanism in the Renaissance of Islam: The Cultural Revival During the Buyid Age* (Leiden 1992).

140. See, moreover, the considerations of Fierro, *Heterodoxia*, 164-65.

the doctors of ʿAbd al-Raḥmān III[141]. The information is problematic because, first, it is impossible for al-Zahrāwī to have been a physician of ʿAbd al-Raḥmān III[142] and, second, there is no record of ʿĪsā b. Isḥāq having been a minister and a physician. Yaḥyā b. Isḥāq, however, was a physician and minister and has tentatively been identified as ʿĪsā b. Isḥāq[143]. Since no one has found Conde's source and Dozy criticized the reliability of his work, some consider this passage erroneous. Or, Conde may have borrowed from an authentic yet imprecise source. We have much more information about what we could refer to as a "vertical exchange," that is, the acquisition and transmission of knowledge in the disciplines themselves through a dense network of teacher-disciple connections. We have the most data for medicine, followed by mathematics, astronomy/astrology, and finally, logic[144].

Ibn Juljul and his disciple Ibn Jānah (d. ca. 432/1040)[145], the physicians who speak about physicians, scientists, and philosophers, show the existence of a medical community whose members were well prepared and highly interconnected with one another, with the Umayyad ruling power, and with foreign centers of knowledge such as Baghdad, Kairouan, and Fusṭāṭ/Cairo. All in all, Ibn Jujul and Ibn Jānah describe a cosmopolitan medical community in which Jews and Christians also participated. We may presume a similar situation with respect to, at least, astronomers/astrologers, most of whom formed part of a remarkable community centered around Maslama al-Majrīṭī, the astronomer and mathematician who became the direct or indirect teacher of several generations of astronomers and astrologers[146]. These scholarly communities were by no means strict

141. J. A. Conde, *Historia de la dominación de los árabes en España* (Madrid 1820), 1:427-28. The passage also says that they healed poor patients free.

142. Ibn Jānah, *Kitāb al-talkhīṣ*, ed. G. Bos, F. Käs, M. Lubke and G. Mensching (Leiden 2020), 1:168. The editors conclude that al-Zahrāwī must have been active during the first decades of the fifth/eleventh century.

143. A. C. López López, «Ibn Isḥāq al-wazīr/al-ṭabīb», in *Biblioteca de al-Andalus*, 3:533-39, on 538, accepting the veracity of Conde's story. On Yaḥyā b. Isḥāq, see Ibn Jānah, *Kitāb al-talkhīṣ*, 121-27.

144. See the tables of Balty-Guesdon, *Médecins*, 734-41.

145. In *Kitāb al-talkhīṣ*, Ibn Jānah provides interesting data about the authors of the late Umayyad period. The works from classical and Muslim authors are a good base for assessing the transfer of knowledge to al-Andalus; see particularly Ibn Jānah, *Kitāb al-talkhīṣ*, introduction, 139-64.

146. Samsó, *Las ciencias*, 80-84.

categories with no overlap. Many professional physicians stand out for their knowledge of other disciplines, and professional astronomers and astrologers also learned medicine. Logic, the transversal discipline par excellence, inasmuch as it trained the minds of the students of rational sciences, was frequently studied by scholars in several areas such as medicine, language, or mathematics[147]. Maslama al-Majrīṭī, who taught the exact sciences and logic, was a key figure in the scientific activity of the late fourth/tenth century, and an intellectual son of al-Ḥakam II's time[148].

In this context, the marginal disciplines were alchemy and magic. Virtually the only textual evidence about the teaching and transmission of alchemy at this time appeared in a polemic text, the *Risāla* on alchemy by Ibn Bishrūn, which Ibn Khaldūn inserted in the sections on alchemy mentioned above[149]. According to Ibn Khaldūn, Ibn Bishrūn was a disciple of Maslama al-Majrīṭī and the addressee of his *Risāla* was Ibn al-Samḥ (d. 426/1035), who was also a disciple of Maslama and one of the most outstanding astronomers and mathematicians in the history of al-Andalus[150]. The difficulty of identify-

147. Forcada, «Books», 78-81 and the bibliography given there.

148. Ṣaʿīd al-Andalusī, *Ṭabaqāt al-umam*, 166; Ibn al-Abbār, *al-Takmila*, 1:68, no. 20; al-Marrākushī, *al-Dhayl wa-l-takmila*, 1:547, no. 521. Maslama learned mathematics, astronomy, and astrology from Abū Bakr b. ʿAbs, who, according to Ṣaʿīd al-Andalusī, taught at the time of al-Ḥakam II. This dating is consistent with what we know about the man who taught Maslama inheritance calculations, ʿAbd al-Ghāfir al-Faraḍī; Ibn Bashkuwāl, *al-Ṣila*, 1:483, no. 819; Ávila et al., *Prosopografía de los ulemas de al-Andalus*, ID 4820. The dates of his life and death are unknown but ʿAbd al-Ghāfir al-Faraḍī learned from three religious scholars who passed away around the middle of the fourth/tenth century, Qāsim b. Aṣbagh (d. 340/951), Ibn al-Mushtarā (d. 337/948), and Aḥmad b. Khālid, who may be identified with Aḥmad b. Khālid al-Tamīmī (d. 330/941) or Aḥmad b. Khālid b. al-Jabāb (d. 322/934); on them, see, respectively, Ávila et al., *Prosopografía de los ulemas de al-Andalus*, IDS 7567, 3797, 932, and 934. ʿAbd al-Ghāfir al-Faraḍī was therefore active by the middle of the fourth/tenth century and so it is likely that Maslama was a student during the last part of the caliphate of ʿAbd al-Raḥmān III and the beginning of al-Ḥakam's epoch. Strong evidence that this was the case is given by Maslama's table of stars, which says that he observed the stars at the end of 367/978; Paul Kunitzsch, «Two Star Tables from Muslim Spain», in *Journal for the History of Astronomy* 11 (1980), 193.

149. Ibn Khaldūn, *al-ʿIbar*, 697-706.

150. M. Comes, «Ibn al-Samḥ, Abū l-Qāsim», in *Biblioteca de al-Andalus*, ed. Jorge Lirola Delgado and José Miguel Puerta Vílchez (Almería 2004-12), 5:227-30; Fierro, *Historia de los autores*, Astronomía, ID 3068; Samsó, *On Both Sides*, esp., 262-64, 376-78.

ing this Ibn Bishrūn[151] and the controversy about the authorship of the *Rutbat* and *Ghāyat al-ḥakīm* led Rosenthal to conclude that Ibn Bishrūn's *Risāla* was pseudepigraphic[152]. Fierro thought the treatise might have been written by a disciple of Maslama b. Qāsim named Ibn Bishrūn, who addressed it to a Shāfiʿ scholar named Abū Sulaymān ʿAbd al-Salām b. al-Samḥ b. Nabil b. ʿAbdallāh b. Yaḥyun b. Ḥārith b. ʿAbdallāh b. ʿAbd al-ʿAzīz al-Hawwārī l-Shāfiʿī (303-70/915-80 or 387/997)[153]. However, there are no sources that indicate that this religious scholar was a disciple of Maslama, nor that he had any knowledge of alchemy, magic, or any rational science. In fact, Ibn Khaldūn's narrative regarding Ibn Bishrūn and Maslama al-Majrīṭī's circle is perfectly reasonable if we consider an anonymous note found in one manuscript of *Rutbat al-ḥakīm* (Ragıp Paşa 963), which Rosenthal mentioned without further analysis[154]. The following are the essential elements of the note.

(1) The attribution to Maslama al-Majrīṭī of the authorship of the *Epistles* of the Ikhwān, *Ghāya, Rutba*, and *Tārīkh al-falāsifat al-ʿarab*[155];

(2) A reference to Ibn al-Samḥ, Ibn al-Ṣaffār, al-Zahrāwī, al-Kirmānī, Ibn Khaldūn, and Abū Bakr b. Bishrūn being disciples of Maslama al-Majrīṭī; and

(3) An assertion that Ibn Bishrūn said that there was a strong personal conflict between Ibn al-Samḥ and Maslama, and that the former left the latter for another teacher, Abū Muḥammad ʿAbdallāh al-Sūsī[156].

151. See Samsó, «Ibn Bišrūn, Abū Bakr», in *Biblioteca de al-Andalus*, ed. Jorge Lirola Delgado and José Miguel Puerta Vílchez (Almería 2004-12), 2:670-71, for a summary of the various theories that have been put forth.

152. F. Rosenthal, *Ibn Khaldūn: The Muqaddimah, an Introduction to History* (New York 1958), 3:230 n. 969.

153. Fierro, «Bāṭinism», 101.

154. The note is edited, translated into English, and analyzed in G. De Callataÿ and S. Moureau, «Again on Maslama», Ibn Qāsim al-Qurṭubī, the Ikhwān al-Ṣafā' and Ibn Khaldūn: New Evidence from Two Manuscripts of *Rutbat al-Hakīm*», in *al-Qanṭara* 37 (2016), 356-67.

155. Maslama b. Qāsim himself says that he wrote this work; *Ghāyat al-ḥakīm*, 144, 176, *Rutbat al-ḥakīm*, 18, mentioned as *Kitāb ṭabaqāt falāsifa al-ʿarab*.

156. The conflict is described in the following terms: «There has been between Ibn al-Shamkh [sic] and Maslama a profound dissension, because this one had treated him roughly, and he [= Ibn al-Samḥ] had left him for Abū Muḥammad al-Sūsī. This is reliable information as it was reported by Ibn Bishrūn and others»; trans. De Callataÿ and Moureau, «Again on Maslama», 357.

Abū Muḥammad ʿAbdallāh al-Sūsī is the essential clue to unravel the problem posed by Ibn Khaldūn. Although apparently not mentioned by Ṣāʿid al-Andalusī[157], al-Sūsī was an outstanding physician of the late fourth/tenth century, and widely quoted in the fifth/eleventh century[158]. According to Ibn al-Abbār, al-Sūsī was a Maghribī who migrated to al-Andalus. He died in Cordoba during the ransacking of 403/1013 mentioned above. He wrote the *Kitāb al-mujarrabāt* that might have been the source of most of the quotes alluded to earlier (see note 158). Moreover, Ibn al-Abbār mentions that al-Sūsī was an expert in *ḥikma*, that is, wisdom in the broad and esoteric sense of the word. In the biography of Ibn al-Samḥ, Ibn al-Abbār says (in much the same way Ibn Bishrūn, according to the note of Ragıp Paşa 963) that Ibn al-Samḥ left Maslama for al-Sūsī[159], although Ibn al-Abbār does not allude to a personal conflict but only says that Ibn al-Samḥ "chose the opinion" of al-Sūsī[160]. What Ibn al-Abbār says about Ibn al-Samḥ and al-Sūsī in connection with Ibn Khaldūn's narrative, leaves little room for doubt that the author of MS Ragıp Paşa 963 did not fabricate what Ibn Bishrūn says about Maslama al-Majrīṭī, al-Sūsī, and Ibn al-Samḥ. Otherwise, too many fabrications coincided in this case: first, the pseudepigraphic treatise was written by another author in the name of Ibn Bishrūn to create an alchemical and magical circle around Maslama al-Majrīṭī; and second, the words in the note attributed to Ibn Bishrūn were not his[161]. It is

157. We should consider the possibility that Ṣaʿīd mentioned him, who was ʿAbdallāh b. Muḥammad al-Sarī mentioned above in note 93. I tend to believe that they are one and the same person. It is very easy to confuse *wāw* for *rā'* and sometimes the *sīn* appears horizontally and is easy to overlook. Besides, it is unlikely that there were, in the same epoch, two experts in alchemy or *ḥikma* named ʿAbdallāh b. Muḥammad whose *nisba* begins with «al-S.»

158. Ibn al-Abbār, *al-Takmila*, 3:302, no. 868; Fierro, *Historia de los autores*, Medicina, ID 4692. See also Balty-Guesdon, *Médecins*, 219, 259, and 634, no. 119, which states that Ibn Wāfid's *Kitāb al-wisād* quotes al-Sūsī; Ibn Jānah, *Kitāb al-talkhīṣ*, 158, in which the editors mention that al-Sūsī is not only cited in Ibn Jānah *Kitāb al-talkhīṣ* but also in the *ʿUmda* by Abū l-Khayr.

159. Ibn al-Abbār, *al-Takmila*, 1:170–1, no. 550.

160. It is worth noting that the stories about al-Sūsī and Ibn al-Samḥ given by Ibn al-Abbār are consistent with one another. In the entry about al-Sūsī, he says that al-Sūsī died in the ransacking of 403/1013; in the entry about Ibn al-Samḥ, he says that the latter left Cordoba during the second *fitna*, the reason is obvious.

161. De Callataÿ and Moureau, «Again on Maslama», 360, say that the Ibn Bishrūn of the note is not the same as the one mentioned in the *Muqaddima*. It

possible that there were two concurrent forgeries, but it is less plausible. Therefore, it is most plausible that Ibn Bishrūn was actually a disciple of Maslama al-Majrīṭī, because it is affirmed by two independent sources, Ibn Khaldūn and Ibn Bishrūn (via the note of MS Ragıp Paşa 963). Ibn Bishrūn's authorship of the *Risāla* is equally plausible, since there would be no reason to question Ibn Khaldūn if Ibn Bishrūn was reliably associated with the circle of Maslama al-Majrīṭī. It is not impossible that Maslama al-Majrīṭī wrote *Ghāyat* and *Rutba*, but it is difficult to believe because he was seemingly too young[162] at the time when both works were written, between 339/950 and 342/953 in the case of *Rutba* and between 346/957 and 348/960 in the case of *Ghāya*[163]. The solution to this puzzle might be that Maslama al-Majrīṭī was a disciple of Maslama b. Qāsim in the fields of magic and alchemy and that he taught these matters to some of his disciples, together with other disciplines. The lack of information, likely due to the secrecy that protected the practice of magic and alchemy, and the fame acquired by al-Majrīṭī and his disciples in more popular and less secret disciplines such as astrology, astronomy, and mathematics may provide a good explanation as to why posterity may have mistaken Maslama b. al-Qāsim for Maslama al-Majrīṭī. Actually, the note in MS Ragıp Paşa 963 contains relevant evidence about this confusion. First, it says that al-Majrīṭī wrote extensively on religion, and this is absolutely true in the case of Ibn Qāsim but is untrue with respect to al-Majrīṭī, who, as far as we know, only wrote one treatise about inheritance calculations[164]. Moreover, it says that Maslama al-Majrīṭī traveled widely, a fact that is probably not true with regard to al-Majrīṭī, because we do not know of sources that indicate that he ever left al-Andalus, but it is absolutely true in the case of Ibn Qāsim. The note says, moreover, that al-Ḥakam granted his favor to Maslama; this is problematic in the case of Ibn Qāsim, as we have seen before, and only possible in the case of al-Majrīṭī. This might be a reflection of his disciples'

is possible but it seems unlikely that such an uncommon name coincides in the same context.

162. See above note 148.

163. Maslama b. Qāsim, *Ghāyat al-ḥakīm*, 1; Maslama b. Qāsim, *Rutbat al-ḥakīm*, 21.

164. Ibn Bashkuwāl, *Kitāb al-ṣila*, ed. I. Al-Abyārī (Beirut and Cairo 1989), 3:899, no. 1372.

familiarity with kings: most of them served the Ṭā'ifa ("Party Kings"), and Ibn al-Khayyāṭ was the astrologer of the caliph Sulaymān al-Musta'īn (r. 400/1009 and 403-7/1013-16) and other Umayyad rulers[165]. The same confusion occurs in the biography of Maslama al-Majrīṭī by al-Burzulī (d. 841/1438)[166].

The hypothesis that one Maslama was a disciple of the other fits well with a good number of historical facts and textual evidence.

(1) It explains why Maslama al-Majrīṭī is so frequently related to the authorship of the *Ghāya*, *Rutba*, and the *Rasā'il* (*Epistles*) of the Ikhwān al-Ṣafā', since at least Ibn Sab'īn (613-14 to 688-9/1217-8 to 1270-1)[167].

(2) It overcomes one of the main problems posed by al-Majrīṭī 's authorship of *Ghāyat al-ḥakīm*, namely that, according to Willy Hartner, the author of the work had a poor knowledge of astronomy[168].

(3) It coincides with what we know about the teachers of Maslama[169]: while Maslama al-Majrīṭī was learning astronomy from Abū Bakr b. 'Abs and *farā'iḍ* (division of inheritance) from Ibn Ghāfir toward the beginning of the caliphate of al-Ḥakam II or slightly earlier, he also could have been learning alchemy and magic from Maslama b. Qāsim.

(4) It is consistent with Ṣā'id al-Andalusī's mention of al-Kirmānī, al-Majrīṭī's disciple, who brought the *Epistles* of the Ikhwān from the Mashriq to Zaragoza toward the middle of the fifth/eleventh century[170]: Maslama taught al-Kirmānī the *Epistles* and so he knew the importance of the work well.

(5) It is consistent with the testimony of Ibn Bishrūn. In the *Risāla* reproduced by Ibn Khaldūn, Ibn Bishrūn mentions a long

165. Above section 7.

166. Kacimi, «La relación», 35, according to al-Burzulī, *Jāmi' masā'il al-aḥkām*, ed. M. Ḥ. al-Hila (Beirut 2002), 6:418.

167. For a list of works and manuscripts, see Kacimi, «La relación», 32-37. R. Forster and J. Müller, «The Identity, Life and Works of the Alchemist Ibn Arfa' Ra's», in *al-Qanṭara* 41 (2020), 383-84, mention two manuscripts of *Shudūr al-dhahab* by Ibn Arfa' Ra's (d. 593/1197) written in the tenth/sixteenth century that give Ibn Arfa' the *nisba* al-Majrīṭī.

168. Samsó, *Las ciencias*, 258; and W. Hartner, «Notes on *Picatrix*», in Hartner, *Oriens-Occidens* (Hildesheim 1968), 415-28.

169. Above, note 149.

170. Ṣa'īd al-Andalusī, *Ṭabaqāt al-umam*, 171-72.

conversation with Maslama (seemingly al-Majrīṭī) about an alchemical subject[171]. Ibn Bishrūn does not say in this fragment or in the rest of the *Epistle* that al-Majrīṭī wrote either the *Ghaya* or *Rutba*. The same happens in the case of the note in Ragıp Paşa 963. The attribution of authorship of the *Ghāya*t and *Rutba* to Maslama al-Majrīṭī is a statement of Ibn Khaldūn and the author of the note.

Astrology is an essential discipline for magic, especially talismanic magic, and is also important for alchemy. Neither Maslama nor his disciples were solely astronomers or astrologers. They were multifaceted scholars who, in at least seven cases, were also physicians[172]. In other words, the circle of Maslama al-Majrīṭī constituted an audience specially able to understand and practice disciplines as complex as magic and alchemy.

A Final Note on Magic and Alchemy in the Caliphate

Though there is little data on magic and alchemy from the Umayyad era, it is the best documented period in the history of al-Andalus[173]. Besides the references found in historical and bibliographical sources, three works have been passed down to us: the two treatises by Maslama and a short tract on talismans and lunar mansions written by an otherwise unknown Abū ʿAlī b. al-Ḥātim, active in 327/939[174]. The work is known by the title of its Latin translation,

171. Ibn Khaldūn, *al-ʿIbar*, 704. The fragment deals with a well-known subject, the egg as a metaphor for alchemy. Maslama b. Qāsim, *Rutbat al-ḥakīm*, 36, explains this issue briefly but the two texts are unrelated to one another.

172. Forcada, *Ética*, 171 and 239-40.

173. Latin translations of Arabic magical and alchemical texts show that magic and alchemy were circulating in al-Andalus later, in the sixth/twelfth and seventh/thirteenth centuries; see J. P. Boudet, «The Transmission of Arabic Magic in Europe (Middle Ages - Renaissance)», in *Micrologus* 28 (2020), 143-65 (about magic); and Sébastien Moureau, «*Min al-Kīmiyā' ad Alchimiam:* The Transmission of Alchemy from the Arab-Muslim World to the Latin West in the Middle Ages», in *Micrologus* 28 (2020), 87-141 (about alchemy).

174. K. Lippincott and D. Pingree, «Ibn al-Ḥātim on the Talismans of the Lunar Mansions», in *Journal of the Warburg and Courtauld Institutes* 50 (1987), 57-81; K. Lippincott, «More on Ibn al-Ḥātim», in *Journal of the Warburg and Courtauld Institutes* 51 (1988), 188-90; M. Oliveras, «El *De imaginibus caelestibus* de Ibn al-Ḥātim», in *al-Qanṭara* 30 (2009), 171-220. We return to this treatise later.

De imaginibus. Although there is no direct relation between the authors or the works, Ibn al-Ḥātim's treatise deals with a subject, namely talismans, that employ the powers of lunar mansions, and is addressed extensively in the *Ghāyat al-ḥakīm*. The main source of Ibn Ḥātim seems to be a treatise on talismans that coincides with one of the sections of the *Libro de las formas et de las imágenes* written in the scriptorium of Alfonso X the Wise, which is attributed to "Pliny". Christian posterity considered the treatises of Maslama's *Ghāyat al-ḥakīm/Picatrix* and Ibn Ḥātim's *De imaginibus* as a pair since both circulated in the same manuscript. Other treatises include the works attributed to Ibn Bishrūn, and others. The well-known writer Ibn Shuhayd (d. 426/1035), a member of the Cordoban aristocracy who served the dynasty, also deals with the subject. Even though he belongs, chronologically, to the transition between the era of the Umayyads and the time of the Ṭā'ifa ("Party Kings"), his mind was a product of the most refined culture of the Umayyads[175]. He refers to a story of an alchemical laboratory that was actually a workshop of counterfeiters[176]. More importantly, there is an edited, yet virtually unknown treatise on magical recipes for *nīranjāt*[177] that is attributed to him[178]. Even though the work deals with the tricks

175. Fierro, *Historia de los autores*, *Fiqh* ID, 353, Poesí, ID 336, *Adab* ID 116, Gramática ID 107, Medicina ID 40, Otros ID 180.

176. Ibn Bassām, *al-Dhakhīra*, 1:220; Samsó, *Las ciencias*, 259-60.

177. According to Burnett, «Three Divisions», 50-51, the *nīranj* «is a magical practice that includes a combination of mixing and processing ingredients, invoking spiritual beings, burning incense (suffumigation), and making figurines in order to manipulate spiritual forces». Moreover, see Ch. Burnett, «Nīranj: A Category of Magic (Almost) Forgotten in the Latin West», in *Natura, scienze e società medievali. Studi in onore di Agostino Paravicini Bagliani* (Florence 2008), 37-66. *Ghāyat al-ḥakīm* deals extensively with *nīranjāt* but it seems that Ibn Shuhayd's treatise does not borrow from it.

178. Ibn Shuhayd, *Kitāb al-nāranjiyyāt*, ed. Ṣ. M. al-'Azzāwī, [published as] «Kitāb al-nāranjiyāt: al-Bāhir fī 'ajā'ib al-ḥiyal li-Abī 'Āmir Aḥmad b. 'Abd al-Malik al-Andalusī Ibn Shuhayd», in *al-Turāth al-Sha'bī* 6 (1975), 126-54. See an approach to this work in M. T. Garulo, *La literatura árabe en al-Andalus durante el siglo XI* (Madrid 1998), 93-95. *Kitāb al-nāranjiyyāt* preceded another treatise on the same topic entitled *Kashf al-dakk wa-īḍāḥ al-shakk* (Discovery of the falsification and clarification of the doubt). I would like to thank Juan Manuel Gallego Luque for sharing with me his research on Ibn Shuhayd's treatise. He informed me that Ibn Shuhayd's *Kashf al-dakk* is quoted in *Kitāb al-mukhtār fī kashf al-asrār*, a treatise about charlatans written by the Syrian al-Jawbarī (fl. 619/1222); see the recent translation into English by H. Davies: Jamāl al-Dīn 'Abd al-Raḥīm al-Jawbarī, *The Book of Charlatans*, ed. Manuela Dengler, trans. Humphrey Davies (New York 2020), 7 (sections 0.5 and 0.7).

that charlatans use to fool superstitious people, Ibn Shuhayd says in the introduction that there are *nāranjiyyāt* (*sic*) that use the properties of stones and drugs and are prepared according to correct methods. This means that, on the one hand, Ibn Shuhayd believes that there is "true" and "false" magic, and, on the other, that the practice of magic was relatively common in Umayyad society. Although the contents of the work seems too simplistic for a sophisticated spirit such as Ibn Shuhayd, the importance of the treatise should not be overlooked before it receives the careful study that it deserves. For the purposes of the present article, suffice it to say that Ibn Shuhayd and his treatise exemplifies the relevance that the esoteric sciences acquired during the Umayyad caliphate, a relevance that would not have been possible without the complicity of the court. The Umayyad caliphs invested generously in the services of doctors, astrologers, architects, accountants, and so on. It makes sense that they also wanted magicians and alchemists in their service, since magic and alchemy might have been deemed as useful as medicine or astronomy.

Conclusions

During the transition between the third/ninth and the fourth/tenth centuries, the scientific and philosophical culture of al-Andalus entered a period of stagnation and decay due, on the one hand, to the harsh political and economic circumstances of the first *fitna* and, on the other hand, to the pressure of religious sectors, who condemned the practice of astrology and other controversial disciplines that had disappeared from the court. The era of ʿAbd al-Raḥmān III prompted the resurgence of the scientific and philosophical traditions. The new situation improved the standards of living of Cordobans and this, in turn, had a beneficial impact on scientific professions. With better revenues than his predecessors, ʿAbd al-Raḥmān III built a new state in which the sciences played an important role. First, they provided tangible services that were considered important by the dynasty. Moreover, they provided intangible but more invaluable assets such as prestige, influence, and symbolic power. The controversial disciplines were brought back to the palace discreetly. It would seem that Maslama b. Qāsim, the prince's

teacher, taught in the court the most controversial of all scientific matters, alchemy and magic. However, since he belonged to the wrong party in the rebellion of ʿAbdallāh against ʿAbd al-Raḥmān III, it is possible that he wrote the *Rutba* and *Ghāya* for his followers and not for the caliphs. With one eye on the Fāṭimids and another on the religious scholars at home, ʿAbd al-Raḥmān III and his sons al-Ḥakam II and ʿAbdallāh improved the scientific activity of the court in order to strengthen the moral and symbolic authority of the dynasty. However, the caliph avoided direct association with them. Al-Ḥakam took a step ahead. As soon as he acceded to the throne, he tried to change the direction of the *qibla* of Cordoba's Great Mosque according to the advice of the court experts (most probably astronomers who were also astrologers). Given that the caliph was by no means politically naïve, he probably said to his subjects that reason should guide religion. The religious scholars and the people refused to change the *qibla*, saying that this would be heresy, and the caliph backtracked on his decision. However, he insisted on allowing the practice of astrology in court circles and, in general, allowed a greater presence of polemical subjects in the public life of the learned classes. We can speculate that the caliph might have attempted to foster rational discourse among the learned classes to reproduce in the Andalusī context what al-Maʾmūn did in Baghdad and what ʿAbd al-Raḥmān II attempted to do, albeit unsuccessfully, a century earlier. There is significant evidence that the rational disciplines spread through the court during al-Ḥakam's rule. Some of this evidence is anecdotal but significative and appealing: the court physicians/philosophers taught astronomy, medicine, and philosophy to the slave singers, in order to please the men of the Cordoban aristocracy, and these women were extraordinarily expensive. Further evidence can be seen in the way al-Manṣūr, in order to appease religious scholars, destroyed books on astrology and philosophy and persecuted those who studied and taught them.

From the middle of the fourth/tenth century onward, the Andalusīs consolidated their knowledge of most of the rational disciplines, particularly medicine, mathematics, astronomy, and astrology. It seems that philosophy lagged behind, although there was a general interest in logic. Circles of specialists consistently emerged; however, most scholars were multifaceted men who showed interest and proficiency in many disciplines. Alchemy and magic were also

important matters in this context, though a good portion of the scientific community had certain reservations about them. Although secluded in small and secret circles, there is more evidence of the practice of these disciplines dating from the time of the Umayyad caliphate and the period immediately afterward than from any other period in the history of al-Andalus. The narrative that connects the practice of magic and alchemy with Maslama al-Majrīṭī and his disciples is problematic. There seems to be more than an element of truth behind these traditions, despite it being chronologically unlikely, yet not impossible, that Maslama al-Majrīṭī wrote *Ghāyat al-ḥakīm* and *Rutbat al-ḥakīm*. The premise that one Maslama was the disciple of the other is a good explanation for many aspects of this history that still puzzle us.

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ABSTRACT

Miquel Forcada, *Rational and More Than Rational Sciences in the Umayyad Caliphate: Dialogue, Debate, and Confrontation*

The time of the Umayyad caliphate of Cordoba (early fourth/tenth century to early fifth/eleventh century) represents a crucial phase in the creation of the scientific and philosophical culture of al-Andalus. At the beginning of the fourth/tenth century, the economic and political situation of the Umayyad regime was weak and the rulers were largely unable to sponsor the arts and sciences. Due to the general instability of the time, the rulers needed the support of the religious scholars, and so the disciplines that most of these scholars rejected (namely astrology, philosophy, and rational theology) were banned from the court. The ascent of ʿAbd al-Raḥmān III (r. 300-50/912-61), who proclaimed the caliphate in 316/929, signified a new beginning for scientific and intellectual activity, which flourished until the end of the period, most particularly during the caliphate of al-Ḥakam II (350-66/961-76). There was intense activity in disciplines that appeared particularly controversial in the eyes of religious scholars, like astrology, magic, and alchemy. These and other disciplines made their mark in learned society and at the court. This article explores the political and intellectual considerations underlying this process and analyzes the extent of the practice of controversial disciplines in the context of the period, paying particular attention to the role played by Maslama b. Qāsim and Maslama al-Majrīṭī.

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INTENSE RIVALRY, SECTARIAN SECRECY, AND DOCTRINAL RECOURSE TO REASON: OBSTACLES TO THE FOURTH-/TENTH-CENTURY TRANSMISSION OF ISMĀʿĪLĪ THOUGHT TO AL-ANDALUS

The Historical Background

With the advent of Fāṭimid rule in North Africa commencing in 297/909, the divide between the western and eastern Islamic spheres became increasingly acute. The ʿAbbāsid East lost what little sway it had retained over any territory west of Egypt and it held on to Egypt in the face of a persistent Fāṭimid military threat, but only at the cost of the timely dispatch of re-enforcements from Iraq. Fāṭimid invasions of Egypt occurred twice early in the fourth/tenth century, and serve as an illustration of the Fāṭimid determination to move back east, an aspiration that did not come to fruition for many decades. Despite its wish to return east, the local situation where it rose to power demanded careful attention. This reality was learned by hard lessons with serious setbacks along the way, among them the fierce and constant opposition of local entrenched Mālikī scholars (*ʿulamāʾ*), the ongoing hostility of Ibāḍī Berbers, local anti-government riots, and the near fatal revolt of Abū Yazīd. A first priority of the new dynasty and the empire it was building required that it come to terms with its western environment, the lands it inherited in central North Africa and in Sicily, and the close proximity of the Umayyads of Iberia and their proxies in the Maghrib. Baghdad was far away, while Cordoba was near at hand. This remained true and dominated Fāṭimid policy until 358/969 when they finally managed, with great effort, to conquer Egypt and, in 362/973, move the court and caliphal government eastward to Cairo. As a consequence of its longstanding hopes of supplanting the ʿAbbāsids, the Fāṭimids progressively lost interest in controlling or even paying attention to the

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Islamic west. Once established in Egypt, the importance of al-Andalus began to fade.

While the political situation of the earliest Fāṭimids in the west is reasonably clear, especially in terms of the forces arrayed against them, either externally, for example by the Umayyads in al-Andalus, or internally, by Mālikī scholarly circles, the dynasty itself consisted of the state and also its religious organization, its *daʿwa*, the agency of its Shīʿism and doctrinal appeal. The precise role of the latter is often far less certain. The history of the *daʿwa* is not coterminous with its rule. It existed and was active throughout Islamic lands long before the caliphate. Major branches of it achieved notable political successes in Yemen, Iraq, Syria, Khurasan, and various eastern areas prior to 297/909, as is evidenced by the conversions of large tribal groupings, or individual rulers of existing local dynasties, cities, or towns. But in addition, it had also become a fairly dynamic intellectual movement which was, over the fourth/tenth century, in the process of adapting an earlier Shīʿism, in part doctrinally esoteric, into a sophisticated set of teachings based on Neoplatonism. This development began, we now believe, among agents (*dāʿīs*) of the *daʿwa* in the far eastern regions of Iran. Scholars working there, such as Muḥammad al-Nasafī (322/943) and Abū Yaʿqūb al-Sijistānī (d. after 361/971), formulated a new synthesis of philosophy and the Ismāʿīlī version of Shīʿism[1]; this change in doctrinal approach gradually spread and took hold of the whole of the *daʿwa* underpinning the Fāṭimids. But there remains a valid question about the extent to which this development, so clear among the eastern *dāʿīs*, was also taken up by those in the west, in the North African domain of Fāṭimid rule. Eventually it did travel west, but possibly not until fairly late in the fourth/tenth century and then into Egypt, not further west. To be sure, it is not a question of the influence of ancient Greek philosophy, which appeared in the west fairly early[2], but of a

1. For the details and specifics of this development, see Paul Walker, *Early Philosophical Shiism: The Ismaili Neoplatonism of Abū Yaʿqūb al-Sijistānī* (Cambridge 1993).

2. See, for example, the memoire of Ibn al-Haytham (a young recruit to the Ismāʿīlī *daʿwa* in the earliest days of the Fāṭimid ascendancy in North Africa), in which he mentions his own study of Greek philosophy and that he personally owned the works of Plato and Aristotle, among other relevant Arabic translations of the classics. His memoir consists mainly of a record of long conversations of he had with the brothers Abū ʿAbdallāh and Abū l-ʿAbbās, now

specifically Ismāʿīlī version of it, a combination peculiar to the latter, in which previous Ismāʿīlī Shīʿī doctrines were married to Neoplatonic speculations, one part inherited from ancient sources, the other from Qurʾānic Islam. Simply put, when, if at all, did the works and ideas of al-Nasafī or al-Sijistānī arrive in the far west? And if any evidence of such transmission occurred, what role, if any, did the Fāṭimid era *daʿwa* play in the process?

An answer is further complicated by looking at this issue through a longer lens, not merely the key fourth/tenth century, but including later periods when, without doubt, some forms of Neoplatonic thought reached al-Andalus. As it becomes more obvious, the timeline for the advent of some form of *bāṭinism* in the west is crucial: could it have happened as early as the first half of the fourth/tenth century, or was it later in that or even in the fifth/eleventh century?

The Original Aim of the Conference

The working title of the conference was *Power, Religion and Wisdom: Bāṭinism between Orthodoxy and Heterodoxy in [Fourth-/] Tenth-Century al-Andalus*. The principal questions to be answered were: (1) why did Andalusī Sunnī scholars incorporate *bāṭinī* doctrines produced in Shīʿī milieus in the east into their scholarship? (2) through what channels did this unorthodox material reach the Iberian Peninsula?, and (3) what role did the fourth-/tenth-century rulers in al-Andalus play in the reception of this material? A major issue to examine is "by what channels were Ismāʿīlī or Ismāʿīlī-like tenets introduced into al-Andalus. Here it is key to determine whether – and eventually in what proportion – this influence was part of Ismāʿīlī-Fāṭimid propaganda"[3].

published in Ibn al-Haytham, *The Advent of the Fatimids: A Contemporary Shiʿi Witness*, ed. and trans. Paul Walker with Wilferd Madelung (London 2000), especially 52, 111, 138 and the discussion that follows, notably concerning Aristotle. Clearly he and the two brothers knew a lot about ancient Greek thought and could discuss specific texts in detail, but in what he reports there is no sign of an Ismāʿīlī interpretation of such material.

3. The Call for Papers continues, «The sources at our disposal to answer this question are notoriously both less numerous and authoritative than one may have hoped, but we do have evidence that some diplomacy implying missionary activities took place between the arch-rival Fāṭimids and Umayyads during

An interesting auxiliary question, added to the topic by Prof. M. Fierro, is "whether the Umayyad caliphs of Cordoba could have deliberately developed, in order to legitimize themselves, a sense of esotericism directly modeled on the one used by their Fāṭimid adversaries". An answer here clearly assumes positive evidence supporting the previous questions.

What follows here concentrates on issues that arise from the inquiry set in motion by the major point stated and/or implied above; namely, the possible transfer to the Iberian Peninsula during the fourth/tenth century of an Ismā'īlī form of esoteric doctrine, a kind of *bāṭinism*, from Fāṭimid sources, either those present at the time in North Africa or in the Islamic East.

The Meaning and Implications of the Term Bāṭinism

Because it is so crucial to this investigation as a whole, it is essential to begin with an analysis of the Arabic terms *bāṭin*, *bāṭinī*, and *bāṭiniyya*[4]. The word *bāṭiniyya* derives from the Arabic *bāṭin*, which means "inner," "inward," "interior," and hence "hidden," "secret," and most importantly in this context, «esoteric». It is normally contrasted with *ẓāhir*, which, accordingly, carries the sense of "outward," "obvious," "literal," and "exoteric". In its abstract form and as the name of a group, the Bāṭiniyya, it indicates those who advocated the esoteric meaning of the holy scripture and the law. Such a group most likely also claimed that the inner, esoteric meaning and significance of religious rites, rules, and rituals supersedes, or is in some way superior to, the outward expression of them. To be labeled *bāṭinī* must therefore involve an assertion of the greater value of the *bāṭin* over the *ẓāhir*, the inner, non-literal over the outer, literal meaning of the text or law. In general, it does not include those who recognize these as equal components. There are, however, serious prob-

the fourth/tenth century and we also know with certainty that during the same period the Fāṭimids also established contacts with Andalusī rebels against the Umayyad regime. On the other hand, it has repeatedly been stressed that important Ismā'īlī-flavored productions such as the *Rasā'il Ikhwān al-Ṣafā'* remained largely unknown to the Fāṭimid *da'wa*».

4. What follows here on this subject depends in part on Paul Walker, «Bāṭiniyya», in *EI*³.

lems with what a given group holds as the relationship between the esoteric (*bāṭin*) and the exoteric (*ẓāhir*), and how, when, and on whose authority is a shift from one to the other allowed or necessary. When is it permitted to interpret scripture according to its non-literal meaning and, under what circumstances, if any, is it necessary to take the outward wording of the holy law in its figurative sense?

In the history of Islam there have been a number of cases in which an opposing party tried to apply the name Bāṭiniyya to a group it disliked or disapproved of. Typically, for Sunnīs, the term might be used against the Philosophers (Falāsifa) or the Sufis, both of whom were accused of elevating the figurative interpretation of the holy book over its literal meaning, which they thus tended to ignore. Despite the insistence of their enemies that the term *bāṭinī* applied to either the Philosophers or to many of the Sufis, ordinarily neither group would admit that it was an appropriate name for themselves or what they advocated. Most often, in fact, in the Islamic world, the designation Bāṭiniyya served as a pejorative name for the Ismāʿīlīs, on the theory that they maintained the superiority of the *bāṭin* over the *ẓāhir*, or even at its most extreme, the cancellation of the *ẓāhir* by exclusive adherence to the *bāṭin*. Although there is little direct evidence that the majority of the Ismāʿīlīs or the followers of the Fāṭimid line of imams denied the validity of the outward forms of Islamic law and scripture, some elements of the Ismāʿīlī movement did so. Among the earlier Shīʿī extremists (*ghulāt*), moreover, there were several situations when a leader taught just such a doctrine, in which the esoteric meaning of the law replaced that recognized and observed by the majority of Muslims. Various Shīʿī groups professed to have secret knowledge that had been transmitted to them from ʿAlī b. Abī Ṭālib and the imams descended from him. Such knowledge involved interpretations that were highly esoteric and thus passed solely to and by initiates.

But the term Bāṭiniyya did not apply in those instances in which the members of a group simply advocated knowing the inner spiritual meaning. Among the Ismāʿīlīs, especially in its classic period of the Fāṭimid caliphate, virtually all the leading members of the group who wrote on this subject vehemently insisted that they scrupulously observe both the *ẓāhir* and the *bāṭin* and that this was the doctrine of the imams they followed. Nevertheless it remains important

to establish how and to what degree the two (*bāṭin* and *ẓāhir*) are related. How do these Fāṭimid Ismāʿīlī *dāʿīs* derive the *bāṭin* from the *ẓāhir* and does the act of deriving it depend on a process that yields a coherently associated result or does it involve a mysterious, even esoteric, operation known only to members of the *daʿwa*. Who is allowed access to the *bāṭin* and on what basis? In Arabic the operation itself is called *taʾwīl* (which might be translated as "interpretation"); in Ismāʿīlī thought, its role is immense, though seldom defined with precision. In fact, what *taʾwīl* is, who is authorized to do it, and under what circumstances varies considerably throughout our source texts[5].

Basically there appear to exist three modes or concepts of *taʾwīl* used by the various major Fāṭimid-era Ismāʿīlī authors. We have no clear statement of principal, only some discussion, and many examples that we have managed to cull from the texts known to us. However, in a considerable number of situations the esoteric nature of the *bāṭinī* aspect of *taʾwīl* is notably divorced from any reasonable interpretation of the outward, plain meaning observable in the wording of the text or ritual under consideration. Accordingly, in such cases, the *taʾwīl* is truly esoteric, that is, unconnected to the outward *ẓāhirī* text by some form of logic (for example, a metaphoric extension of meaning). Therefore, it represents a newly revealed truth, one gained by a rite of initiation that leads to something that transcends what might be ordinarily understood, or may even lead to a different and new form of knowledge altogether[6].

5. Of the many studies now available on this topic, perhaps the most essential are the following: Ismail Poonawala, «Ismāʿīlī Taʾwīl of the Qurʾan», in *Approaches to the History of the Interpretation of the Qurʾan*, ed. A. Rippin (Oxford 1988), 199-222; Tahera Qutbuddin, «Principles of Fatimid Symbolic Interpretation (*Taʾwīl*): An Analysis Based on the *Majālis Muʾayyadiyya* of al-Muʾayyad al-Shīrāzī (d. 470/1078)», in *Reason, Esotericism and Authority in Shiʿi Islam*, ed. Rodrigo Adem and Edmund Hayes (Leiden 2021), 151-89; and David Hollenberg, *Beyond the Qurʾān: Early Ismāʿīlī Taʾwīl and the Secrets of the Prophets* (Columbia, SC 2016).

6. This kind of *taʾwīl* and its use most particularly applies to the material on which Hollenberg based his previously cited *Beyond the Qurʾān*. I have cited and included many example of a similar form from Abū l-ʿAbbās, «*Mafātīḥ al-niʿma* (The Keys to Grace)», in *Affirming the Imamate: Early Fatimid Teachings in the Islamic West, an Arabic Critical Edition and English Translation of Works Attributed to Abū ʿAbd Allāh al-Shiʿi and His Brother Abū'l-ʿAbbās*, ed. and trans. Wilferd Madelung and Paul Walker (London 2021).

But a complete answer is not that simple. The situation cited above describes one form of *ta'wīl*. Another mention by an early North African Ismāʿīlī source, the memoire of Ibn al-Haytham (d. first half of fourth/tenth century), comments about what he learned from the shaykhs of the group: "I harvested from their fruits both the exterior and the interior (*min thimārihim ẓāhira wa-bāṭina*)", and further,

> I shall never forget the *dāʿī* of Malūsa, the shaykh of the community and their legal authority [i.e., a Fatimid Berber (Kutama) authority], Aflaḥ b. Hārūn al-ʿIbānī. He combined his activity as a *dāʿī* with the sciences of the religious law.... I heard from him the summons for the women (*daʿwat al-nisā'*, the "*daʿwa* for women") and what types of proofs he would address to them that their minds will accept and retain. He would say, «God has the convincing proof [Q 6:149]". He said: "This means the proof with which the scholar addresses the one he teaches or the ignorant person, using only what that person comprehends". He would address women and employ as evidence in their case items of their jewelry, rings, earrings, headgear, necklaces, anklets, bracelets, dresses, head binding. Next he would cite examples pertaining to spinning, weaving, costume, and hair, and other items that suit the natural disposition of women. He would speak to the craftsman using the terms of his craft and thus, for example, address the tailor by reference to his needle, his thread, his patch, and his scissors. He addressed the shepherd using references to his staff, his cloak, his horn, and his two-pouched travelling bag[7].

It should be noted that there is nothing particularly esoteric in what al-ʿIbānī seems to be doing in this kind of *daʿwa*.

Al-Sijistānī, from about mid-fourth/tenth century, writing in the far east, offers us a curious example of what might constitute yet another type of *ta'wīl*. He says about the crucifixion of Jesus:

> The wood Jesus was crucified on was provided for this purpose by a group other than his own, and these people were the ones who crucified him on it, openly and manifestly. Accordingly, the explanation that the messiah [the Qā'im] and his deputies, on whom be peace, will reveal concerns the sacred laws of the messenger-prophets who have come before him. The cross thus becomes a clear sign and evidence of all ranks of the hierarchy. [Christian] veneration of it is something required of them, as, similarly, our veneration of the [Islamic] profession of faith[8] is [required of us].

7. Ibn al-Haytham, *The Advent of the Fatimids*, Eng. 168-70, Ar. 121-22.
8. The profession of faith is, «There is no god but God» (*lā ilāha ilā Allāh*).

The profession of faith is built on denial and affirmation, beginning with denial and ending with affirmation. Similarly, the cross is two pieces of wood: a piece that stands on its own and another piece whose placement depends entirely on the placement of the other. The profession of faith is four words. Likewise the cross has four extremities. The end fixed in the ground has the position of the master of interpretation [*ta'wīl*] in whom the souls of the seekers attain lasting security. The end opposite this, high in the air, has the position of the master of divine inspiration [*ta'yīd*], in whom the souls of the inspired ones attain lasting security. The two ends in the middle, which are to the left and the right, indicate the Follower [i.e., the universal soul] and the Speaking-prophet, of whom one is the master of natural composition [*tarkīb*] and the other master of scriptural compilation [*ta'līf*]. One is opposite the other, with the end standing for the Preceder [intellect] sustaining all of the edges[9].

The works of al-Sijistānī contain many other examples of the same type of *ta'wīl*, but what is particularly significant is his discussion of interpretation in a more theoretical context, especially as paired or associated with "revelation" (*tanzīl*). The latter he says resembles something in an undeveloped, organic form. By contrast, *ta'wīl* is like the product of a craftsman who works with organic material in order to make something of greater benefit. His own example is wood, which in a natural state is good only as fuel for a fire, but when crafted it becomes an object of greater benefit, such as a door, a box, arrows, spears, a pulpit, or a chair. Thus *tanzīl*, the revelation in plain form, is a set of "subjective items and restricted phrases beneath which there are hidden meanings. *Ta'wīl* on the part of its master puts all of these into a proper context and extracts from each phrase what was intended by it"[10]. The master of *ta'wīl* approaches each word or phrase in order to adduce its deeper meanings. Here we have the idea of exploiting and/or nurturing what was originally only "seeded" in the scripture.

Al-Kirmānī, writing in the East in the first two decades of the fifth/eleventh century, used a tendency already evident in al-Sijistānī, to rationalize the process of moving from the *ẓāhir* to the

9. Paul Walker, *The Wellsprings of Wisdom: A Study of Abū Ya'qūb al-Sijistānī's* Kitāb al-yanābī', including a complete English translation with commentary and notes on the Arabic text (Salt Lake City, UT 1994), para. 146, 147, and 183.

10. Walker, *Early Philosophical Shiism*, 127 (quoting from al-Sijistānī's *Maqālid*)

bāṭin – in effect, to make it less mysterious and esoteric – makes it clearer as if to correct an earlier restrictive sense for *ta'wīl*. Where the older forms needed to be kept from public view, certain aspects of some statements of al-Kirmānī suggest the possibility of an open discourse, almost as if they were used in debates. In part, al-Kirmānī was concerned to deny the claim of enemies and detractors that secret interpretations made Ismā'īlīsm a heresy, or that, by adhering only to hidden notions of what the law actually meant, an Ismā'īlī could avoid performing and following Islamic rites and rituals of ordinary belief. Al-Kirmānī would insist that both *ẓāhir* and *bāṭin* must be accepted, practiced, and observed; one without the other was for him intolerable. Both together were absolutely essential. He says:

When we specify the *ẓāhir*, we mean by it the acts ordained in the law in accord with the subordinate parts of the profession of faith, namely alms-giving, fasting, pilgrimages, *jihād*, and the implementation of the acts of submission to the persons in authority, on whom be peace. All these acts and rites in the law which, when they come into being, are perceptible to the senses, are commonly perceived by every creature that possesses senses that are sound, as is the case with regards to the heavens, the earth, and what is between them of the planets, the elements, the natural kingdoms, which, in that they are evident and obvious, are subject to sensation and every creature having sensation perceives them equally without any differentiation between one over another. If we specify the *bāṭin*, we mean by it the knowledge that accrues from knowing the existence of a thing and its elements and of its existing as a thing and whether it is manifest or hidden, of its measure and its form, of the cause of its existence, of the purpose because of which it has existence, which is a matter not subject to sense perception but is rather known by the mind, and of eternal punishment, the gathering, the reckoning, paradise and the inferno, the temporal contingency of the world and its annihilation, and other matters which, since they are esoteric (*bāṭinī*) in essence and hence not subject to sensation, all groups do not participate in perceiving but instead one group only is singled out to acquire it[11].

11. Paul Walker, *Ḥamīd al-Dīn al-Kirmānī: Ismaili Thought in the Age of al-Ḥakīm* (London 1999), 75.

He explains further:

[…] the absolute oneness of God and an understanding of the hierarchy of beings is a truly difficult matter, but, by means of it, there is life for the souls and their eternity, and salvation from the world of nature […] Since it is so difficult, God knew that His servants as a whole would never achieve the level at which they could obtain a perfect understanding of God's hierarchy or of His own absolute unity. Therefore God favored among them all a single person in each age for that perfection and purity, as is the case with the Imam, may God bless him profusely. That is to say, God favored him with a perfection in which he receives completely the emanation that flows into the world of nature from the angels. This man, by virtue of that emanation, is the guardian over the rest […] God has thus made obedience and love of him obligatory […][12]

My Purpose in this Chapter

Having spent considerable time and effort investigating these topics in Fāṭimid era Ismā'īlī sources, as the previous material illustrates, I feel comfortable in describing the range and complexity of the doctrines involved[13]. However I am far less at home with the other side of the problem at hand, namely the non-Ismā'īlī Andalusī

12. Walker, *Ḥamīd al-Dīn al-Kirmānī*, 76, quoted from al-Kirmānī's *al-Riyāḍ*. It is important to add here al-Kirmānī, *al-Maṣābīḥ fī ithbāt al-imāma*, in *Master of the Age: An Islamic Treatise on the Necessity of the Imamate*, ed. and trans. Paul Walker (London 2007), the Sixth Light, «In proof of the interpretation of the revelation and the law that comes from the messengers, which is knowledge», trans. 63-67, Ar. 28-32.

13. See, for example, the following items on this subject: Paul Walker, «Techniques for Guarding and Restricting Esoteric Knowledge in the Ismaili da'wa during the Fatimid Period», in *Sharing and Hiding Religious Knowledge in Early Judaism, Christianity, and Islam*, ed. Mladen Popović, Lautaro Roig Lanzillotta, and Clare Wilde (Berlin 2018), 186-98; Paul Walker, «To What Degree Was Classical Ismaili Esotericism Based on Reason as Opposed to Authority?» in *Esotérisme shi'ite, ses racines et ses prolongements*, ed. M. A. Amir-Moezzi, M. De Cillis, D. De Smet, O. Mir-Kasimov, 493-505 (Turnhout 2016); Walker, *Early Philosophical Shiism*, ch. 12: «Interpretation and Its Institution»; and Walker, «Double Observance by Works and Knowledge», in *Early Philosophical Shiism*, 62-79; and most recently, Paul Walker, «The Doctrine of Ta'wīl in Fatimid Ismaili Texts», in *Reason, Esotericism and Authority in Shi'i Islam*, ed. R. Adem and E. Hayes (Leiden 2021), 137-50. This last paper offers a good idea of the range and variety of *ta'wīl* in these texts.

response, if indeed there was a response. A key issue requires careful delineation of that side, again, with some precision as to dates. First we need to know what *bāṭinī* doctrines are found and in the works of which authors. Then, how might these writers have been influenced by Ismāʿīlī teachings. What were the possible means of transmission? If there is evidence of it, does it come from North Africa, or was it perhaps from much further east?

Therefore, my role is first and foremost to set out what I see as the situation from the Fāṭimid-Ismāʿīlī side, and outline what I find as the basic obstacles in the way of transmission. I do not argue that it did not happen at all, but suggest caution and careful circumspection in looking for it or claiming that it did happen.

Intense Hostility and Rivalry

Despite evidence of Fāṭimid attempts to gain a foothold in Umayyad Iberia, as in the embassy of Ibn al-Haytham and colleague sent to Ibn Ḥafṣūn[14], the divide between the two rivals persisted openly with fierce polemical exchanges on all sorts of issues[15]. Over the first two-thirds of the fourth/tenth century, the constant vocal opposition emanating from al-Andalus and the threat of Umayyad interference in North African affairs precluded any but the most minimal exchange of ideas or texts. Fāṭimid authorities were particularly sensitive to and focused on the Umayyads, perhaps even more so than they were on the ʿAbbāsids, who were less a threat in that period, at least locally.

For a full accounting of the relevant issues on this point, it is useful to begin with what happened to or began to happen upon the advent of Fāṭimid control over the former territories of the Aghlabids. Throughout the previous decades, the principal local factions pitted

14. On which see Paul Walker, «The Identity of One of the Ismaili Dāʿīs Sent by the Fatimids to Ibn Ḥafṣūn», in *al-Qanṭara* 21 (2000), 387-88.

15. For the Fāṭimid side, see Paul Walker, «Fatimid Portrayals of the Umayyads in Official Pronouncements and in Daʿwa Literature», in *Fatimids and Umayyads: Competing Caliphates*, ed. M. Ali de Unzaga (London forthcoming); now also available as chapter 22 in *The Fatimids; Select Papers on their Governing Institutions, Social and Cultural Organization, Religious Appeal, and Rivalries* (Leiden 2023).

an entrenched Mālikī *'ulamā'*, backed by a majority of the scholarly population, against a much smaller contingent of Ḥanafīs who were often supported by the pro-ʿAbbāsid government. But, on the whole the Mālikīs fared well, were respected, and could find employment. When the Fāṭimids appointed as the new chief judge (*qāḍī*) of Kairouan a local Shīʿī who insisted on some elements of Shīʿism, for example, forbidding *tarāwīḥ* prayers with an imam during Ramaḍān, a clash with the Mālikīs was inevitable. Not only were they denied cherished practices, but even more seriously, they lost standing and employment. The legal texts they depended on became worthless, so reduced in value that they were sent abroad or used as paper for wrapping medical prescriptions[16]. A few of the most uncompromising among them suffered physical harm which, in later Mālikī accounts, were vastly exaggerated into cases of full-blown martyrdom. The main point is that many felt that they would be better off leaving for Umayyad-ruled al-Andalus, carrying stories of Fāṭimid persecution. Could they also have taken to Iberia what they had managed to learn of Ismāʿīlī doctrines? Did the process, begun in the early to mid-fourth/tenth century, continue, with the arrival of more and more Mālikī refugees from the east?

A second issue in this rivalry that needs consideration is the long-standing and deep-seated Ismāʿīlī, and hence Fāṭimid, hatred of the Umayyads, a matter that began with a clash of clans in the earliest Islamic period. Al-Kirmānī, a great *dāʿī* at the beginning of the fifth/eleventh century, says about the Umayyads, and here specifically one "who resides in al-Andalus": that "he is not pure due to his being from the Tree of Zaqqūm which are the Umayyad clan"[17]. Thus the whole family, root and branches, are from the "accursed tree" (Q. 17:60). The Fāṭimid caliph al-Manṣūr says in a letter to his son: "Know, O my son, that the Cursed Tree in the Qur'an applies to the Umayyads"[18]. Qāḍī l-Nuʿmān's *Kitāb al-majālis wa-l-musāyarāt* contains more, much of it quite specific to the Umayyads of Cordoba[19]. The author himself was a North African and his view-

16. As reported by Ibn al-Haytham, *The Advent of the Fatimids*, 166.

17. Al-Kirmānī, *al-Maṣābīḥ*, 121. The tree of Zaqqūm is a tree in hell with fruit that are the heads of devils: see Qur'ān 37:62, 44:43-46, and 56:52.

18. Manṣūr al-ʿAzīzī l-Jawdharī, *Sīrat al-Ustādh Jawhar*, ed. and trans. Hamid Haji, *Inside the Immaculate Portal* (London 2012), Eng. 57-58, Ar. 46.

19. Note key examples in Qāḍī l-Nuʿmān, *Kitāb al-majālis wa-l-musāyarāt*, ed. al-Ḥabīb al-Faqhī, Ibrāhīm Shabbūḥ, and Muḥammad al-Yaʿlāwī (Tunis

point clearly represents a Fāṭimid attitude from the mid-fourth/tenth century and earlier. His more essential work in this regard is a treatise he often called simply *Kitāb al-manāqib wa-l-mathālib*, which might be translated as Book of virtues and vices[20]. However, its actual title is *Kitāb al-manāqib li-ahl bayt rasūl Allāh al-nujabā' wa-l-mathālib li-banī Umayya al-luʿanā'*, which translates as Book of the virtues of the house of God's messenger, the most noble, and the vices of the house of Umayya, the accursed ones. Most significantly for the present purpose, it concludes with a chapter entitled "A review of the virtues of the imams who presently hold the imamate and the vices of those of the house of Umayya who dominate the territory of al-Andalus". Although this is only one chapter of many, it offers the most explicit view of the Iberian Umayyads as they were seen by the Fāṭiimids (or as the Fāṭimids wanted them to be seen). In short, it is a prime document in their polemical attack against the rival caliphate of the west.

And finally, it was obviously ʿAbd al-Raḥmān III's declaration of his caliphate that, above all else, engendered the ire and fury of the Fāṭimids, raising the level of their animosity even higher. At a key point in this book, having just named the Umayyad rulers of al-Andalus from ʿAbd al-Raḥmān I to ʿAbd al-Raḥmān III, Qāḍī l-Nuʿmān comments:

> These were all wicked rulers, of vile standing, of despicable intentions, who drank wine, passed time with musical instruments, amused themselves with young boys, caroused with fools, listened to singing girls, ate forbidden things, transgressed regulations, in the same way as their forefathers in the past. All of them were styled *amīrs*. None claimed the caliphate, nor

1978) as follows: (pp. 92-93) a list of their criminal activities such as consuming wine and selling it in public, pederasty, prostitution, imprisoning women and selecting certain of them for sex; (pp. 115-16) a session about the cursing of the Banū Umayya, discussion of the «Accursed Tree»; (pp. 164-70) the episode of the Fāṭimid raid on Almeria, counter raids, and Byzantine truce; (p. 168) preparation for Jawhar's conquest of the furthest Maghrib to cleanse it of supporters of the Umayyads; (p. 190) expression of scorn for the inhabitants of al-Andalus who are feeble-minded (*sakhf ʿuqūlihim*) and coarse in character (*ghalīẓ ṭibāʾihim*); (p. 234) ʿAbd al-Raḥmān's committing of forbidden acts openly; (p. 253) whether they are related to dogs, monkeys, or pigs?; (pp. 285-86) a session disparaging the Banū Umayya, Marwānid cursing of the Fāṭimids from their minbars, al-Muʿizz seeing al-Nāṣir in a dream.

20. Qāḍī l-Nuʿmān, *Kitāb al-manāqib wa-l-mathālib*, ed. Mājid b. Aḥmad al-ʿAṭiyya (Beirut 2012).

styled themselves as imams; they did not preach from the *minbar*, nor was the *khuṭba* said for them from it. They did not mint coins in their own name, neither dinar nor dirham, and they did not name themselves in the *ṭirāz* or on flags. The coinage with them was struck with the name of the governor of Ifrīqiyya among the commanders of the House of ʿAbbās. All that ran in accord with the standard practice in the region by its governors. They did not permit themselves to transgress that, nor contradict anything in it. Nor to depart from the limits set by the previous rulers who had occupied their position and controlled the place, until the advent of the time of ʿAbd al-Raḥmān b. Muḥammad.

It was he who exceeded the boundaries and crossed over into what none of his forefathers had done. He was allowed that by the common people of al-Andalus who, had his forefathers wanted to do that, they would not have allowed them nor approved of them doing it. So it was that he called himself "Commander of the Believers", coined money, decorated *ṭirāz* with his name. He parted with his loyal followers because of his animosity due to the vileness of his condition and meanness of his character and intentions and the shamelessness of his opinions. This was caused by what we have cited as the malicious states of his forefathers that had come together in him, being deposited in his soul and active in it. That aspect of his condition was not hidden nor was there any way to avert the possibility of its being proved. He was well known and famous for it and he adopted from the possessors of stamina and power for sexual intercourse that with his young boys, group after group. They knew about that and characterized him so. That went along with his openly drinking wine, listening to singing girls, playing *ṭanbūrs* and *ʿūds*. The keepers of pleasure houses visited him from remote lands and he settled them with him accordingly, in close proximity, and he gave them abundant gifts and favors. He manifested a mockery of heroes even though he was the one most certainly mocked by doing it. But he insisted on that for reasons of pretense and meanness. He had his subjects firmly believe a behavior good according to his own claims for it by permitting them these transgressions and by passing over the reprehensible in it, thus leaving it aside, along with what of their doctrine they might have believed. So they amused themselves with young boys, openly practicing pederasty in public. Daughters were shared among them as they accustomed her [to it] young and proceeded with the same when older. Among them fornication was evident and they flaunted openly sedition and wealth. They did commerce in wine in their markets, safe with him from this manifesting of crime that was due to their own moral depravity[21].

21. Qāḍī l-Nuʿmān, *Kitāb al-manāqib*, 400–1 (my translation). At several points in this chapter Qāḍī l-Nuʿmān says much the same, that in his other

This form of inherent hostility to the Umayyads need not, or course, have precluded any and all contact or transmission but, along with the almost constant defensive state of the Fāṭimids against incursions from Iberia or from pro-Umayyad Berbers closer by in the Maghrib, there does appear to have been a wall of physical, if not intellectual, separation[22].

Imposed Secrecy and Ensuring Compliance

As an additional factor blocking possible transmission, the more esoteric doctrinal writings by agents of the *daʿwa* were subject to a rule of secrecy imposed by an oath and other mechanisms. There was thus a sharp distinction between public discourse and what was kept highly restricted. The latter was accessible solely to members tested and approved by senior *dāʿīs*. All were sworn never to reveal anything of the doctrinal writings without explicit permission. It is only recently that modern scholarship has gained some degree of access, but with difficulty. Scholars have studied what the opponents and detractors of Ismāʿīlīsm in the Fāṭimid era knew of these secret writings and the breaches wherein an outsider or renegade exposed the true esoterica, but these cases are rare. Most denunciations of the Ismāʿīlīs were based on generic polemical falsehoods, not on

works he set out a detailed account of the virtues and excellences of the Fāṭimid imams and their predecessors. Thus, he sees no explicit need to repeat it in this treatise that is primarily devoted to the vices of the Umayyads.

22. At this point we might note the evidence Dachraoui discovered and published in an article long ago about the Umayyad conception of Fāṭimid corruptions. He adduced the Umayyad view by extracting information from Ibn Sahl's account of testimony taken in a case brought against a person (Abū l-Khayr) who was thought by local Andalusī authorities to be an agent working in al-Andalus on behalf of the Fāṭimids. The testimony presented to the judge is hearsay, but even so, likely indicates what the Umayyad authorities considered the vices of the Fāṭimids, and the practices their agents would have advocated. Among them was condoning the cursing of Abū Bakr and ʿUmar, slandering ʿA'isha, denying intercession, advocating permanent punishment by the fire of sinning Muslims, not performing the five prayers, not attending prayer on Fridays, *and drinking wine*. The culprit in question – the so-called Fāṭimid agent – was apparently so devoted to wine consumption that he is reported to have said: «when I die, wash me in it». Farhat Dachraoui, «Tentative d'infiltration shiʿite en Espagne musulmane sous le règne d'al-Hakim II», in *al-Andalus* 23 (1958), 100-1.

authentic examples of what they actually advocated. For the former, we can cite the fourth-/tenth-century anti-Ismāʿīlī tracts of Ibn Rizām (d. first half fourth/tenth century) and Akhū Muḥsin (d. 374/985) which may have been based in part on material captured by the ʿAbbāsids, or the section on the Ismāʿīlīs in al-Baghdādī's (d. 429/1037) early fifth-/eleventh-century *Farq bayn al-firaq*. Although significantly later, al-Ghazālī's first of many attempts to expose and condemn the Ismāʿīlīs, whom he called Bāṭinīs, and his work *Faḍāʾiḥ al-bāṭiniyya* (completed in 488/1095), offers a better picture of the problem he (and others) faced in trying to gain access to genuine Ismāʿīlī texts or doctrines. When challenged as to how he could have acquired true knowledge of these texts and doctrines, al-Ghazālī replied, but first noted that these people divulge their secrets

> only after pacts and covenants and they guard them save from one agreeing with them in belief – so whence has it happened to you to become cognizant of them, since they hide their religion and strive to keep their beliefs secret?
>
> I [al-Ghazālī] reply: As for becoming cognizant of that, we came across it simply through many men who had professed their religion and responded to their propaganda, then they became aware of their error and returned from their seduction to the plain truth and [then] reported the views those men had proposed to them[23].

Here then is fairly sound evidence of two factors. One is the Ismāʿīlīs' imposition of secrecy, as noted by al-Ghazālī. The Ismāʿīlīs were famously reticent about publicly declaring any of their religious messages, preferring to carefully guard them. The means they used to protect themselves and their doctrines needs some discussion at this point, as it may be key to why the opposition, including the Umayyads of Iberia, did not and could not have had access to it. We must also stress that the anti-Ismāʿīlī writers mentioned above appear to have known little or nothing about genuine Ismāʿīlī works. Al-Ghazālī's account of their older, classical doctrines is significantly weak, despite his claim to have had access to some of

23. Al-Ghazālī, *Faḍāʾiḥ al-bāṭiniyya*, ed. ʿAbd al-Raḥmān Badawī (Cairo 1964), 33; and al-Ghazālī, *Freedom and Fulfillment: An Annotated Translation of al-Munqidh min al-ḍalāl and Other Relevant Works of al-Ghazālī*, trans. by R. J. McCarthy (Boston 1980), 192, 55–56.

them[24]. However, we do know of a small number of Ismāʿīlī opponents – the Zaydī author Abū l-Qāsim al-Bustī (active late fourth/tenth and early fifth/eleventh century)[25] and a Yemeni author named Abū Muḥammad[26] – who cited and even quoted Ismāʿīlī works, thus indicating that there must have been a few breaches in the barriers. Perhaps an ex-Ismāʿīlī became an informant or one or two valid accounts by critics circulated to the west.

Still the policy of imposed secrecy involved a long-standing method of oaths and payments. An oath of allegiance administered to anyone who wanted to join served two main purposes. One was to ensure the absolute loyalty of each new member and the other was to guard and protect, and thus control access to, the esoteric knowledge imparted in the course of the *daʿwa*'s appeal and its instruction. The new adept swore that "he will support the imam of his time and will not forsake him, that he will not reveal any secret of the faith to a person not worthy of it or to anyone who has not sworn the oath of covenant"[27]. Another version says,

> Thus you must reveal nothing of it, neither little or much, nor in allusions, except those things about which I myself or the person responsible dwelling in this city explicitly allow you to speak, so that in this matter you must only act according to our command, which you must not contravene and to which you must add nothing.... If you do anything of the kind, although you know that in so doing you violate [the oath], which you remember exactly, then you renounce God the Creator of heaven and earth.... You leave the party of God and his saints, to God's unconcealed disappointment, but He will soon bring retribution and punishment on you, and you will walk into the fire of *jahannam* [Hell], in which there is no mercy[28].

24. Al-Ghazālī, *Faḍāʾiḥ al-bāṭiniyya* contains a chapter on earlier forms of Ismāʿīlī doctrine and a second chapter on their doctrines during his own time and place.

25. Abū l-Qāsim al-Bustī, *Kashf asrār al-bāṭiniyya wa-ʿawār madhhabihim*, ed. ʿĀdil Sālim ʿAbd al-Jādir, in *Ismāʿīlīyūn: kashf al-asrār wa-naqd al-afkār* (Kuwait 2002).

26. Abū Muḥammad, *ʿAqāʾid al-thalāth wa-l-sabʿīn farqa*, ed. Muḥammad ʿAbdallāh Zarban al-Ghāmidī (Medina 1993).

27. Walker, «Techniques for Guarding», 190.

28. Heinz Halm, «The Ismaili Oath of Allegiance (*ʿahd*) and the 'Sessions of Wisdom» (*majālis al-ḥikma*) in Fatimid Times», in *Mediaeval Isma'ili History & Thought*, ed. Farhad Daftary (Cambridge 1996), 75-115. This particular version of the oath, as translated by Halm, appears on 95-97.

The second and perhaps most important benefit of membership concerns access to esoteric knowledge, to the *ta'wīl*. A newly uncovered text from about 298/911, the earliest period in North Africa, explains:

> [For] the person who renders that [alms] offering out of the goodness of his own self, God will cleanse thereby his spirit and purify his money, and thus it will be lawful for his *dāʿī* and mentor to reveal to him the interpretive *(ta'wīlī)* sciences and make known to him the truths hidden from the enemies of God's religion[29].
>
> […] The believer pays what he pays on the measure of his sincerity and in accord with what his *dāʿī* determines for him in order to test him. If he pays that once, he has fulfilled the basic requirement of the religion and thus fulfills the necessary obligation, by his fulfillment of which he distinguishes himself from the people of outward meaning [Sunnī Muslims and other non-Ismāʿīlīs] and he departs from their ranks. If he pays a second time, his *dāʿī* knows the goodness of his intention and the firmness of his certainty and then he reveals to him the *secrets of the interpretation* [italics mine]. If he pays out a third time, his status with God's guardian rises and his rank similarly rises among the believers[30].
>
> […] God orders him [the *dāʿī*] to examine the believers who seek the benefits of the religion to test out their secrets. If they bear the trial with patience, *it is licit for the teacher to initiate them and raise them in the interpretive sciences* [italics mine][31].

Was Ismāʿīlī Bāṭinism *Mystical or Strictly Rational*

Yet another possible obstacle needs to be considered as well. Although fourth-/tenth-century Ismāʿīlī thought became heavily dependent on a form of Neoplatonism, most clearly seen in the works of al-Sijistānī, there are serious questions about the degree to which it was accepted in the Maghrib. To be sure, it was adopted

29. Wilferd Madelung and Paul Walker (ed. and trans.), *Affirming the Imamate: Early Fatimid Teachings in the Islamic West, an Arabic Critical Edition and English Translation of Works Attributed to Abū ʿAbd Allāh al-Shiʿi and His Brother Abū'l-ʿAbbās* (London 2021), trans. 81.

30. Madelung and Walker (ed. and trans.), *Affirming the Imamate*, trans. 92.

31. Madelung and Walker (ed. and trans.), *Affirming the Imamate*, trans. 85–86.

fairly widely later, though mainly in Egypt and the East. But there is also a matter of whether it promoted any kind of mysticism other than a narrow doctrine of intellect that tended to reject most forms of supra-rational perception.

For a full understanding of this aspect of the issue, it is necessary to consider not merely Ismāʿīlī expressions of a form of Neoplatonism, but also the history of Neoplatonic materials, the Arabic texts that conveyed them, and independent works that adopted and adapted it in the Islamic context. Elements of this school of ancient philosophical thought show up in several ways and places ranging from portions of works of the third-/ninth-century al-Kindī (d. ca. 252/866) and the fourth-/tenth-century *Rasāʾil Ikhwān al-Ṣafāʾ* to the pseudo-ancient *Theologia* in its shorter and longer version, and the so-called *Pseudo-Ammonius*[32]. As but one key example, we know that a mid-fourth-/tenth-century work of al-Sijistānī, his *Kitāb al-maqālīd*, actually quotes passages that also appear in the *Longer Theologia*, which was apparently his source[33]. Therefore, the transmission and use of similar materials may not be connected in any way with the Ismāʿīlī al-Sijistānī but rather derived directly from the *Theologia* itself, at least from one version of it.

A further point of interest in this regard is whether or not what many have perceived as a mystical side to Plotinus (or Plato) had any influence on the Ismāʿīlī Neoplatonists. The famous passage by Plotinus in which he describes the experience of transcendence into a vision of light and splendor follows.

> Often have I been alone with my soul and have doffed my body […] so as to be inside myself, outside of other things. Then do I see within myself such beauty and splendor as I do remain marveling at […] so that I know that I am one of the parts of the sublime […] divine world. When I am certain of that, I lift my intellect up from that world into the divine world […] so as to be above the entire intelligible world, and seem to be standing in the sublime and divine place. And there I see such light and splendor as tongues cannot describe nor ears comprehend […] The place of splendor and light, which is the cause of all light and splendor[34].

32. On the *Pseudo-Ammonius* in this context see my discussion of it and source citations including the edition and trans. by Ulrich Rudolph, in *Early Philosophical Shiism* (Cambridge 1993), particularly 39-40.

33. Again see my analysis of the work in Walker, *Early Philosophical Shiism*.

34. *Theologia* I, 21-44 = *Enneads* IV 8, 1, 1-2, 9.

This passage was retained in the Arabic version and was certainly known to Ismāʿīlī writers. Yet it does not have much influence on them. The Ismāʿīlī writers were not necessarily interested in experiences during which ordinary humans gain a personal glimpse of a reality above and beyond the universal intellect. Intellect cannot know of anything more than itself. And if it tries, as in attempting to understand where it came from, it recoils at the experience and it falls back in confusion and failure. In this theology God is simply utterly unknowable. He is a given that cannot be attained in any sense whatsoever. For Plotinus and those under his influence trying to comprehend the very source of all things is a process that is ultimately mystical and ineffable. Plotinus, via his Arabic texts, provided the Islamic world not only with his version of the doctrine of the hypostatic One, but also with a driving force that calls the individual soul to seek it out and to rise toward a union with it. Poetic and passionate, his description of the One and of the individual soul's confrontation with it, is lyrical, mystical, and intensely personal, as illustrated in the passage just cited. The end is ecstatic not rational. Al-Sijistānī and those of his kind do not delve into these matters, rather they resist the temptation that became the major objective of the Sufi path[35]. He stops the upward progress and blocks the way by use of his special concept of double negations. The divine is, he insists, not in a place, not in time, not characterizable, not describable and also *not* not in a place, *not* not in a time, *not* not characterizable, and *not* not describable. All knowledge and all perception, any form of perception, terminate at this level. There can be no "taste" of what might be higher and beyond. No speculation about God's reality is allowed. Reason is as far as the road goes. Ecstatic experiences do not play a part in this theology.

Therefore, if some elements of Ismāʿīlī thought did move westward across North Africa and into Iberia, this restriction was likely a factor in that transmission. In sum, it appears to be premature to posit influences in the absence of solid evidence, such as clear examples of conscious adaption by Andalusī writers (or rulers) of Fāṭimid,

35. I am thinking here of a later but clearly Andalusī account found in Ibn Tufayl's *Ḥayy b. Yaqẓān* who, as with the author himself, ultimately experiences a «taste» (*dhawq*) of what is beyond and above pure intellect. But I do not know how much earlier this idea can be found in Iberian literature.

or Fāṭimid like, doctrines or practices. At present it seems that none existed, at least none were explicit enough to provide a path for further inquiry, let alone confirmation.

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ABSTRACT

Paul Walker, *Intense Rivalry, Sectarian Secrecy, and Doctrinal Recourse to Reason: Obstacles to the Fourth-/Tenth-Century Transmission of Ismāʿīlī Thought to al-Andalus*

Occasional Fāṭimid attempts to gain a foothold in Umayyad Iberia were typically accompanied by fierce polemical exchanges from both sides. Vocal opposition emanating from al-Andalus and Umayyad interference in North African affairs precluded any but the most minimal transmission of ideas or texts. Moreover, esoteric doctrinal writings by agents of the Ismāʿīlī *daʿwa* were subjected to a rule of secrecy. Ismāʿīlīs were sworn never to reveal anything in their writings. Opponents in the Fāṭimid era knew little of it and most denunciations of the Ismāʿīlīs were based instead on generic polemical falsehoods. In addition, although fourth-/tenth-century Ismāʿīlī thought became dependent on a form of Neoplatonism, there are serious questions as to what degree it was accepted in the Maghrib. There is also an issue of whether it promotes any kind of mysticism rather than a narrower doctrine of intellect that tends to reject most forms of supra-rational perception.

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Part II

CONTEXTUALIZING THE ORIENT

Travis Zadeh

TRACING THE SORCERER'S CIRCLE: DEMONS, POLYSEMY, AND THE BOUNDARIES OF ISLAMIC NORMATIVITY

Encircling a Field

This article proceeds, more or less, as an extended gloss on the use of circles and other diagrams in Islamic ritual practices for commanding jinn, demons, angels, and planetary forces, or for obtaining otherworldly states, powers, and knowledge[1]. Early examples of these diagrams feature in the Arabic compendium of incantations by Fakhr al-A'imma al-Ṭabasī (d. 482/1089) from eastern Iran[2]. What follows also addresses the question of normativity, in that it asks how we may think of these materials and techniques as Islamic. In doing so, I turn to some early prosopographical accounts and codicological materials

1. The following has benefited from conversations and exchanges with Phyllis Granoff, Lillian McCabe, Matthew Melvin-Koushki, Omer Michaelis, Michael Noble, Liana Saif, Emily Selove, Nicholas Sims-Williams, and Kevin van Bladel. This article supplements materials discussed in Travis Zadeh, «Postscript: Cutting Ariadne's Thread, or How to Think Otherwise in the Maze», in *Islamicate Occult Sciences in Theory and Practice*, ed. Liana Saif et al. (Leiden 2021), 628-39; Travis Zadeh, «Magic, Marvel, and Miracle in Early Islamic Thought», in *The Cambridge History of Magic and Witchcraft in the West*, ed. David Collins (Cambridge 2015), 235-67; and Travis Zadeh, «Commanding Demons and Jinn: The Sorcerer in Early Islamic Thought», in *No Tapping around Philology*: *A Festschrift in Honor of Wheeler McIntosh Thackston Jr.'s 70th Birthday*, ed. Alireza Korangy and Dan Sheffield (Wiesbaden 2014), 131-60.

2. Al-Ṭabasī's collection, *al-Shāmil min al-baḥr al-kāmil fī l-dawr al-ʿāmil min uṣūl al-taʿzīm wa-qawāʿid al-tanjīm*, remains unedited. It survives in various manuscript copies. The following Arabic manuscripts of the collection were consulted: B = Staatsbibliothek, Berlin, MS Or. fol. 52, copied 833/1430; E = Real Biblioteca del Monasterio de El Escorial, Madrid, perhaps an eighth-/fourteenth-century copy; P = Princeton University Library, Princeton, Islamic Manuscripts, Islamic MSS, New Series 160; and the following Persian translation: N = Suleymaniye Yazma Eser Kutuphanesi, Istanbul, Nuruosmaniye 2827.

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of those who, like al-Ṭabasī, were in some fashion connected to the study of incantations and spells (*'ilm al-'azā'im wa-l-ruqā*).

The diagrams in question often feature in writings associated with the science of incantations. One of the primary aims of this field is to subjugate (*taskhīr*) intermediary beings so as to produce various results. Generally, these results range from the therapeutic, prophylactic, divinatory, and revelatory, to diverse forms of love magic, the incitement of enmity, and the infliction of harm on enemies. A notable category in the repertoire of those who practiced the science of incantations is the word *mandal*, a polysemous term with a complex genealogy. The term made its way from Sanskrit through Arabic, Persian, Judeo-Arabic, Hebrew, Latin, and various European vernaculars. Even with all these transformations, the movement of the *mandal* across sectarian and linguistic divides speaks to an elite, transregional script for communicating with intermediary beings. Various discourses on the *mandal* overlapped, as they could be mutually intelligible, or radically divergent. Outside an Indic milieu, they all represent, to some degree, the absorption of a foreign word as a catchment for and mechanism of enchantment.

Before proceeding, a few words about the state of the field and terms of art. The discipline under consideration is often referred to in modern portrayals as "jinn magic". While this shorthand gets to the gist of the matter, the field of study and body of practice are not limited solely to jinn. Moreover, the classical Islamic science of adjurations and incantations was not uniformly thought of as magic, if by that we mean a discursive arena starkly opposed to science or religion. As for the modern study of this discipline in the frameworks of the Western academy, a good deal of work has been done, particularly in the last decades. Yet much remains unedited, unexamined, and under theorized. And so, by way of a caveat, the following observations must be, as with so much else, provisional[3].

The *mandal* emerged in Arabic and early New Persian as a technical term for diagrams used in complex ritual performances to summon or engage with unseen forces. In one sense of the word, the

3. Many of the primary materials under consideration here remain unedited. There is, however, a growing body of scholarship on the Arabic science of incantations. This includes the ongoing work of Emily Selove on the handbook of practical magic ascribed to Sirāj al-Dīn al-Sakkākī, which is of direct relevance to the topic at hand.

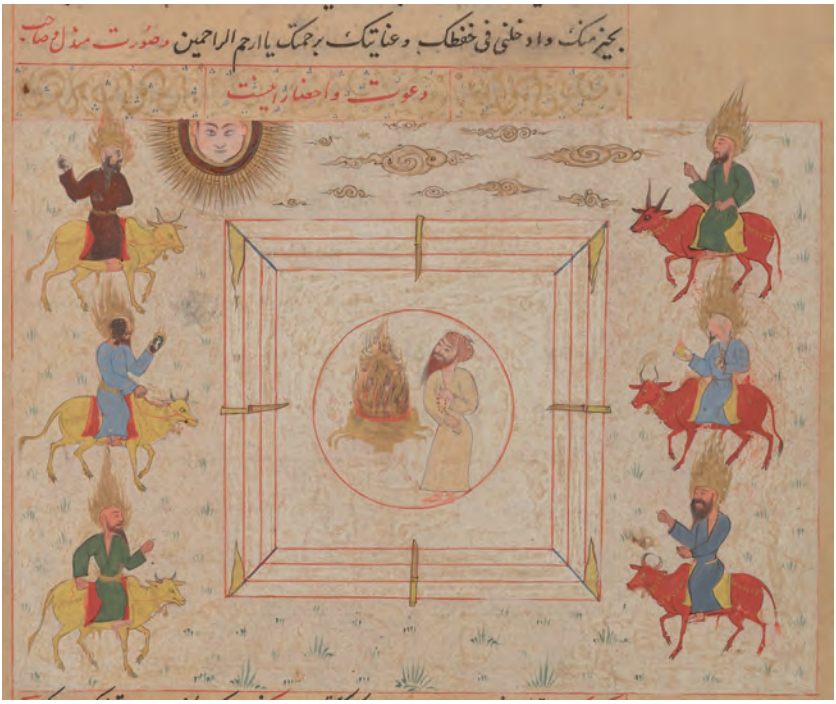


Figure 1. From the Persian *Taskhīrāt* [Subjugations] of Muḥammad b. Sirāj al-Dīn al-Sakkākī (fl. seventh/thirteenth century), illustrated in the *Nujūm al-ʿulūm*, a compendium produced in Bijapur India, dated 978/1570. Six luminous celestial beings on bovines appear outside of a *mandal* designed to subjugate the sun. The recipe calls for five days of fasting and prayers, the use of flags and blades, a fire, and sacrifices. The master of ceremonies (*ṣāḥib-i daʿvat*) sits in the middle of the diagram during the course of the ritual. Chester Beatty Library, Dublin, MS IN2, fol. 223b.

term represents a kind of "magic circle". In what appear to be the earliest attestations, this took the form of a practitioner who would sit within a *mandal* diagram, often surrounded by ritual objects and implements, including the use of fire for suffumigation (see figure 1).

But in addition to protection, the *mandal* could attract and harness intermediary beings. As a technical term employed by conjurers, the word appears to have already been in use in Arabic during the second/eighth century. It may well have made its way there orally through contacts with Persian speakers in the East, though other routes are equally plausible. The exact process by which the word

mandal, which is connected etymologically to the Sanskrit *maṇḍala*, became both a multivalent term and a technique in the toolkit for the science of incantations is not entirely clear, though the pages that follow offer some broad suggestions[4].

There are pre-Islamic Buddhist texts from Central Asia that address the *maṇḍala* in Sanskrit; the word also makes its way into Sogdian and Khotanese (eastern Middle Iranian languages), as a powerful diagram used for communing with unseen forces. A reasonable surmise would be that the word also entered into Bactrian, another eastern Iranian language. In the course of the Arab conquests of Central Asia, during the late first/seventh and early second/eighth centuries, Muslims developed extensive military, economic, and social connections with the region; so too followed high-ranking conversions among Buddhist elites, most notably the Barmakids of Balkh, a capital city of Bactria, in modern-day Afghanistan. The city was a major center of Buddhist learning, populated with monks, monasteries, stupas, relics of the Buddha, and statues of powerful deities. Moreover, cave art in Afghanistan and Central Asia preserves paintings of the Buddha seated in circular *maṇḍala* diagrams surrounded by Bodhisattvas; Muslims from the region were long aware of Buddhist iconography and architecture. All of which points to a broad, interconnected landscape where the term could circulate in the form of sacred diagrams[5].

4. For general identifications with Sanskrit, see Johann August Vullers, *Lexicon Persico-Latinum etymologicum*, 2 vols. (Bonn 1855-64), 2:1217; Reinhart Dozy, *Supplément aux dictionnaires arabes*, 2 vols. (Leiden 1881), 2:652-53; David Pingree, «Learned Magic in the Time of Frederick II», in *Micrologus* 2 (1994), 48; Constant Hamès, «Maṇḍalas et sceaux talismaniques musulmans», in *De l'Arabie à l'Himalaya: Chemins croisés en hommage à Marc Gaborieau*, ed. Véronique Bouillier and Catherine Servan-Schreiber (Paris 2004), 156-57.

5. See Takayasu Higuchiand and Gina Barnes, «Bamiyan: Buddhist Cave Temples in Afghanistan», in *World Archaeology* 27:2 (1995), 282-302. For descriptions of the statutes of Bamiyan and surrounding temple iconography, see ʿImād al-Dīn al-Qazwīnī, *Āthār al-bilād fī l-akhbār al-ʿibād* (Beirut 1960), 154; Shams al-Dīn al-Ṭūsī, *ʿAjā'ib al-makhlūqāt*, ed. Manūchihr Sutūda (Tehran 1966), 338, cf. 114. For further context, see Kevin van Bladel, «The Bactrian Background of the Barmakids», in *Islam and Tibet: Interactions along the Musk Routes*, ed. Anna Akasoy et al. (New York 2011), 43-88; Étienne de la Vaissière, *Sogdian Traders: A History*, trans. James Wood (Lieden 2005), 263-90. See also Johan Elverskog, *Buddhism and Islam on the Silk Road* (Philadelphia 2010), 25-64; Christopher Beckwith, *The Tibetan Empire in Central Asia* (Princeton 1987), 55-83.

The incorporation of the *mandal* as a diagram used in Islamic practices of adjuration, however, almost entirely strips away these associations, leaving, as it were, only a few traces as to how or when the word made it into the Arabic and Persian literary record. There were clearly other ways of referring to the practice of magical encirclement. To confound matters, casting, striking (*ḍarb*), or opening up (*fatḥ*) a *mandal* came to be applied, particularly in Iraq, the Levant, and North Africa, to practices of exorcism and divination through reflective surfaces, akin to scrying, involving various vessels used to commune with jinn, often with the aid of a child medium; boys appear in the literary record to have been common, though girls also are attested[6]. Thus, in addition to a protective enclosure in which one sat, the *mandal* could refer to diagrams or even reflective surfaces used to summon spirits.

At the outset, I should also note that the word "circle" does not entirely capture the full range of diagrams in question. While the shapes drawn on the ground when addressing intermediary forces enclosed in some fashion, they were not just circular. Polygons of numerous sides and configurations were also used, and various labyrinthine patterns emerge. Moreover, the expressions "sorcerer's circle" or "magic circle" are of course not neutral modifiers. At least in our modern vocabulary, they risk narrowing the diverse meanings and contexts that animated diagrams for communing with and commanding otherworldly forces. The conceptual grammars of modernity carve out sorcery and magic from religion and science in ways that often obscure even as they reveal. As in the diverse fields of antiquity and the broad realms of Latin Christendom, scholars of Islamic history have questioned the heuristic utility of the category of "magic" as a second order form of theorization. Part of the problem, as far as historical inquiry is concerned, is that our scholarly vocabulary is itself designed to distinguish the past from the present in distinctly metaphysical and ethical terms.

6. See the modern collection by the Egyptian occultist, ʿAbd al-Fattāḥ al-Sayyid al-Ṭūkhī, *al-Mandal wa-l-khātam al-sulāymānī wa-l-ʿilm al-rūḥānī li-l-imām al-Ghazālī* (Cairo n.d.), 44, cf. 72, 83-90. On al-Ṭūkhī and the Maʿhad al-Futūḥ al-Falakī l-ʿAmm of Egypt, see Alexander Fodor, «Arabic Bowl Divination and the Greek Magical Papryi», in *Arabist* 9-10 (1994), 76, 89, 93; Emily Selove, «Magic as Poetry, Poetry as Magic, A Fragment of Arabic Spells», in *Magic, Ritual, and Witchcraft* 15.1 (2020), 34, 36-37. Cf. ʿAbd al-Majīd al-Mushʿabī, *al-Tanjīm wa-l-munajjimīn wa-ḥukmuhum fī l-Islām* (Taif 1994), 139.

One way of bridging the gap, frequently invoked in the modern field of ancient magic, is the concept of the "coefficient of weirdness", coined by the anthropologist Bronislaw Malinowski (d. 1942). The coefficient of weirdness, in Malinowski's usage, applies not only to speech, but also to the full array of activities and gestures designed to mark, in any given cultural matrix, a particular act, performance, object, or phenomenon, as magical, and thus beyond the ordinary. Rather than an end, the magic of something, in this sense, represents a spectrum, moving from weirdness to what Malinowki refers to as "a coefficient of intelligibility". Thus, it is with unintelligible speech, the use of *charaktēres*, the invocation of *nomina barbara* and *voces magicae*, phallic emblems, *defixiones*, drawings of demons, and the like. This stuff, we are frequently reminded, is just weird. Even the technical vocabulary is strange and open to conflation, metonymic shift, and wholesale appropriation, often of foreign import. Such is the *mandal*, a loanword encircled with many different meanings – diagrams, traps, portals, reflections, mirrors of ink, magic circles, wax tablets, aloes-wood, as well as even regional centers of coastal India. The word produces its own obscurity through estrangement[7].

In some sense, the frameworks of classical Islamic metaphysics would appear to support an affective turn to emotions and sensibilities, with recourse to the central category of *gharīb*, which can be glossed variously as strange, uncanny, paranormal, extraordinary, queer, monstrous, miraculous, rare, and of course weird[8]. This is all on display in early Arabic and Persian writings on incantations, known classically as *'ilm al-'azā'im*, the science of summoning and commanding all forms of demons, jinn, angels, and planetary forces. Various encirclements and vessels feature, as do talismans, signets, seals, fires, sacred tools, pin dolls, libations, suffumigations, sacrifices,

7. Bronislaw Malinowski, *Coral Gardens and Their Magic*, 2 vols. (New York 1935), 2:218–23; cf. Stanley Tambiah, *Magic, Science, Religion and the Scope of Rationality* (Cambridge, MA 1990), 65–83. Malinowksi's coefficient provides a steady heuristic, for instance, in Radcliffe Edmonds, *Drawing Down the Moon: Magic in the Ancient Greco-Roman World* (Princeton 2019), 18, 33, 48, 87–88, 90, 114, 136, 144, 147, 169, 175, 182, 225, 413. See also David Frankfurter, «Spell and Speech Act: The Magic of the Spoken Word», in *Guide to the Study of Ancient Magic*, ed. David Frankfurter et al. (Leiden 2019), 621, 623–24.

8. See Travis Zadeh, *Wonders and Rarities: The Marvelous Book that Traveled the World and Mapped the Cosmos* (Cambridge, MA 2023), 28–29, 121–26.

aromatics, ascetic practices of fasting, purification, and supplications to planets, demons, and angels.

On the one hand, this discursive body of learning is all quintessentially Islamic in the sense of being firmly rooted in the power of the Qur'ān, the life of the Prophet, and a frequent appeal to God as the supreme power in a world where evil itself has no ontological reality. Yet the field also builds on and refashions in a host of obvious ways pre-Islamic and non-Islamic materials. The prayers drawn from Hebrew and Aramaic are perhaps the most conspicuous. Thus, for instance, one of the earliest surviving Arabic handbooks in the field of jinn magic by Fakhr al-A'imma al-Ṭabasī is filled with invocations to *Ehyeh ašer ehyeh* ("I-am-who-I-am"), *Adonai Ṣbā'ōt* ("Lord of Hosts"), *El Šaddai* ("God Almighty"), and the angel Metatron, known to al-Ṭabasī as the chief of the angelic emissaries (*ra'īs al-sufarā'*).

Such phrases were clearly drawn from a Jewish cosmography of sacred language and divine power, but transposed into the Arabic script and an explicitly Islamic cosmology[9]. So too, the Aramaic Lord's Prayer appears as a spell in al-Ṭabasī's handbook, where it is identified with Christians[10]. Likewise, al-Ṭabasī records invocations for summoning the devil (known by various names including Iblīs and ʿAzāzīl) and his offspring and hosts, who include the mighty

9. Al-Ṭabasī, *Shāmil*, with transliteration reflecting an oral transmission, *hiyā shirā hiyā, adhūnay aṣbāwūth, al shadday*, B 7, 38; E fol. 9a, etc. These phrases and other similar ones are found throughout the collection. For similar formulations, see Alexander Fodr, «The Rod of Moses in Arabic Magic», in *Acta Orientalia* 32 (1978), 9. Countless other examples of Hebrew and Aramaic phrases can be adduced in the collection. On Metatron, see al-Ṭabasī, *Shāmil*, E fol. 134b; B 126; N fol. 111b. For Metatron in Jewish lore, see broadly, Steven Wasserstrom, *Between Muslim and Jew: The Problem of Symbiosis under Early Islam* (Princeton 1995), 181–205; cf. Daniel Boyarin, «Beyond Judaisms: Meṭaṭron and the Divine Polymorphy of Ancient Judaism», in *Journal for the Study of Judaism* 41.3 (2010), 323–65.

10. Al-Ṭabasī, *Shāmil*, B 102; N fol. 101b. Al-Ṭabasī describes the Lord's Prayer in Aramaic as the *fātiḥa* of the Christians. His transcription, rendered here with minor modifications, is vocalized in B and likely reflects an oral transmission, with close attention to the underlying original prayer: *abūn d-bashmayyā nataqaddash smākh tī tī malakūtākh nahawī ṣabyānākh aykannā d-bashmayyā abbarʿā; hab lan laḥmā d-shunqānā yawmānā; wa-shūqi [l]anna ḥawbayn wa-ḥaṭṭāhanī aykannā d-shaqan laḥḥā īn w-ḥaṭṭāhīn; w-lā taʿlan l-nasyūnā yawmānā aylā [b]aṣṣān min bīshiyā miṭul d-dīlākh-ī [*missing: *malkūtā] u-ḥaylā u-tīshbuḥtā l-ʿālam ʿālmīn āmīn*.

demon king Mahākāl al-Hindī. This particular demon corresponds to the Sanskrit *mahākāla*, meaning "great time", one of the epithets for the god Śiva, the destroyer and giver of life, who made his way into the Arabic pantheon of jinn controlled by Solomon well before al-Ṭabasī's time[11]. Importantly for the present discussion, the key ceremony that opens al-Ṭabasī's collection is the performance of the *mandal* ceremony, a practice with parallels in a variety of Indic esoteric discourses, including Śaiva and Buddhist Tantra[12].

Incantations and spells were certainly weird, in the sense of strange and paranormal, as they could be linguistically and socially transgressive. Yet the theological and philosophical vocabulary that emerges in Arabic to describe both magic and miracle makes the analytical task of accounting for these practices and beliefs all the harder. By definition the miraculous strips the boundaries of *ʿāda*, a theological and philosophical concept encompassing the customary, the normal, the quotidian, and the habitual. Many towering Muslim authorities sought to naturalize magic as a physical force that could be explained scientifically and harnessed empirically.

Magic also came to be defined in terms of ruptures with the ordinary. And in this regard, what separated magic from miracle was often not ontology, but rather ethics and morality; what determined the value of a given procedure, act, or ritual, was not merely a question of form, but also of intent. The problem with the "coefficient of weirdness" as a definition for magic is that it can easily merge the

11. On Mahākāl, see al-Ṭabasī, *Shāmil*, E fol. 53a; P fol. 58a; B 61; N fol. 58a; cf. Fakhr al-Dīn al-Rāzī, *al-Sirr al-maktūm*, Staatsbibliothek, Berlin, MS Petermann I 207, fols. 145a, 151a, 183a, same as Sirāj al-Dīn al-Sakkākī (d. 626/1229), *Kitāb al-shāmil wa-baḥr al-kāmil*, Markaz Jumʿat al-Mājid, Dubai, microfilm 1735 (a deaccessioned manuscript from the Dār al-Kutub of Cairo now in a private collection), fols. 172b–173a; see also the invocation (*daʿvat*) to Mahākāl and the gloss on him, appended to Muḥammad b. Sirāj al-Dīn al-Sakkākī, *Taskhīrāt*, Kashmir University Library, MS 2746, fols. 31b–32a. For further background, see Ibn al-Nadīm, *Fihrist*, ed. Ayman Fu'ād Sayyid, 3 vols. (London 2009), 2:335 (for Mahāqāl as a jinn controlled by Solomon); 2:429 (for al-Kindī's report on the Indian deity Mahākāl, described as an *ʿifrīt*). Cf. Vladimir Minorsky, «Gardīzī on India», in *BSOAS* 12.3/4 (1948), 635.

12. For more on the Indic background and interconnections between the *mandal* ceremony, Tantric practices, and mantra recitation, see Supriya Gandhi and Travis Zadeh, «From India to Syria and Back Again: Demons, Deities, and the Mysterious Vocabulary of Islamic Incantations», in *The Sorcerer's Handbook*, ed. Emily Selove (Leiden forthcoming).

ways in which religion and science could be invested in similar epistemic and emotive processes. Thus, in one sense, to call the circles and diagrams under consideration magic is to prejudge their social, theological, and metaphysical value.

Yet it is also the case that the diverse uses of circles for controlling demons, angels, and planetary powers indeed would appear to many today to be analogous to the sorcerer's circles of medieval lore. The "magic circle" lives on among us in sundry forms, from intimate Wicca rituals to the big screen of Dr. Strange and Marvel's multiverse, as a technique for porting between worlds. While one can draw a line connecting ancient diagrams for summoning spirits and traversing unseen realms to modern manifestations and portrayals, the path is circuitous and each turn proceeds with its own cosmic values and historical sensibilities. In this way, to trace after the sorcerer's circle is to follow distinct formations of ideology and cosmology.

The challenge, at least for Islamic normativity as reconstituted and contested in the course of modernity, is that communing with jinn and otherworldly forces is rooted in prophetic authority and the precedent of Muḥammad. Thus, to assign these diagrams the name of sorcery is to predetermine their moral and soteriological value. Moreover, throughout classical Arabic and Persian letters, techniques for subjugating jinn and angelic forces were also closely associated with *umūr ġharība*, extraordinary or paranormal phenomena, itself a category that features in high-level discussions of classical Islamic metaphysics.

Following a common scholarly usage in modern Buddhist studies on *maṇḍalas*, we may describe what follows as an esoteric practice, generally of initiates who sought to obtain access to hidden realms[13]. As with all of our conceptual frameworks for imagining past cosmologies, esoterism brings both benefits and limitations[14]. The social value of collections of incantations that feature *mandal* diagrams and the associations attached to those who used them could well be transgressive. The practices of summoning otherworldly forces were

13. See Koichi Shinohara, *Spells, Images, and Maṇḍalas: Tracing the Evolution of Esoteric Buddhist Rituals* (New York 2014); Gudrun Buhnemann, «Maṇḍala, Yantra and Cakra: Some Observations», in *Mandalas and Yantras in the Hindu Traditions*, ed. Gudrun Buhnemann (Leiden 2003), 13-56.

14. See Liana Saif, «What is Islamic Esotericism», in *Correspondences* 7.1 (2019), 1-59.

designed, by definition, to transcend the limits of the ordinary and quotidian. All of which is to say that in the movement of *mandal*s we are dealing with a shifting terrain of normativity over a vast expanse of time. Jinn, demons, and angels are all unambiguously part of the cosmology of the Qur'ān and *ḥadīth*, just as they feature in the basic creedal structures of Islamic theology. In this sense, the art of commanding or subjugating forces of the unseen was also aligned to normative understandings of what reality was and how the world worked.

Diagrams for conjuring unseen forces feature in the early Arabic literature on talismans and incantations. Much of the Islamic-era material, in turn, exhibits parallels with a variety of practices from late antiquity. These include the use of *charaktēres*, cyphers, amulets, diagrams, seals, goblets, mirrors, adolescent mediums, as well as divine, angelic, and demonic names. Spells and incantations in Arabic and Persian handbooks of magic regularly evoke ancient sacred words and phrases in a divine language. Many materials were drawn from Aramaic and Hebrew, often transcribed in surprisingly legible forms into the Arabic script.

Terms of Art

In Arabic, the word *mandal* connotes a range of activities associated with the discipline of incantations. The early Arabic lexicons do not discuss the *mandal* as a technical term in the art of summoning intermediary forces. They do, however, define the term as a type of moist fragrant wood (*ʿūd*), said to derive from the word *mandal*, a region, usually littoral, in India. In his Arabic-English dictionary, the Jesuit priest Joseph Hava (d. 1916) set these two associations side-by-side, explaining *mandal* as both "odiferous wood" and "witchcraft", without giving any insight into how, or if these two meanings were related[15]. Hava's witchcraft is certainly too broad. Moreover, by this point the *mandal* had long been connected not only with diagrams drawn on the ground, but also with the use of mirrors, goblets, and ink for scrying, as a form of divination through summoning spirits from the unseen.

15. Joseph Hava, *al-Farā'id al-durriyya fī l-lughatayn al-ʿArabiyya wa-l-Inkilīziyya* (Beirut 1899), 752.

Several later medieval works that circulated in Arabic give directions for constructing *mandal*s as a form of summoning demons and jinn through goblets, diagrams, and the aid of prepubescent (*dūna l-bulūgh*) mediums. Many are pseudepigraphic collections ascribed to the likes of Abū Ḥāmid al-Ghazālī (d. 505/1111), Ibn Sīnā (d. 428/1037), the famed mystic al-Ḥusayn b. Manṣūr al-Ḥallāj (d. 309/922), and the Umayyad-era conjurer ʿAbdallāh Ibn Hilāl[16]. There is also the Arabic *Kitāb al-mandal al-Sulaymānī*, which identifies the ritual with ancient Solomonic practice. This particular collection on jinn magic enjoyed further adaptations that circulated in Yemen and Ethiopia[17].

It was this practice of scrying, documented in such later works, that the British orientalist Edward Lane (d. 1876) witnessed while living in Cairo. Lane referred to the *mandal* used in the ceremony as the "mirror of ink". In addition to reflective surfaces for divining, these versions of the *mandal* often involved the use of a young boy as a medium to attract jinn. This was the form known to Lane, who was famously convinced of the efficacy of the divinatory performances he observed[18]. As a means for summoning jinn with goblets,

16. See al-Ghazālī (ascribed), *ʿAmaliyyāt wa-l-mujarrabāt*, [published in] *al-Asrār al-makhzūna fī l-ṭibb al-rūḥānī*, ed. ʿAbd al-Ghanī l-Fāsī (Beirut 2018), 153-54, 224, 240-41, 253; Ibn Sīnā (ascribed), *Mujarrabāt* (Beirut 2005), 60, 62-63, 68, 233-34, 246. See also Ibn Hilāl (ascribed), *Kitāb nūr al-muqal fī l-dakk wa-l-ḥiyal*, Berlin, Staatsbibliothek, Landberg 191, fol. 20a; for further copies, see Kūrkīs ʿAwwād, *al-Dhakhā'ir al-sharqiyya*, 7 vols. (Beirut 1999), 4:420, section 277; Imtiyaz Ali Arshi, *Catalogue of the Arabic Manuscripts in the Raza Library, Rampur*, 6 vols. (Rampur 1963-77), 5:586 (MS 6839 M.). The *Kitāb nūr al-muqal* is also ascribed to al-Ḥallāj in a manuscript dated 1021/1612-63 from the University of Riyadh, a digital copy of which is held in the Markaz Jumʿat al-Mājid, Dubai, inventory no. 537792.

17. Anne Regourd, «Le *Kitāb al-Mandal al-sulaymânî*, un ouvrage d'exorcisme yéménite postérieur au V^{e}/XI^{e} siècle?», in *Res orientales* 13 (2001), 123-28; Anne Regourd, «Images de djinns et exorcisme dans le *Mandal al-sulaymānī*», in *Images et Magie: Picatrix entre Orient et Occident*, ed. Jean-Patrice Boudet, Anna Caiozzo, and Nicolas Weill-Parot (Paris 2011), 253-94; Anne Regourd, «A Twentieth-Century Manuscript of the *Kitāb al-Mandal al-sulaymānī* (IES Ar. 286, Addis Ababa, Ethiopia)», in *Amulets and Talismans of the Middle East and North Africa in Context Transmission, Efficacy and Collections*, ed. Marcela Garcia Probert and Petra Sijpesteijn (Leiden 2022), 47-77; Hans Daiber, *From the Greeks to the Arabs and Beyond*, 6 vols. (Leiden 2022), 5:521-23.

18. See Edward Lane, *An Account of the Manners and Customs of the Modern Egyptians*, ed. Edward Stanley Poole (London 1860), 263-75, 275 n. 1; William Worrell, «Ink, Oil and Mirror Gazing Ceremonies in Modern Egypt», in *JAOS* 36 (1916), 37-53.

the *mandal* features in the Arabic book of secrets by ʿAbd al-Raḥīm al-Jawbarī (fl. 619/1222) who reveals the various tricks and devices used in a wide array of professions. For al-Jawbarī, the *mandal* is connected to practices for communing with jinn, but it is not identified with detailed ritual diagrams[19]. More research remains to be done on links between *mandal* diagrams found in the handbooks of practical magic produced in eastern lands by the likes of al-Ṭabasī, al-Rāzī, and al-Sakkākī, and the diagrams associated with the later development of "the science of letters and theophoric names" (*ʿilm al-ḥurūf wa-l-asmāʾ*), which appear to have first emerged in the West. Notably, in its westward movement, the term *mandal* transforms from a pattern drawn on the ground in which one sits – quite similar, say, to cognate Tantric practices found in South Asia – into an esoteric diagram used for scrying through visionary contemplation of a design (often patterned with and/or out of letters and *charaktēres*), so as to open the world of the unseen and to summon intermediary beings[20].

Though the same word is used, we are some distance from encirclements drawn around an individual enchanter. Through a process of linguistic abstraction, the *mandal* came to refer not only to a phys-

19. ʿAbd al-Raḥmān al-Jawbarī, *Kitāb al-mukhtār min kashf al-asrār*, [published as] *Al-Ǵawbarī und sein Kašf al-asrār*, ed. Manuela Höglmeier (Berlin 2006), 233–35, sections 13.1, 13.3.

20. For a study of diagrams associated with the science of letters, see Noah Gardiner, «Diagrams and Visionary Experience in al-Būnī's *Laṭāʾif al-ishārāt fī l-ḥurūf al-ʿulwīyat*», in *Visualizing Sufism: Studies on Graphic Representations in Sufi Literature (13th to 16th Century)*, ed. Giovanni Maria-Martini (Leiden 2023), 16–50. See also the introduction to the *Dāʾirat al-aḥruf al-abjadiyya*, edited and translated as *Le Cercle des lettres de l'alphabet*, ed. Cécile Bonmariage and Sébastien Moureau (Leiden 2016), 11–27. Notably, the term *mandal* is missing from the *Dāʾirat al-aḥruf*. The term however features as a device for scrying in Judeo-Arabic material drawn from this later Arabic collection, as discussed in Dóra Zsom, «A Judeo-Arabic Fragment of the Magical Treatise *Kitāb dāʾirat al-aḥruf al-abǧadiyya», The Arabist: Budapest Studies in Arabic* 38 (2017), 97, 102, 115 (*mandal*). For a more general study of Islamic diagrams from the perspective of art history, see David Roxburgh, «Islamicate Diagrams», in *The Diagram as Paradigm: Cross-Cultural Approaches*, ed. Jeffry Hamburger et al. (Washington, DC 2022), 33–53. Purely visual parallels can also be made with cosmic diagrams of the geocentric universe at the heart of classical astronomy, made of concentric circles of the celestial spheres (*aflāk*), on which see Sonja Brentjes, «Islamic Cosmological Diagrams», in *The Diagram as Paradigm*, ed. Hamburger et al. (Washington, DC 2022), 227–52.

ical catchment meant to protect, but also to a form of conjuring by gazing at surfaces, such as goblets, and more broadly as a mechanism for trapping spirits, often with the use of diagrams, *charaktēres*, magic squares, and talismanic objects. All of these forms require summoning and subjugating; but each application suggests an elastic array of meanings for the *mandal* itself. When applied to scrying, often with the assistance of an adolescent child, the term suggests a portal into the unseen realm of spirits.

The use of an adolescent medium for the *mandal* ceremony is attested in sixth-/twelfth-century Iraq. It features in a Judeo-Arabic treatise by Joseph b. Shimʿon (d. 1226) defending his famed teacher the Jewish physician-philosopher Moses Maimonides (d. 1204)[21]. The epistle quotes the Gaon of Baghdad, Samuel b. ʿEli (fl. 1194), who according to Ibn Shimʿon upheld the position that the spirits of the dead can speak. One of the justifications the Gaon offered was the tested and verified use of the *mandal* by skilled practitioners in Baghdad, who through the aid of adolescent boys were able to communicate with spirits[22].

In addition to medieval Hebrew and Judeo-Arabic, by the end of the sixth/twelfth century the *mandal* made its way into Latin through the translation and adaptation of Arabic materials on summoning demons, angels, and planets and the wider workings of Solomonic magic[23]. Several Christian collections on summoning

21. See Reimund Leicht, «A Maimonidean Life: Joseph ben Judah Ibn Shimʿon of Ceuta's Biography Reconstructed», in *Maimonides Review of Philosophy and Religion* 1 (2022), 1–48; Marina Rustow, «Ibn al-Dastūr, Samuel ben ʿAlī», in *Encyclopedia of Jews in the Islamic World*, ed. Norman Stillman, 5 vols. (Leiden 2010), 2:450–51.

22. Sarah Stroumsa, «Twelfth Century Concepts of Soul and Body: The Maimonidean Controversy in Baghdad», in *Self, Soul and Body in Religious Experience*, ed. Albert Baumgartner (Leiden 1998), 319–20, 324; Yosef b. Shimʿon, *Risālat al-iskāt fī ḥasr al-amwāt*, [published as] *Beginnings of the Maimonidean Controversy in the East: Yosef ibn Shimʿon's Silencing Epistle concerning the Resurrection of the Dead: Arabic and Hebrew Texts*, ed. and trans. Sarah Stroumsa (Jerusalem 1999), 34–40 (Judeo-Arabic); Y. Tzvi Langermann, «Samuel b. ʿEli's Epistle on Resurrection», in *Qovez al yad* 15.25 (2001), 41–94 (Hebrew), 90–94 (appendix with further examples). See also Haggai Ben-Shammai, «From Rabbinic Homilies to Geonic Doctrinal Exegesis: The Story of the Witch of En Dor as a Test Case», in *Exegetical Crossroads: Understanding Scripture in Judaism, Christianity and Islam in the Pre-Modern Orient*, ed. Georges Tamer et al. (Berlin 2019), 185.

23. See Zsom, «A Judeo-Arabic Fragment», 97, 102, 115; Gideon Bohak, *A*

intermediary beings survive. These include the *Liber Almandal*, a significant medieval Latin work on ritual magic. The use of the *mandal* in these Latin texts points to both parallels with and areas of divergence from the Arabic materials. In Latin, *almandal* came to connote a small table, wax tablet, or altar on which diagrams were drawn. The ritual associated with *almandal* involved various states of purification, the lighting of candles, suffumigation, and the recitation of sacred names and prayers. In Latin Christendom, the form of the term also shifted: *almadel*, *almandel*, *alimandel* are all attested[24]. The word could even be replaced with the equally ambiguous Latin *areola*, meaning an area, space, or ring. Over time, the Latin adaptations shifted away from *algin et assaiatin* (jinn and *shayāṭīn*), in a process of Christianization that focused on summoning angels, rather than jinn or demons, to hover above an altar[25].

As for the history of the *mandal*'s westward journey, classical Arabic dictionaries do not offer much help. The early lexicographers document the word, but they do not identify it with any form of enchantment or exorcism. Rather, they define *mandal* as a fragrant wood imported from India and used for incense and perfume. The association with aloes-wood (*'ūd*) is old. The word features with this meaning in early Arabic poetry as part of a larger array of aromatics and exotica acquired through distant trade. The Baghdadi traditionist and man of letters Ibn Qutayba (d. 276/889) defines the word *mandal* as a region; he quotes the Medinan traditionist Muḥammad

Fifteenth-Century Manuscript of Jewish Magic: MS New York Public Library, Heb. 190, ed. Gideon Bohak, 2 vols. (Los Angeles 2014), 1:166, line 1 (edited text), 2:166 (facsimile with diagram).

24. See Pingree, «Learned Magic», 41, 48-54. See the Latin edition, *L'Almandal et l'Almadel latins au Moyen Âge: Introduction et éditions critiques*, ed. Julien Veronese (Florence 2012). See also Jan Veenstra, «The Holy Almandal: Angels and the Intellectual Aims of Magic», in *The Metamorphosis of Magic from Late Antiquity to the Early Modern Period*, ed. Jan Bremmer and Jan Veenstra (Leuven 2002), 189-229; Jan Veenstra, «Venerating and Conjuring Angels: Eiximenis's *Book of the Holy Angels* and the *Holy Almandal*: Two Case Studies», in *Magic and the Classical Tradition*, ed. Charles Burnett and W. F. Ryan (London 2006), 119-34.

25. See Vajra Regan, «The *De consecratione lapidum:* A Previously Unknown Thirteenth-Century Version of the *Liber Almandal Salomonis*», in *Journal of Medieval Latin* 28 (2018), 277-333; Bernd-Christian Otto, «Magie im Islam Eine diskursgeschichtliche Perspektive», in *Die Geheimnisse der oberen und der unteren Welt Magie im Islam zwischen Glaube und Wissenschaft*, ed. Sebastian Günther and Dorothee Pielow (Leiden 2019), 521 n. 32.

b. Isḥāq (d. ca. 151/768), who stated that when Adam and Eve were expelled from paradise they alighted near Mandal in India. Ibn Qutayba explains that the Arabs claim that perfume and aloes-wood derive from this region[26].

The Arabic geographers provide further details. ʿImād al-Dīn al-Qazwīnī (d. 682/1283), for instance, observes that Mandal is a city in India whence aloes-wood is imported. He further notes that the source of this exceptionally fragrant and moist wood is actually to be found in islands south of the equator in Qāmrūn, among the archipelagoes of Southeast Asia[27]. The identification is noteworthy as the Sanskrit *maṇḍala* was indeed used as a toponymic element for various cities, districts, provinces, territories, and regions across the Indian Ocean. As a loanword into Arabic, it highlights ancient mercantile and linguistic exchanges. The *maṇḍala*, in the sense of circle, domain, and region, had long served as a term for a political organization, a kind of "circle of states", not only in India, but also throughout Southeast Asia[28]. Notably, the famed polymath Abū l-Rayḥān al-Bīrūnī (d. 440/1048), who had extensive knowledge of India, does not identify the *mandal* with esoteric diagrams or incantations, though he recognizes in the Sanskrit term a cosmological meaning of a celestial realm and also explains it as equivalent to a *wilāya* (region or dominion)[29].

While there is this explicit association with India, the classical Arabic geographers and lexicographers do not describe the *mandal* as a technical word for diagrams used in incantations. The polysemy of the term forms part of the problem. As the scholar and statesman al-Ṣāḥib b. ʿAbbād (d. 385/995) notes, *mandal* is also an accepted

26. Ibn Qutayba, *Kitāb al-maʿārif*, ed. Thawrat ʿUkāsha (Cairo 1969), 15-16. See Anya King, «The Importance of Imported Aromatics in Arabic Culture: Illustrations from Pre-Islamic and Early Islamic Poetry», in *JNES* 67.3 (2008), 181 n. 47.

27. Al-Qazwīnī, *Āthār al-bilād*, 124; copying from Yāqūt al-Rūmī (d. 626/1229), *Muʿjam al-buldān*, 7 vols. (Beirut 1955-57), 3:447, 5:209. On Qāmrūn, see Robin Donkin, *Dragon's Brain Perfume: An Historical Geography of Camphor* (Leiden 1999), 128 n. 119.

28. See Richard Eaton, *India in the Persianate Age, 1000-1765* (Oakland, CA 2019), 24-29; Stanley Tambiah, «The Galactic Polity: The Structure of Traditional Kingdoms in Southeast Asia», in *Annals of the New York Academy of Sciences* 293.1 (1977), 69-97.

29. Abū l-Rayḥān al-Bīrūnī, *Kitāb taḥqīq mā li-l-Hind*, ed. Edward Sachau (London 1887), 196, cf. 219.

apocopated form of *mandīl*, a piece of cloth or hand towel. This word, too, is a foreign import, related to the Greek *mandēlion*, for tablecloth, kerchief, and the like[30]. The proximity between *mandal* and *mandīl* may well have led to a certain semantic ambiguity, though the two words clearly form part of a distinct register of activities. It is not hard to imagine how the *mandīl*, as a handcloth, could be associated with the legerdemain and prestidigitation frequently ascribed to magicians and tricksters, with whom conjurers were often identified. Confounding matters, the orthography of *mandal* can be easily mistaken for *ṣandal*, as in sandalwood, which has also led to some notable confusion[31].

Lane does not address the word in any depth in his ambitious, though unfinished, *Arabic-English Lexicon*. However, in his *Manners and Customs of the Modern Egyptians*, he offers a good deal of insight regarding its use in Cairo[32]. In contrast, one of Lane's most important primary sources for his dictionary provides a fair measure of detail. The Indian lexicographer Abū l-Fayḍ al-Zabīdī (d. 1205/1791), in his sprawling Arabic lexicon, discusses the *mandal* as used in incantations. This is unlike his esteemed predecessors, such as Ibn Durayd (d. 321/933), al-Azharī (d. 370/981), al-Jawharī (d. ca. 400/1010), Ibn al-Manẓūr (d. 711/1311), and al-Fīrūzābādī (d. 817/1415), none of whom give any hint that the *mandal* is connected to practices of summoning intermediary beings[33]. The absence of

30. Al-Ṣāḥib b. ʿAbbād, *al-Muḥīṭ fī l-lugha*, ed. Muḥammad Ḥasan Āl Yāsīn, 11 vols. (Beirut 1994), 9:312. See Dozy, *Supplément*, 2:653, s.v. *mandīl*; Franz Rosenthal, «A Note on the Mandīl», in *Four Essays on Art and Literature in Islam* (Leiden 1971), 63–99.

31. See Ibn al-Nadīm, *al-Fihrist*, ed. Gustav Flügel, 2 vols. (Leipzig 1871–72), 1:309, reading *ṣanādil* instead of *manādil*. A similar slip can be found in the modern Arabic translation of the Persian treatise by Muḥammad b. Sirāj al-Dīn al-Sakkākī, *Funūn tashkhīrāt al-kawākib*, trans. ʿAbd al-Raḥīm al-Ḥamrānī (Beirut 2011), 7 (*lā takhrūj min al-ṣandal*).

32. See Edward Lane, *An Arabic-English Lexicon*, 8 parts (London 1863–93), 8:3030.

33. Abū Bakr Ibn Durayd, *Jamharat al-lugha*, ed. Ramzī Baʿlbakī [Ramzi Baalbaki], 3 vols. (Beirut 1987–8), 2:682; Abū l-Manṣūr al-Azharī, *Tahdhīb al-lugha*, ed. ʿAbd al-Salām Muḥammad Hārūn, 16 vols. (Cairo 1966–76), 2:153; Abū Naṣr al-Jawharī, *Tāj al-lugha wa-ṣaḥāḥ al-ʿarabiyya*, ed Aḥmad ʿAbd al-Ghafūr ʿAṭṭār, 6 vols. (Beirut 1979), 5:1827; Jamāl al-Dīn Ibn Manẓūr, *Lisān al-ʿarab*, 15 vols. (Beirut 1968), 11:654; Majd al-Dīn al-Fīrūzābādī (d. 817/1415), *al-Qāmūs al-muḥīṭ*, ed. Muḥammad Nuʿaym al-ʿIrqsūsī (Beirut 1998), 1061–62.

these associations is not because the word lacked these meanings by this point, or that the lexicographers shied away from discussions of subjugating demons or jinn; rather, the classical dictionaries were generally concerned with documenting the semantic foundations of the Arabic language and the *mandal*, in this form, evidently was not part of the pre-Islamic or early Arabic lexicon. This would appear to suggest that the word only became a technical term for incantations during the early Islamic period.

Comments by Aḥmad Taymūr Pāshā (d. 1930) in his modern lexicon of colloquial or popular (*ʿāmmiyya*) Arabic are helpful for determining the social register evoked here, at least in Arabic. According to Taymūr, the *mandal* is a type of sorcery (*siḥr*); it is also a name of a book on spirits (*rūḥāniyyāt*); it is frequently discussed in modern reformist journals; it was known to the likes of al-Jawbarī in his *al-Mukhtār fī kashf al-asrār* [An anthology for revealing secrets]; and, contrary to those who might see in it an Arabic etymology, it is highly unlikely that the term is derived from the Arabic *nadala*, to remove, snatch, grab. Taymūr was clearly responding to the likes of al-Zabīdī who sought an Arabic origin to the *mandal* used by conjurers[34].

For his part, al-Zabīdī was not bound by the same semantic horizons as his predecessors and he took on a much more encyclopedic purview when documenting the vast evolution of the Arabic language[35]. Al-Zabīdī does not view the *mandal* as aloes-wood to be related to the *mandal* as an esoteric diagram. But his intimacy with India provides more insight into how the word *mandalī* came to mean a type of fragrant wood. He notes that in India *mandal* can refer to a region along the coast; he points to Sumatra and Java and specifically to the traveler Ibn Baṭṭūṭa (d. ca. 779/1377), who reached "Mul Jāva", where aloes-wood is obtained[36].

But al-Zabīdī also knew the *mandal* to be a tool used in incantations and his gloss is particularly telling:

34. Aḥmad Taymūr, *Muʿjam Taymūr al-kabīr fī l-alfāẓ al-ʿāmmiyya*, ed. Ḥusayn Naṣṣār, 6 vols. (Cairo 2002), 5:401–2.

35. See Ramzi Baalbaki, *The Arabic Lexicographical Tradition: From the 2nd/8th to the 12th/18th Century* (Leiden 2014), 397–401.

36. See Ibn Baṭṭūṭa, *Tuḥfat al-nuẓẓār fī ghará'ib al-amṣār*, ed. Muḥammad ʿAbd al-Munʿim al-ʿIryān, 2 vols. (Beirut 1987), 2:633, 636.

Al-Azharī notes that waiters are called *nudul*, for they bring food to those who come to an invitation (*man ḥaḍara al-daʿwa*). I say that this is the etymology of the *mandal*, which is what the people of summoning use (*ahl al-daʿwa*). They have various means of constructing it (*lahum fī fatḥihi ṭuruq shattā*), which are mentioned by al-Kashnāwī, the master of our masters, in the *Bahjat al-āfāq* [The splendor of horizons][37].

There is much here to unpack. First, al-Zabīdī, who ultimately settled in Cairo, had traveled widely and studied with some of the leading authorities in the science of incantations in Egypt and the Hijaz. As for Muḥammad al-Kashnāwī (d. 1154/1741-2), he took up residence in Cairo a generation earlier, after leaving his native West Africa. Al-Kashnawī was trained in Ashʿarī theology and Mālikī *fiqh*; he resided for years in Mecca and Medina and wrote extensively. In addition to the *Bahjat al-āfāq*, al-Kashnāwī also authored a commentary on *al-Sirr al-maktūm* [The concealed secret], the handbook of practical magic by the famed Ashʿarī theologian Fakhr al-Dīn al-Rāzī (d. 606/1210). In both works, al-Kashnāwī describes the *mandal* in depth as a diagram that a conjurer constructs and sits within[38].

Al-Zabīdī's etiology, which links the word to waiters (*nudul*), gives some sense of how the history of the *mandal* was imagined in Arabic among those interested in the origins of words. It is true that *daʿwa* in Arabic, as in the Persian and Urdu *daʿvat*, can have the meaning of a banquet, convivial meeting, or dinner party. A key component of the *mandal* ritual is indeed summoning (*daʿwa*) spirits, just as the person overseeing the entire exercise designed to harness intermediary beings is often referred to as the *ṣāḥib al-daʿwa*, the master of ceremonies, as it were. Taymūr, though, is certainly right to be suspicious of this type of explanation posing as an etymology.

Unlike their classical Arabic counterparts, early New Persian lexicons define the *mandal* explicitly in terms of incantations, and it is clear that it had this sense for some time. Thus, Abū Manṣūr al-Ṭūsī (d. 465/1073) in his *Lughat-i furs* [The lexicon of the Persians],

37. Abū l-Fayḍ al-Zabīdī (d. 1205/1791), *Tāj al-ʿarūs fī jawāhir al-Qāmūs*, ed. ʿAbd al-Sattār Aḥmad Farrāj et al., 40 vols. (Kuwait 1965-2001), 30:474-75.

38. See Muḥammad al-Kashnāwī, *al-Durr al-manẓūm wa-khulāṣat al-sirr al-maktūm fī l-siḥr wa-l-ṭalāsim wa-l-nujūm*, 2 vols. (Cairo n.d.), 1:2-5 (autobiographical account). See also Dahlia Gubara, «Muḥammad al-Kashnāwī and the Everyday Life of the Occult», in *Islamic Scholarship in Africa: New Directions and Global Contexts*, ed. Ousmane Oumar Kane (Suffolk, UK 2022), 41-60.

defines the *mandal* as "a diagram for an incantation which conjurers draw" (*khaṭṭ-i ʿazīmat būd kih muʿāzzimān kashand*)[39]. Al-Ṭūsī offers as an example a verse from Abū ʿAbdallāh al-Rūdakī (d. 329/941), one of the most celebrated Persian poets of the Sāmānid court in Bukhara:

nadīda tunbal-i vāy o-bidīda mandal-i vāy
digar numāyad o-digar buvad bi-sān-i sarāb

[Not having seen his sorcery, but only his *mandal*,
At once it showed itself, at once it seemed like a mirage][40].

Though al-Ṭūsī is less explicit, later Persian lexicons invariably describe the *mandal* as a circle in which a conjurer sits while performing incantations; little mention is made of scrying or other divinatory practices that work through reflective surfaces[41]. The attestation of the word in the formative stages of early New Persian poetry suggests that the association with conjuring had been operative for some time, at least in a Persian speaking milieu in the East. The geographical setting in Central Asia is also significant, as it was home, in al-Rūdakī's day, to Christians, Muslims, Jews, Manicheans, Mazdeans, and Buddhists. There is reason to believe that it is precisely in these kinds of environments that the Sanskrit *maṇḍala* made its way into Persian and Arabic practices of communicating with intermediary spirits.

References to the *mandal* survive in the fragmentary Sogdian corpus from Central Asia[42]. Ancient Sogdiana sat at the crossroads of Asia and the Iranian plateau. Sogdian, an eastern Middle Iranian language, was written in a variety of different scripts, including variations of Aramaic. Particularly noteworthy here is a scroll discovered

39. Abū Manṣūr al-Ṭūsī, *Lughat-i furs*, ed. ʿAbbās Iqbāl (Tehran 1319Sh/1940), 322.

40. As only this verse survives, the antecedent to the pronoun is ambiguous, see Abū ʿAbdallāh al-Rūdakī, *Dīvān*, ed. Saʿīd Nafīsī (Tehran 1373Sh/1994), 129. On the meaning of *tunbal* here and variants to the verse, see also ʿAlī Akbar Dihkhudā, *Lughat-nāma* (Tehran 1998), 5:5011.

41. For the later Mughal context, see Mīr Jamāl al-Dīn Ḥusayn Injū Shīrāzī (d. 1035/1625), *Farhang-i Jahāngīrī*, ed. Raḥīm ʿAfīfī, 2 vols. (Mashhad 1980), 2:1904–5. Further examples cited in Dihkhudā, *Lughat-nāma*, 14:21619.

42. For the word *maṇḍala* in the surviving Sogdian corpus, see Badr al-Zamān Qarīb [Gharīb], *Sogdian Dictionary* (Tehran 1995), 214–15, section 5388, s.v. *mntr*².

in the caves of Dunhuang on the edge of the Gobi Desert. The scroll contains a composite text shaped by Iranian, Indic, and Turkic vocabulary and cosmography. Modern scholars have often referred to the scroll as a shamanistic manual of magic. The short text describes the use of stones for their apotropaic and healing powers and concludes with directions for preparing a rainmaking ceremony that involves the construction of a four-cornered mandala (*mntr* > *mandal*) to be decorated with the images of planets, constellations, and the zodiac[43]. As a ritual diagram designed to attract intermediary beings the *maṇḍala* is also found in Sanskrit materials that circulated among Buddhists in Central Asia, well before the Arab invasions[44]. A major hub of commerce, Dunhuang is noteworthy as it was home to a vibrant tradition of Buddhist *dhāraṇī* sutras, incantations often used with *maṇḍalas*. In addition to a vast trove of written documents, the famed cave of Dunhuang also preserved various *maṇḍala* diagrams and paintings (see figure 2), produced during and shortly after the Tang dynasty (618-907 CE). The region between Samarqand and Bukhara and the edge of the Gobi Desert was connected by postal routes and the regular commerce of Sogdian merchants, who also carried out trade with India[45].

The Sanskrit term *maṇḍala* is attested in Khotanese, also an Iranian language. The kingdom of Khotan in the southern edge of the Tarim Basin remained under the control of Buddhists until the conquests at the beginning of the fifth/eleventh century by the Qarā-khānids, a Turkic Muslim dynasty. The Buddhists of Khotan used the word in a variety of contexts, including as a celestial portal to the Buddha.

43. See Émile Benveniste, *Textes sogdiens, édités, traduits et commentés* (Paris 1940), 66 (text 3 line 162), cf. 258 (glossary). See also W. B. Henning, «The Sogdian Texts of Paris», in *BSOAS* 11.4 (1946), 713-40, esp. 726-30; Samra Azarnouche and Frantz Grenet, «Thaumaturgie sogdienne: Nouvelle edition et commentaire du texte P. 3», in *Studia Iranica* 39.1 (2010), 27-77, esp. 47, 56; Samra Azarnouche and Frantz Grenet, «Where Are the Sogdian Magi?» in *Bulletin of the Asia Institute* 21 (2007), 159-77, esp. 172.

44. See the edition and translation by Seishi Karashima and Margarita Vorobyova-Desyatovskaya, «The Avadāna Anthology from Merv, Turkmenistan», in *Buddhist Manuscripts from Central Asia: The St. Petersburg Sanskrit Fragments*, ed. Seishi Karashima and Margarita Vorobyova-Desyatovskaya, 1:145-523 (Tokyo 2015), 182 (fol. 15r, line 1), 183 n. 48.

45. Michelle Wang, *Mandalas in the Making: The Visual Culture of Esoteric Buddhism at Dunhuang* (Leiden 2018), 23, 122-94. See also de la Vaissière, *Sogdian Traders*, 43-91.

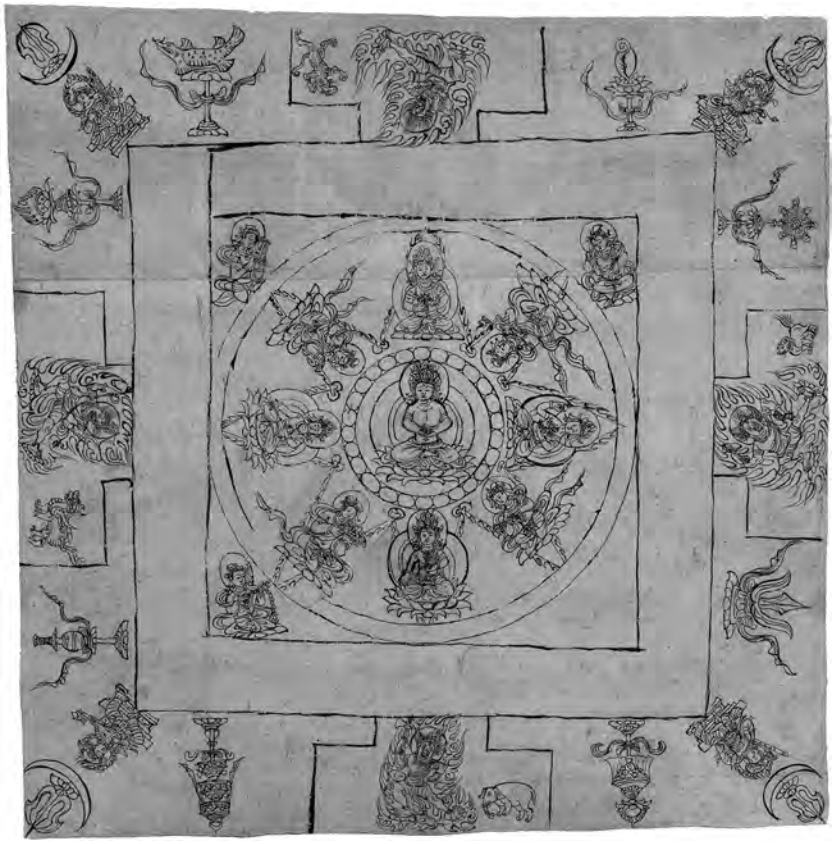


Figure 2. Diagram of a *Maṇḍala* of Five Dhyani-Buddhas, late ninth century, from Dunhuang. British Museum, London 1919, Museum number 1919,0101,0.173. © The Trustees of the British Museum.

Like other Buddhist communities, they also cultivated a host of esoteric practices, including *dhāraṇī* incantations, amulets, and a sophisticated cosmography populated with bodhisattvas and demons[46].

46. See *The Book of Zambasta, A Khotanese Poem on Buddhism*, ed. and trans. Ronald Emmerick (London 1968), 362 line 161; Mark Dresden, «The *Jatakastava* or 'Praise of the Buddha's Former Births': Indo-Scythian (Khotanese) Text, English Translation, Grammatical Notes, and Glossaries», in *Transactions of the American Philosophical Society* 45.5 (1955), 429, fol. 13r, line 54. For examples of incantations, see Prods Oktor Skjærvø, «A Khotanese Amulet», in *Iranian Languages and Texts from Iran and Turan, Ronald E. Emmerick Memorial Volume*, ed.

All of this highlights a shared arena in which the *maṇḍala*, as a word and as a representational form, circulated throughout Central Asia. The city states lining the Tarim Basin were connected by merchants and missionaries, often Jews, Christians, and Buddhists. They encountered a religious landscape marked by Iranian dualism and various Turkic practices and beliefs, and a textual world in which Sanskrit was itself a language of high prestige. The Muslim presence in Transoxiana dates to the history of the Umayyad conquests. It only continued to grow with the arrivals of the ʿAbbāsids, who at the beginning of their caliphate sought to check the westward expansion of the Tang into the region[47].

Early Formations and Prophetic Models

The *mandal* as a form of jinn magic was already in use in Iraq more than a century before al-Rūdakī drew on it in Bukhara. Indeed, the routes I propose move from east to west, probably via Iranian languages, such as Sogdian and Khotanese where it is documented. Here the word reflects contact with the religious practices of communities in Central Asia who had adopted the *maṇḍala* as an esoteric technology for summoning otherworldly spirits, just as it was used in the Indian Subcontinent. With only a fragmentary documentary record, there is still much uncertainty. We can imagine, however, diverse and crisscrossing pathways by which the Sanskrit *maṇḍala* emerged in New Persian and Arabic as a technique for harnessing intermediary beings.

By all measures the term was available to the early ʿAbbāsid literati, such as the luminary Abū ʿUthmān al-Jāḥiẓ (d. 255/868-9), who mentions the *mandal* among the devices used by those who commune with jinn and demons. It is a group he refers to as "the

Maria Macuch et al. (Wiesbaden 2007), 387-401; on demons in Khotanese, see Mauro Maggi, «A Chinese-Khotanese Excerpt from the *Mahasahasrapramardani*», in *La Persia e l'Asia centrale da Alessandro al X secolo* (Rome 1996), 123-37, particularly 125 n. 8 (on *maṇḍala* fragments). For an example of loanwords from the region into Arabic, see Harold Walter Bailey, «The Word 'But' in Iranian», in *BSOAS* 6.2 (1931), 279-83.

47. For further context, see Beckwith, *Tibetan Empire*, 108-42; de la Vaissière, *Sogdian Traders*, 263-90.

people of spells, charms, incantations, sorcery, and trickery" (*aṣḥāb al-ruqā wa-l-ukhadh wa-l-ʿazā'im wa-l-siḥr wa-l-shaʿbdha*)[48]. The term appears in al-Jāḥiẓ's treatment of jinn in his *Kitāb al-ḥayawān* [Book of animals], as part of an invective poem that he cites by his master, fellow Basran Muʿtazilī theologian and man of letters, Abū Isḥāq al-Nazẓām (d. ca. 220/835) against another Basran, the poet Abū l-Jaʿfar Yasīr al-Riyāshī (d. 218/833), who was himself hostile to the field of dialectical theology. Al-Jāḥiẓ explains that al-Riyāshī had claimed for himself mastery of the art (*iddaʿā hādhihi al-ṣanāʿa*), which according to the poem included controlling and exorcising demons with seals (*khawātīm*) and *mandal*s, but also using sleight of hand deceptions. This point is of note, as the Muʿtazila held rather unsympathetic views of magic as nothing but trickery performed by charlatans. Though al-Jāḥiẓ uses the word, he does not explain its actual meaning, other than a general association with controlling jinn and demons[49].

We gain a bit more insight with the reference to *mandal*s by the Ikhwān al-Ṣafā' (Brethren of Purity), the otherwise anonymous collective that according to some accounts emerged out of the emanationist philosophical circles associated with disciples of Abū Yūsuf al-Kindī (d. 252/866)[50]. Their famed parable on the enmity that arose between jinn and humans provides further background to the identification of the *mandal* as a quintessential tool for commanding jinn and demons. God forgave Adam and Eve after expelling them from heaven and sent an angel to teach them plowing, sowing, milling, graining, baking, cooking, sewing, and how to fashion

48. Al-Jāḥiẓ, *Kitāb al-ḥayawān*, ed. Muḥammad Hārūn, 7 vols. (Cairo 1938-45), 6:231. On *ukhdha*, pl. *ukhadh* as a form of fascination, see Ibn Manẓūr, *Lisān al-ʿarab*, 3:472-73.

49. Al-Jāḥiẓ, *Kitāb al-ḥayawān*, 6:233. Hārūn reads *manādīl*, however, see Sülaymaniye, Istanbul, Köprülü 995/5, p. 324, where it is *manādil*. Similar wording is repeated in al-Jāḥiẓ, *Kitāb al-tarbīʿ wa-l-tadwīr*, ed. Charles Pellat (Damascus 1955), 78 n. 141.

50. For the hypothesis linking the collection to al-Kindī's circle, see Guillaume de Vaulx D'Arcy, «Aḥmad b. al-Ṭayyib al-Sarak̲sī, réviseur de *l'Introduction arithmétique* de nicomaque de Gérase et rédacteur des *Rasā'il Iḫ̲wān al-Ṣafā'*», *Arabic Sciences and Philosophy* 29.2 (2019), 261-83; cf. Aziz Hilal, «Vaulx d'Arcy, Guillaume de, *Les Épîtres des Frères en Pureté (Rasā'il Ikhwān al-Ṣafā). Mathématique et philosophie. Présentation et traduction de six épîtres*», *Mélanges - Institut dominicain d'études orientales du Caire* 35 (2020), section 15, online: http://journals.openedition.org/mideo/6262 (accessed 16 March 2024).

clothes. Their offspring multiplied and their children mixed with jinn, who in turn taught them various other crafts, including how to determine beneficial and harmful substances. They trusted and befriended each other, living together in tranquility for a time. But all the while the family of Adam recalled what occurred with the deception of ʿAzāzīl and his enmity toward them. And when Cain killed Abel, the children of Abel blamed the jinn and sought every stratagem to protect themselves. This included, the epistle notes, "incantations, spells, and *mandal*s", along with the smoke of oil and sulfur. With these devices, humans could trap jinn in bottles (*qawārīr*) and torture them with various forms of smoke and painful fumes (*bukhārāt*)[51].

Unlike al-Jāḥiẓ, who held a rather jaundiced view of the craft, the Brethren took the reality of incantations, talismans, and techniques for communing with jinn and angels quite seriously. Following an emanationist philosophical system, the epistles conclude with a study on the quiddity of magic (*māhiyyat al-siḥr*) as the final culmination of an investigation into the rarities of philosophy (*gharā'ib al-ḥikma*)[52]. A similar move to naturalize magic as a force in the cosmos features prominently in the *Enneads* of Plotinus (d. 270 CE), known in Arabic generally as the *Theology of Aristotle*. This work, which circulated in al-Kindī's circle, had demonstrable influence on the development of Islamic emanationism and it preceded later efforts to situate magic in the frameworks of natural philosophy[53].

The Adamic context given by the Brethren links the various techniques to subjugate and command jinn and demons squarely in the prophetic tradition of sacred history. The character of ʿAzāzīl in the epistles is another name supplied by many early Muslim exegetes for Iblīs, the devil figure of the Qur'ān. The name features throughout a much larger repertoire of demons and fallen angels shared across

51. Ikhwān al-Ṣafā', *Epistles of the Brethren of Purity. The Case of the Animals versus Man Before the King of the Jinn. An Arabic Critical Edition and English Translation of Epistle 22*, trans. Lenn Goodman and Richard McGregor (Oxford 2009), 76 (Arabic); cf. 136 (English).

52. See Ikhwān al-Ṣafā', *Epistles of the Brethren of Purity, On Magic I. An Arabic Critical Edition and English translation of Epistle 52*, ed. and trans. Godefroid de Callataÿ and Bruno Halflants (Oxford 2011), 87-88 (English), 5-6 (Arabic).

53. See Liana Saif, *The Arabic Influences on Early Modern Occult Philosophy* (New York 2015), 15, 31-32, 34-35; Zadeh, *Wonders and Rarities*, 42, 118, 193-94.

the Near East prior to the advent of Islam[54]. The integration of the *mandal* as a term of art in this discursive arena of prophetic history appears by all measures to be a later addition to what was a very old set of practices and beliefs for guarding against and gaining power over demons.

This process of assimilation is on display in *al-Fihrist* [The catalogue] by the Baghdadi bookman Ibn al-Nadīm (d. 380/990), who makes a sharp distinction between conjurers (*muʿazzimūn*) and sorcerers (*saḥra*). The sciences (*ʿulūm*) of both groups call for the use of "seals, incantations, charms, *mandal*s, receptacles, suffumigation, and other such matters"[55]. However, for Ibn al-Nadīm what distinguishes the conjurer from the sorcerer are their beliefs and practices. The first group, rooted in the lawful, prophetic history of monotheism, follows what Ibn al-Nadīm refers to as the praised method (*al-ṭarīqa al-maḥmūda*). They draw from the precedent of Solomon and use the names of jinn that he commanded, a list of which Ibn al-Nadīm provides. By this time, lists of demons and angels formed part of a much larger set of discursive practices drawn from the ancient Near East, designed to enumerate, name, and control intermediary beings[56]. Ibn al-Nadīm explains that the praiseworthy path was followed by conjurers who professed religious legal norms (*yantaḥilu al-sharāʾiʿ*). In contrast, the condemned method (*al-ṭarīqa al-madhmūma*) practiced by sorcerers involves summoning the devil and his daughter, blood sacrifices, and various forms of polluting depravity. The distinction is noteworthy, though the boundaries between these two idealized types of magic – one sanctioned by religious law, the other not – were not rigid or stable[57].

54. Annette Yoshiko Reed, *Demons, Angels, and Writing in Ancient Judaism* (Cambridge 2020), 42, 72, 198; Patricia Crone, «The Book of the Watchers in the Qurʾān», in *Exchange and Transmission across Cultural Boundaries: Philosophy, Mysticism and Science in the Mediterranean World*, ed. H. Ben-Shammai, S. Shaked, and S. Stroumsa (Jerusalem 2013), 29-30.

55. Ibn al-Nadīm, *Fihrist*, ed. Sayyid, 2:334 (*khawātīm wa-ʿazāʾim wa-ruqā wa-manādil wa-jarāb wa-dakhn wa-ghayra dhālika*).

56. On *Listenwissenschaft* in this context, see Reed, *Demons*, 79-80, 98, 228-40.

57. Ibn al-Nadīm, *Fihrist*, ed. Sayyid, 2:333-4, 337. For example, al-Ṭabasī includes incantations for summoning the daughter of Iblīs, whose name is unvocalized, but which we may render as ʿAyna, following an eastern Aramaic pronunciation for the evil eye (*ʿyn*ʾ). See al-Ṭabasī, *Shāmil*, E fols. 66a-70a; P fols. 72b-76b; B 71-74. A word long associated with exorcism, cf. Ethel S. Drower, «*Shafta d Pishra d Ainia*», in *Journal of the Royal Asiatic Society of Great*

None of these early allusions give us actual insight into the form, procedure, or purpose for producing a *mandal*, though cumulatively they point to its use in the science of summoning and controlling intermediary beings. The later literary evidence suggests that the *mandal* could be deployed both to protect the *muʿazzim* and to trap demons. Take, for instance, the story reported by the Ḥanbalī jurist of Baghdad Ibn ʿAqīl (d. 513/1119), writing at the end of the fifth/eleventh century about a house in the city that was haunted by a jinn. To expel the evil spirit, Ibn ʿAqīl employed a local *muʿazzim* to capture the jinn, who had taken the form of a serpent dangling from the roof. The conjurer did so by reciting verses from the Qur'ān and casting a *mandal* on the ground into which the jinn fell and was ultimately trapped, before being placed safely into a basket[58].

The ritual here looks quite similar to other esoteric procedures used to trap animals. Thus, the *ʿAjā'ib al-Hind* [Wonders of India] ascribed to the otherwise unknown Buzurg b. Shahriyār, describes how Indian soothsayers (*kahana*) trapped birds and other animals by drawing a circle on the ground (*fa-khaṭṭa fī l-arḍ dā'ira*). Once animals crosssed the circle, they could not escape[59]. The power to trap a flock of flying birds through such a device was also ascribed to Sirāj al-Dīn al-Sakkākī (d. 626/1229), the famed Central Asian rhetorician and mage. According to the Tīmūrid historian of India Ghiyāth al-Dīn Khwāndamīr (d. ca. 942/1535), al-Sakkākī ingratiated himself with Chaghatay Khān (d. 642/1244-45), by preforming

Britain and Ireland (1937), 589-611; (1938), 1-20; James Ford, «Ninety-Nine by the Evil Eye and One from Natural Causes», in *Ugarit-Forschungen* 30 (1998), 201-78.

58. Reported in Sibṭ Ibn al-Jawzī (d. 654/1256), *al-Juz' al-thāmin min Mir'āt al-zamān*, facsimile, ed. James Jewett (Chicago 1907), 53-54; Shams al-Dīn al-Dhahabī (d. 748/1348), *Tārīkh al-islām wa-wafayāt al-mashāhīr wa-l-aʿlām*, ed. ʿUmar ʿAbd al-Salām Tadmurī, 53 vols. (Beirut 1987), 35:355-56; Badr al-Dīn al-Shiblī, *Ākām al-marjān fī aḥkām al-jānn*, ed. Edward Badeen (Beirut 2017), 236-37.

59. Buzurg b. Shahriyār (ascribed), *Kitāb ʿajā'ib al-Hind*, Süleymaniyye, Istanbul, Aya Sofya 3306, fol. 52b (emending *dāra* to *dā'ira*); edited as *Kitāb ʿajā'ib al-Hind = Livre des merveilles de l'Inde*, ed. Pieter Antonie Van der Lith, trans. Louis Marcel Devic (Leiden 1883-6), 104-5. The authorship of this work is highly problematic; large portions of it appear in the *Masālik al-abṣār* of Faḍlallāh al-ʿUmarī (d. 749/1349) ascribed to the Muʿtazilī theologian Abū ʿImrān Mūsā b. Rabāḥ al-Sīrāfī (fl. 377/987), edited as *al-Ṣaḥīḥ min akhbār al-biḥār wa-ʿajā'ibihā*, ed. Yūsuf al-Hādī (Damascus 2006).

this spell before the Mongol lord. Neither report uses the word *mandal*, but both highlight a diagram on the ground. In terms of comparisons, circles used for magical purposes, both for trapping and protecting, are not only ubiquitous, they are quite old. Numerous examples of the use of encirclements to guard and to contain are found in antiquity. They can be seen, for instance, in ritual incantations in Sumerian and Akkadian recorded on clay tablets, in spells used by Egyptian priests preserved in Greek and Demotic papyri, and in clay incantation bowls inscribed in Aramaic buried throughout Mesopotamia[60].

This leads us back to Abū Manṣūr al-Ṭūsī's concise definition in his Persian lexicon of the *mandal* as a *khaṭṭ* (a line or diagram) drawn by conjurers in the performance of an incantation. First there is no way of distinguishing from this definition alone what kind of *khaṭṭ* was meant. Notably, the practice of drawing a *khaṭṭ* on the ground is itself connected in the early *ḥadīth* corpus with ancient divinatory techniques of geomancy. The Arabic root, like its counterparts *ḥ-ṭ-ṭ* in various forms of Aramaic, has the sense of digging, ploughing, excavating, and by extension carving out a line of writing[61].

The Baghdadi authority Ibn Qutayba notes that *khaṭṭ* was a pre-Islamic science of the Arabs used for divination, practiced by a *khaṭṭāṭ*, a geomancer who would draw lines in the sand (*raml*) with his finger for purposes of augury[62]. Here the morphological form of *khaṭṭāṭ*, as a noun of intensiveness (*ism al-mubālagha*), suggests a skilled profession or trade. Ibn Qutayba's account serves as a gloss for a canonical *ḥadīth* that affirms that there was a prophet who practiced this form of divination (*kāna nabiyyun min al-anbiyā' yakhuṭṭu*) by drawing lines on the ground. Though not named, the prophet in question was frequently identified with Idrīs, who according to the Medinan authority Muḥammad b. Isḥāq was the first to write with

60. See Ghiyāth al-Dīn Khwāndamīr (d. ca. 942/1535), *Ḥabīb al-siyar*, ed. Jalāl al-Dīn Humā'ī, 4 vols. (Tehran 1333Sh/1954), 3:80.

61. See Marcus Jastrow, *Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic Literature*, 2 vols. (London 1903), 1:448, s.v. «ḥ-ṭ-ṭ».

62. Ibn Qutayba, *Faḍl al-ʿArab wa-l-tanbīh ʿalā ʿulūmihā*, ed. Walīd Maḥmūd Khāliṣ (Abu Dhabi 1998), 143-44; Ibn Qutayba, *Gharīb al-ḥadīth*, ed. ʿAbdallāh al-Jubūrī, 3 vols. (Baghdad 1977), 1:403-4. See also Ibn Manẓūr, *Lisān al-ʿarab*, 7:288.

a reed pen[63]. Early exegetes also linked the practice of divining through *khaṭṭ* with the Qur'ānic verse (Q. 46:4), "a trace of divine knowledge" (*athāratin min ʿilm*). These associations were themselves used as a basis for grounding the field of geomancy, referred to as *ʿilm al-raml*, in prophetic history[64].

But there is good reason to believe that *khaṭṭ* in al-Ṭūsī's definition refers to diagrams drawn on the ground for guarding against or controlling intermediary forces. Again, in this sense ancient Arabia looms large, at least as preserved in the literary record. According to established lore, among the many tools that desert travelers used to guard against jinn and *ghūl*s was a protective circle drawn on the ground, matched with a decent command of poetry and sacred speech. Stories of besting jinn in Arabic literature often involve just this. They feature, for instance, in this form in the famed natural history on the wonders of creation by the Shāfiʿī judge and *madrasa* professor of Wasit, ʿImād al-Dīn al-Qazwīnī.

In his chapter on jinn and demons, al-Qazwīnī notes as an established fact that jinn could whisk off humans, often for sexual pleasure. Among the tales of such encounters al-Qazwīnī preserves the following anecdote said to have been related at an assembly of the caliph ʿUmar b. al-Khaṭṭāb (d. 23/644). There a traveler reported that on the way back from Damascus, while journeying by camel in the middle of the Hijaz, he lost sight of his party at dusk. Soon he came upon a woman alone by a tent. What was she was doing in such a desolate place? It turns out that an *ʿifrīt* (a class of powerful jinn), who would return at any moment, had abducted her. Fearless, the traveler convinces the captive woman to escape with him. They set off, journeying until the rise of the moon, whereupon a cloud of

63. See Ibn Kathīr (d. 774/1373), *Qiṣaṣ al-anbiyāʾ*, ed. Muṣṭafā ʿAbd al-Wāḥid (Mecca 1988), 80; Ḥājjī Khalīfa (d. 1067/1657), *Kashf al-ẓunūn ʿan asāmī l-kutub wa-l-funūn*, ed. Muḥammad Sharaf al-Dīn Yāltqāyā and Rifʿat Bīlga al-Kilīsī, 2 vols. (Istanbul 1941–43), 1:912, s.v. *ʿilm al-raml*.

64. See Aḥmad b. Ḥanbal (d. 241/855), *Musnad*, ed. Shuʿayb al-Arnāʾūṭ, 52 vols. (Beirut 1993–2001), 15:58–6, 39:175–79, 183–85 nos. 9118, 23762, 23767 (with *takhrīj* in notes); Muslim b. al-Ḥajjāj (d. 261/875), *Ṣaḥīḥ*, 2 vols. (Vaduz 2000), «Kitāb al-masājid», bk. 6, ch. 8; «Kitāb al-salām», bk. 40, ch. 35, 1:215–17, 2:964–65 nos. 1227, 5951. For efforts to limit this particular canonical *ḥadīth* as a license for geomancy, see Abū l-Walīd Ibn Rushd (d. 520/1126), *Fatāwā*, ed. al-Mukhtār b. al-Ṭāhir al-Talīlī, 3 vols. (Beirut 1987), 1:249–61; Abū Zakariyyāʾ al-Nawawī (d. 676/1277), *Sharḥ Ṣaḥīḥ Muslim*, 18 vols. (Cairo 1994), 5:32, 14:323.

dust picked up. Knowing that the jinn would soon appear, the traveler sets his camel and the woman on the ground. "I drew around them a circle (*khaṭaṭtu ḥawlahā*) and began reciting the Qur'ān and seeking refuge in God". A poetic parley ensues with an exchange of verses. Wrestling follows, three boons are offered, which the traveler rebuffs; finally, he bests the jinn, and sets off with the woman, whom he ultimately marries[65].

There is a lot that is interesting in this story. The jinn, forlorn with love sickness, evokes in verse the zephyrs of Najd – a tried motif of pre-Islamic poetry. Similar themes of possession and rivalry feature in numerous Arabic stories on jinn, famously memorialized, for instance, in *Alf Layla wa-layla* [A thousand and one nights]. Most notable, at least for our purposes, is the protective circle drawn on the ground with an accompanying recitation of the Qur'ān. This defensive move would have been immediately intelligible to al-Qazwīnī's readers, as drawing a circle to guard against jinn finds no better a model than the Prophet Muḥammad himself.

There are several *ḥadīth* reports of the Prophet using a circle for its protective force during the so-called *laylat al-jinn*, the night when Muḥammad headed into the desert to convert a group of jinn. The Damascene Ḥanafī jurist Badr al-Dīn al-Shiblī (d. 769/1367), in his treatise on jinn, notes that tradition preserves several occasions during which the Prophet set out to the convert the jinn, with accounts set in both Mecca and Medina[66]. As with other fragmented narratives in the *ḥadīth* corpus, many of these reports smuggle in tangential legal matters. Thus, the proliferation of occasions when the Prophet met delegations of jinn often served to either bolster or undermine various juridical positions. Notably, one cycle that circulated widely in Hijazi and Iraqi circles included the presence of a young Ibn Masʿūd (d. ca. 32/652). In addition to the matter of reciting to the jinn, this version of the night is wrapped

65. Al-Qazwīnī, *ʿAjā'ib al-makhlūqāt wa-l-gharā'ib al-mawjūdāt*, British Library, London, Or. 14140, fols. 101b-2a (with two illustrations); edited as *Die wunder der schöpfung*, ed. Ferdinand Wüstenfeld (Göttingen 1848), 373-75; referenced in Arthur Stanley Tritton, «Spirits and Demons in Arabia», in *JRAS* 66.4 (1934), 721-22; illustrations reproduced in Stefano Carboni, *The Wonders of Creation and the Singularities of Painting: A Study of the Ilkhanid London Qazvīnī* (Edinburgh 2015), 76-77, 297-98.

66. Treated with extensive references in al-Shiblī, *Ākām*, 108-22.

up in the legal dispute of whether the Prophet, having no water with him to perform ablution, instead used *nabīdh*, a fermented beverage of questionable legal status. The probity of using *nabīdh* for ablution was a Kufan position adopted by later Ḥanafīs. Most of the accounts, with or without *nabīdh*, feature the use of a line drawn in the sand as a protective measure. None of the juridical disputes raised by these *ḥadīth* question the circle drawn by the Prophet as a point of contestation.

The Iraqi traditionist Aḥmad b. Ḥanbal (d. 241/855) records several versions, including one via Muḥammad b. Isḥāq, the famed compiler on the epic history of the Prophet, his family, and his followers. The Prophet takes along a young Ibn Masʿūd. Parenthetically, it is of note that jinn and demons were well known to be attracted to adolescents, who often served as mediums, though the sources give no indication that this was the reason that Ibn Masʿūd came along. As mediums, boys in particular feature in divinatory practices for communing with intermediary beings[67]. To protect the child, the Prophet draws a circle on the ground around him (*khaṭṭa ḥawlahu*). He warns that should Ibn Masʿūd step outside the circle, the jinn will surely seize him. Muḥammad then proceeds to walk off with the delegation, reciting the Qurʾān through the course of the night, while Ibn Masʿūd listened on from the safety of the circle[68].

This account features not only in early *ḥadīth* collections, but also in numerous Qurʾān commentaries. Moreover, it also forms the basis for the name of a mosque in Mecca known as the Mosque of the Jinn (Masjid al-Jinn). The name of the mosque features in the respective histories of Mecca by Abū l-Walīd al-Azraqī (fl. 250/865) and Abū ʿAbdallāh al-Fākihī (fl. 272/885) in their topography of the sacred city. Both authorities identify the Mosque of the Jinn as having been built on the spot where Ibn Masʿūd sat in the circle the Prophet had drawn to protect the boy. It is here, too, that jinn

67. See Sarah Iles Johnston, «Charming Children: The Use of the Child in Ancient Divination», in *Arethusa* 34.1 (2001), 97–117; Edmonds, *Drawing Down the Moon*, 213–14.

68. See Ibn Ḥanbal, *Musnad*, 7:367, 390–91, nos. 4353, 4381; Abū ʿAbdallāh al-Ḥākim al-Nīshābūrī (d. 405/1014), *al-Mustadrak ʿalā l-ṣaḥīḥayn*, 5 vols. (Cairo 1997), 2:592–93, no. 3915; al-Dhahabī, *Tārīkh al-islām*, 2:199–200.

pledged an oath of allegiance (*bayʿa*) to Muḥammad and thus the mosque also became known as the Mosque of Allegiance[69].

In this sense, the practice of drawing a circle on the ground as a precaution when engaging with jinn represents a veritable *sunna* of the Prophet. The main thrust of these accounts, as with the Qur'ānic treatment of the topic (e.g., Q. 72), is not only that jinn can convert and find faith in God, but that there are sacred means of communicating with them. Jinn are thus conceptually related to the *daimones* ubiquitous in classical Greek cosmology. In this regard, it is not surprising that during the course of the ʿAbbāsid absorption of Greek learning into Arabic, often via Syriac intermediaries, *jinn* was one of the words used to render the Greek *daimōn*. To be sure, as intermediary beings, *daimones* could be harmful and destructive. But far from the demonic associations that early Christians ascribed to them in polemical terms, they could also be quite helpful, serving, as it were, as guardian spirits and sources of divine inspiration[70].

The use of circles and diagrams for both guarding against and communing with intermediary beings is so ubiquitous across the various contact zones that Muslims inhabited with others that drawing them all out would border on the banal[71]. There was the famous Jewish miracle worker from Jerusalem named Ḥoni (first century CE), who, according to Rabbinic sources, could summon rain by drawing a circle, standing inside it, and calling upon God, whence his honorific *ha-meʿagel*, "circle maker"[72]. The practice of using pro-

69. Al-Azraqī, *Akhbār Makka*, ed. ʿAbd al-Malik b. Duhaysh, 2 vols. (Mecca 2003), 2:814-15; al-Fākihī, *Akhbār Makka*, ed. ʿAbd al-Malik b. Duhaysh, 6 vols. (Beirut 1994), 4:20-24; Abū ʿUbayd al-Bakrī (d. 487/1094), *al-Masālik wa-l-mamālik*, ed. André Ferré and Adrian van Leeuwen, 2 vols. (Beirut 1992), 1:398.

70. See, for instance, the Arabic adaptation of Plotinus, *Enneads* as pseudo-Aristotle, *Uthūlūjiya* [*The Theology of Aristotle*], Süleymaniye, Istanbul, Aya Sofya 2457, fol. 146a (*jinn*); translated in *Plotiniana Arabica*, trans. Geoffrey Lewis, in *Plotini Opera, Tomus II: Enneades IV-V,* ed. Paul Henry and Hans-Rudolf Schwyzer (Paris 1959), 145 line 43. For the classical philosophical background, see Charles Stang, *Our Divine Double* (Cambridge, MA 2016), 185-230.

71. See Reginald Campbell Thompson, *Semitic Magic: Its Origins and Development* (London 1908), lvii-xl; for this and further references, see Gideon Bohak, *Ancient Jewish Magic* (Cambridge 2008), 286 n. 165.

72. Bohak, *Ancient Jewish Magic*, 45, 53, 401; and more broadly Aaron Panken, «Telling Retellings: Honi the Circle Maker and the Development of Rabbinic Narrative Discourse», in *From Scrolls to Traditions: A Festschrift Honoring Lawrence H. Schiffman*, ed. Stuart Miller et al. (Leiden 2021), 408-49.

tective circles when summoning demons is preserved in the Greek, Demotic, and Coptic corpus of magical papyri. Many of these materials feature diagrams that parallel, in iconographic terms, the Ouroboros, the ancient symbol of a snake that eats its own tail, which was common in alchemical texts as well as a host of amulets and signets from antiquity[73]. Even further back there was the *zisurrâ*, the ancient Babylonian ritual of the magic circle of flour, drawn on the ground to guard a ritual space against evil spirits. Practices aimed at demarcation through encirclement, burying, and entrapment were also at play in Aramaic incantation bowls used for trapping demons[74].

Buried upside down in courtyards, thresholds, and the corners of rooms, incantation bowls were designed to trap demons. They feature inscriptions lining their interior circumference forming concentric circles of increasing size. Many of the centers foreground diagrams of demonic figures who have been trapped or bound within the circular lines that are made up by the inscription of the incantation[75]. Archeological evidence points to the everyday use of incantation bowls, seals, and amulets by Christians, Jews, Mandaeans, Manicheans, and Mazdeans across Iraq and Iran prior to and concomitant with the rise of Islam. Furthermore, numerous literary sources, such as Christian Syriac writings on the lives of saints and Rabbinic accounts in the Babylonian Talmud, give further context to a shared cosmography of spirits and demons inhabiting Mesopotamia.

73. See the use of circles and enchantments in protective spells against daimons and phantasms in *The Greek Magical Papyri in Translation*, ed. Hans Dieter Betz (Chicago 1986), 130 (PGM VII, l. 579-90, British Library, London, Papyrus 121, fol. 3a) and 141 (PGM VII, l. 846-61, British Library, Papyrus 121, fol. 5a); see also Angelicus Kropp, *Ausgewahlte koptische Zaubertexte*, 3 vols. (Brussels 1930-1), 3:100.

74. See *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*, 21 vols. (Chicago 1956-2010), 21:137-38; JoAnn Scurlock, *Magico-Medical Means of Treating Ghost-Induced Illness in Ancient Mesopotamia* (Leiden 2006), 57-59; for comparisons, see Judah Segal and Erica Hunter, *Catalogue of the Aramaic and Mandaic Incantation Bowls in the British Museum* (London 2000), 176-79; Charles Haberl, «The Production and Reception of a Mandaic Incantation», in *Afroasiatic Studies in Memory of Robert Hetzron*, ed. Charles G. Häberl (Newcastle 2009), 133.

75. See Naama Vilozny, «The Art of the Aramaic Incantation Bowls», in *Aramaic Bowl Spells: Jewish Babylonian Aramaic Bowls*, ed. Shaul Shaked et al. (Leiden 2013), 29-37. Compare the wood boards with demons trapped in encirclements in Bactrian and Brahmi script, in Nicholas Sims-Williams, *Bactrian Documents from Northern Afghanistan*, 3 vols. (Oxford 2000-12), 3:35, plates 240-41, the second features a mantra in the Brahmi script.

In these ways, the Arabic uses of *khaṭṭ* as a protective measure to guard spaces against demons and jinn clearly parallel earlier forms of protection through encirclement. Notably, these cases developed entirely without utilizing the word *mandal*. The encirclement suggested by the word *khaṭṭ* and its variants can be traced back to the formative development of Islamic writings on the Prophet and the early community. In addition, a variety of handbooks of practical magic do not refer to the word *mandal*. Thus while the Andalusian grimoire *Ghāyat al-ḥakīm* [Aim of the sage] does not use the word, it does speak of the procedure of drawing a *dā'ira* (circle) to sit in while conjuring astral spirits[76]. A similar observation can be made about the Arabic collection of spells that circulated under the name Andahriyūsh(?) the Babylonian on the subjugation of jinn and demons and on curing various ailments, a pseudepigraphic collection that was purportedly drawn from the magic of ancient Mesopotamia. The handbook is filled with incantations that evoke an array of demonic and angelic names drawn in part from Aramaic. The *mandal* does not feature here, but there are supplications, *charaktēres*, the construction of an enclosed pavilion (*qubba*) for summoning intermediary forces, goblets for scrying, protective circles referred to as *khaṭṭ*, and bowls marked with inscriptions[77].

And yet it is clear that over time, the term *mandal* became an entirely naturalized category in the standard repertoire of incantations. And it is in this regard that al-Ṭūsī's Persian definition is significant. Not only does it refer to the use of diagrams, but it also addresses the *mandal* as part of an incantation or enchantment (*'azīmat*) used by a conjurer or enchanter (*mu'azzim*). As a term of art, the *mandal* tells us a good deal about the formation of the science of incantations, and it lends some insight into the social and religious values associated with those who sought to wield its power.

76. See Maslama b. Qāsim al-Qurṭubī [ascribed], *Ghāyat al-ḥakīm*, ed. Hellmut Ritter (Berlin 1933), 298, 299.

77. See Andahriyūsh al-Bābilī, *Kitāb fī 'ilājāt al-jinn*, Bibliothèque nationale de France, Paris, MS Arabe 2630, fols. 16a, 17a, 18a–b, 20a, 26a, 27b, 35a (protective circles); 36a (*charaktēres*); 21b–23a (*qubba*). The vocalization of the purported author's name is conjectural.

Handbooks of Practical Magic

To date, the earliest Arabic accounts that are known to survive on how to construct the *mandal* as a protective diagram are found in the interrelated handbooks of practical magic by Fakhr al-A'imma al-Ṭabasī, Fakhr al-Dīn al-Rāzī, and Sirāj al-Dīn al-Sakkākī, all produced in the East. These works each describe the *mandal* as one of the techniques used when summoning intermediary forces. This takes the form of an encirclement on the ground in which one sits to perform various incantations and ritual acts. The materials preserved in these handbooks, I would suggest, go back several generations and reflect an even older body of practices for communicating with and gaining mastery over intermediary beings.

In this form, the *mandal* as the sorcerer's circle also features in the development of Persian works on practical magic. In his influential Persian classification of the sciences, the *Jāmiʿ al-ʿulūm*, al-Rāzī describes how to construct such a diagram and the requisite ceremonial steps that accompany it. His account notably does not use the term *mandal*. However, his description very closely parallels the *mandal* ceremony that opens al-Ṭabasī's Arabic manual[78]. There is also the Persian treatise, the *Taskhīrāt* [Subjugations] by Muḥammad, the son of Sirāj al-Dīn al-Sakkākī, who may well have been a compiler and publisher of his father's handbook; in it the *mandal* forms a mechanism for harnessing intermediary forces, with intricate and labyrinthine diagrams (see figure 2)[79].

As a technique of drawing circles on the ground to summon beings, the *mandal* is also elaborated in detail in an illuminated Persian compendium of practical magic complied for the Seljuq court of Anatolia by Nāṣir al-Dīn Muḥammad b. Ibrāhīm (fl. 671/1273). The compiler is otherwise unknown, though notably he took,

78. For the procedure, see Fakhr al-Dīn al-Rāzī, *Jāmiʿ al-ʿulūm*, ed. Sayyid ʿAlī Āl Dāwūd (Tehran 1382Sh/2003), 441-46; al-Rāzī's Persian paraphrases the second chapter of al-Ṭabasī, *Shāmil*, E fols. 8a-10b; P fols. 5b-8a; B 5-6; N fols. 6b-8a. For similar ceremonies referred to by the term *mandal*, see al-Rāzī, *Sirr*, fols. 133b, 136b, 149a, 150a, 169b, 176a.

79. For this manuscript collection, see Emma Flatt, «Spices, Smells and Spells: The Use of Olfactory Substances in the Conjuring of Spirits», in *Journal South Asian Studies* 32.1 (2016), 3-21.

among other honorifics, the titles geomancer (*rammāl*) and conjurer (*muʿazzim*)[80]. The unique manuscript contains labyrinthine diagrams marked with gates and clear indications where the conjurer was to sit. The instructions evince a broad repertoire of practices and techniques that include the use of music, various forms of fasting and breaking the fast, along with ritual objects, including knifes and spears. His square *mandal* diagram for summoning the angel Metatron contains eight spaces in which to conduct the ceremony, each bisected by eight gates (see figure 3). These eight locations are identified for the footwear the conjurer removes and the offering; the water used in the ritual; the space where the conjurer sits; the placement of reed pipes (*mūsīqāl*); a plate of dates; a Qur'ānic codex; incense; and weapons. Other diagrams call for the use of books, candles, and bread. These works describe similar ceremonies and conventions, though with some clear expansions and adaptations. Such is the case with the use of musical accompaniment in the form of a reed (*nay*) and drum (*daf*) in Nāṣir al-Dīn's Persian handbook produced in Anatolia, where music often formed an established part of Sufi piety[81].

The handbooks also describe special means for preparing the *mandal* diagram in which the devotee sits. The ceremony may call for particular astral timings or locations, along with various forms of purification, suffumigation, the fashioning of charms, amulets, seals, signets, or talismans, the sacrifice of animals, and the recitation of sacred formulas and names, often in unintelligible forms. The ritual can involve days of recitation, sleeping, and fasting. Though there is good deal of variation, this form of the *mandal* ceremony is attested in generations of writing. The eighteenth-century West African savant Muḥammad al-Kashnāwī treats the broad outlines of the ceremony in detail. Al-Kashnāwī explains how to construct the *mandal* diagram in his commentary on al-Rāzī's famed collection *al-Sirr al-maktūm* and in his own handbook of letterism and numerology, the *Bahjat al-āfāq*.

Foremost, as al-Kashnāwī makes explicit, the *mandal* is meant to guard the individual trying to summon intermediary beings and

80. For the name of the author (*muṣannif*), see Bibliothèque nationale de France, Paris MS Persan 174, fol. 51a, 75a, 79b, 81a; discussed in Andrew Peacock, «A Seljuq Occult Manuscript and its World: MS Paris Persan 174», in *The Seljuqs and Their Successors*, ed. Sheila Canby et al. (Edinburgh 2020), 167, 170.

81. MS persan 174, fols. 74b, 79a.



Figure 3. *Mandal* diagram for subjugating the angel Metatron, with eight gates along with ritual objects and the location for the conjurer to sit, accompanied by divine names (*nām-hā*), citing the authority of ʿAbdallāh b. Hilāl. Bibliothèque nationale de France, Paris, MS Persan 174, fol. 74b, manuscript compiled for the Seljuq court of Anatolia, ca. 671/1273.

thus, it serves above all as a protective device. He cautions that the utmost care is to be taken when constructing one. We can trace a similar concern back to al-Ṭabasī, who describes the lines (*khuṭūṭ*) as a form of fortification and protection (*taḥṣīn wa-iḥrāz*) used during the course of the ritual. Al-Ṭabasī explains that no part of the petitioner's body should leave the design (*khaṭṭ*) during the ceremony, as there is "the risk of death, illness, possession, dumbfoundedness, muteness, blindness, and other things which God might ordain"[82].

The rite can only begin in a state of ritual consecration and purification. Al-Ṭabasī explains that one has to strip away the baseness of ambition, and the weakness of intention, for it is only through "determination (*himma*) that a man can soar". The prolonged practices of fasting and recitation represent forms of theurgic purification. Stressing the ritual in gendered terms, al-Ṭabasī notes: "whoever lacks determination lacks manliness (*murū'a*), and whoever lacks manliness, has no comeliness (*ruwā'*), and without comeliness, one is of no consequence"[83]. The language speaks to larger discourses of Islamic piety, ethics, and epistemology in general terms. Al-Ṭabasī's handbook, in this way, reflects the diverse routes by which religious authorities cultivated the science of incantations as a practical means for communicating with the realm of the unseen.

Al-Kashnawī, like al-Ṭabasī centuries before, offers a normative account of the *mandal* ritual. Seven circles are to be drawn on the ground starting with the one furthest from the practitioner (see figure 4). The lines should be drawn with steel (*fūlād*)[84]. Al-Rāzī notes that it is also possible to use a knife. Al-Ṭabasī gives a detailed list of divergences akin to legal differences of opinion (*ikhtilāf*) in various forms of positive ritual law. Iron or steel is requisite, a spear is preferable, followed by a lathe, or a knife; al-Ṭabasī cites the authority of Ibrāhīm al-Fallāḥ who also allowed the use of large needles, pins, the metallic end of a scabbard, and the like.

Each line should be drawn with the right hand in a continual action without lifting up the point. At the moment when the ends of the lines join, a new line should be started, proceeding in smaller concentric circles. However, not all *mandal*s are circular; various

82. Al-Ṭabasī, *Shāmil*, E fols. 17b–18a; P fol. 14a; B 12; N fol. 13b.

83. Al-Ṭabasī, *Shāmil*, E fols. 7b–8a; P fol. 5b; B 6; N fol. 6b.

84. See al-Kashnāwī, *al-Durr*, 2:208–212; al-Kashnāwī, *Bahjat al-āfāq*, Beinecke Library, Yale University, Arabic MSS suppl. 29, fols. 97a–99a.



Figure 4. Diagram for the first *mandal* ceremony described in al-Ṭabasī's handbook, Salar Jung Museum Library, Hyderabad, ʿUlūm-i Sirriyya 14, p. 17, copied in India in the eighteenth century.

squares and rectangular shapes can be used, a point made clear in the rectilinear designs for *mandal* enclosures that al-Ṭabasī preserves[85]. As the illuminated Persian grimoire of Nāṣir al-Dīn the conjurer highlights, *mandal* diagrams can also combine shapes into significantly complicated patterns and forms. The diagrams also frequently include various numbers of gates or doors that bisect in some fashion the catchment of lines. Prayers and supplications are to be recited at each stage of the drawing. The supplicant is to fast, wear white robes, and is required, generally, to remain in the *mandal* during the procedure. Supplications could include reciting verses of the Qur'ān, prayers, and incantations. Instructions could call for kindling a fire, burning various substances and aromatics, breaking fasts, and even the use of

85. See al-Ṭabasī, *Shāmil*, E fol. 66b; P fol. 73b; B 72; N fol. 114a.

music. The ceremony could take days, and much of it was to be conducted outdoors at night, in an open space, away from others.

In the opening to his treatment of *tanjīm*, another technical term in the toolkit of incantations, al-Ṭabasī gives a detailed account of one version of the ritual, which he notes can take various forms. The word *tanjīm* here does not have the same sense used in judicial astrology, in which it refers to observing the course of stars for the purposes of divination. Rather, as becomes clear from the way al-Ṭabasī, al-Rāzī, and al-Sakkākī use the term, *tanjīm* serves as a basis for forming connections with heavenly bodies and thereby activating spells and incantations in the form of astral enchantment.

In this way, seals, signets, and talismans are brought into the *mandal* and are then activated through their exposure to astral forces. The incantations summon the jinn and demons, while exposure to the stars then subjugates these forces from the realm of the unseen within an object and compels them into obedience. This transference is done, al-Rāzī suggests, so that the conjurer need not actually unite with the jinn or demon in a form of possession[86]. The central importance of *tanjīm*, in this sense of astral enchantment or activation by the stars, for the *mandal* ceremony can be seen in the subtitle to al-Ṭabasī's collection, *uṣūl al-taʿzīm wa-qawāʿid al-tanjīm* ("the foundations of adjuration and the rules for astral activation").

In his opening account of how to perform the ceremony, al-Ṭabasī explains that an astrologer (*munajjim*) is a scholar trained to determine the course (*maysīr*) of the stars, their felicities (*suʿūd*), calamities (*nuḥūs*), ascents and descents (*ṣuʿūd wa-hubūṭ*). He then notes the necessity of consulting an authority of astral science who possesses precise knowledge of the movement of stars (*ʿāliman bi-l-nujūm*) before performing the *tanjīm* ceremony within the *mandal*. This is all to ensure that the procedure is done when the stars are in auspicious positions. Al-Ṭabasī's advice is noteworthy for it suggests a clear division of labor between astrologers and conjurers. It also highlights that the discipline of incantations, as al-Ṭabasī sees it, does not require, in itself, detailed knowledge of astral science; rather the mastery of spells and incantations, and the rituals used to activate them through special prayers and procedures, represents its own form of specialization[87].

86. Al-Rāzī, *Jāmiʿ*, 441.
87. Al-Ṭabasī, *Shāmil*, E fols. 8a-b; P fols. 5b-6a; B 6; N fols. 6b-7a.

Prophetic Pedigrees and Pious Lineages

The opening of al-Ṭabasī's collection provides a sacred history of the science of incantations that stretches back to Adam and the torments inflicted on him by Iblīs. After expelling Adam from heaven, God revealed to him the sacred names so that he and his progeny could defend themselves against Iblīs and his minions, an idea explicitly rooted in the Qur'ānic account (Q. 2:31) of how God taught Adam all the names (*'allama ādama l-asmā'a kullahā*). Al-Ṭabasī further explains that these names were recorded in the *Sifr Ādam* (Book of Adam), which was then passed on to Seth. We are told that Adam used these names to subjugate demons and that the phrases were established through authenticated transmission (*riwāya*). This explanation parallels, in very general terms, the story provided by the Brethren of Purity discussed above[88].

Ibn al-Nadīm knew an Arabic book by this same title, which he reports contained accounts of angels and operations based on their names. The *Sifr Ādam* appears in Ibn al-Nadīm's list of writings on amulets and spells (*al-ta'āwīdh wa-l-ruqā*). Though its author was unknown (*majhūl*), Ibn al-Nadīm notes that Jews claimed it as their own. Al-Jāḥiẓ also lists the title among the works consulted by conjurers. However, the illuminist philosopher Shams al-Dīn al-Shahrazūrī (fl. 687/1288) comments that by his day the collection was no longer available, having long been lost. This may speak more to its rarity than to its survival. Al-Ṭabasī appears to have had access to some version of the collection, which he describes as containing details of angels and divine names. Moreover, references to the work are made by the likes of the Ottoman polymath Ḥājjī Khalīfa (d. 1067/1657) and later manuscripts with the title *Sifr Ādam* survive in Arabic and Persian. The extent to which they match what circulated in the book markets of Baghdad during the time of Ibn al-Nadīm remains to be seen. These later materials, however, exhibit notable parallels with the Hebrew *Sefer Ha-Razim* [Book of secrets], particularly in the use of sacred Hebrew and Aramaic phrases and in the enumeration of the celestial inhabitants of the seven heavens. In this

88. Al-Ṭabasī, *Shāmil*, E fol. 6b.

way the *Sifr Ādam* highlights early shared techniques for harnessing angels and demons that were, in turn, rooted in prophetic history[89].

From Seth, al-Ṭabasī traces the prophetic science of incantations and talismans through Idrīs, whom Ibn al-Nadīm and others knew as Enoch, and who was frequently identified as Hermes. Again, there is vast body of Jewish and Christian literature on Enoch that points to his celestial powers over demons. Next for al-Ṭabasī comes Ezekiel (Ḥizqīl), followed by Solomon, who forms a backbone to the elaboration of the field with his mastery of demons and jinn. In the genealogy of the prophetic discipline from Adam to Solomon, al-Ṭabasī identifies jinn with the high mountains of India.

Al-Ṭabasī notes that Solomon's chief minister among the jinn, Āṣif b. Barkhiyā, had befriended Faqṭiṭiyūs, the ruler of the jinn and demons. This king was said to dwell in a hidden garden in India, one blooming with rare fruits, in the middle of which was a pool of pure spring water (*ghadīr mā' ma'īn murawwaq*) in front of towering mountains. Notably, in India the association between high mountains, particularly the Himalayas, and various intermediary beings, including not only deities, but demons and ghosts, was quite old. Al-Ṭabasī explains that there was a dispute over the name of the king of the jinn; some claimed that it was actually Fuqṭus. Others maintained that Fuqṭus was merely a brother who made the trek each year to hear the king's council. Meeting on the summit of one of the peaks, the king preached, dispensed advice, and gave commands and prohibitions that Fuqṭus then relayed to the other jinn far and wide, east and west. Faqṭiṭiyūs features in a cycle of incanta-

89. Al-Ṭabasī, *Shāmil*, E fol. 5a; P 116b; B 4, 128. On the *sifr* of Adam, see al-Jāḥiẓ, *Kitāb al-ḥayawān*, 6:232; al-Jāḥiẓ, *Kitāb al-tarbī'*, 80; Ibn al-Nadīm, *Fihrist*, ed. Sayyid, 2:353; noted as the *sifr* of Seth son of Adam in al-Jawbarī, *Kitāb al-mukhtār*, 82. See Shams al-Dīn al-Shahrazūrī, *Rasā'il al-Shajara al-ilahiyya*, ed. Najafqulī Ḥabībī, 3 vols. (Tehran 1383/2004-5), 3:519; Ḥājjī Khalīfa, *Kashf*, 1:591, 655, cf. 650-51; al-Kashnāwī, *Bahjat al-āfāq*, fol. 7b. An Arabic text by this title is published in 'Abd al-Fattāḥ al-Sayyid 'Abduh Ṭūkhī, *al-Siḥr al-'aẓīm*, 3 vols. (Cairo n.d.), 1:11-96. For an eighteenth-century Arabic copy, see Rampur Raza Library, *Catalogue of the Arabic Manuscripts*, 5:500 (8695 M). See also Dóra Zsom, «Another Arabic Version of *Sefer Ha-Razim* and *Ḥarba De-Moše*: A New *Sifr Ādam* Manuscript», in *Arabist* 37 (2016), 179-201; Alexander Fodor, «An Arabic Version of *Sefer Ha-Razim*», in *Jewish Studies Quarterly* 13:4 (2006), 412-27; Alexander Fodor, «An Arabic Version of 'The Sword of Moses'», in *Continuity and Innovation in the Magical Tradition*, ed. Gideon Bohak et al. (Leiden 2011), 341-85.

tions later in al-Ṭabasī's handbook. This, in turn, highlights how a larger mythology of *historiolae* on the lives of demons, jinn, and prophets came to envelop a range of spells[90].

This king of the jinn, al-Ṭabasī observes, appeared five generations after Iblīs. He dragged the impudent jinn and demons to Solomon, who, in turn, took their vows (*ʿuhūd*), namely, the secret names of God by which He commanded them. In this way Solomon learned the incantations (*ʿazā'im*) that would subjugate them[91]. India emerges as a *locus classicus* in early Arabic letters as an abode of jinn filled with ascetics and magicians who, through the powers of the mind, work wonders. Al-Jāḥiẓ, for instance, knew that jinn and powerful demons abounded in India. In addition, there is a well-known report in early Arabic sources that India was the first terrestrial home of Adam, an idea that has analogues among Jews and Christians in antiquity[92].

This larger prophetic framework guides al-Ṭabasī's opening chapter on the definition of *taʿzīm*, the act of commanding demons and jinn by adjurations. The practice, al-Ṭabasī explains, is both possible and permitted by reason and by religious law (*sharʿ*). Moreover, he continues, whoever denies the reality that these entities can be commanded, risks placing a limit on the power (*qudra*) of God, for subjugation and making jinn and demons subservient to humans is part of God's marvelous design and wonderous decree (*min badīʿ ṣanʿihi wa-ʿajīb amrihi*). These acts of subjugation are lawful, al-Ṭabasī concludes, as they are done through God, not through some other power, all in harmony with His beautiful names (*bi-asmā'ihi al-ḥusnā*), His mighty commandments (*ʿazā'im*), His most sublime vows (*ʿuhūd*), and His magnificent oaths (*aqsām*). At its foundation, there are only two types of practice in this field of learning: that which is forbidden (*maḥẓūr*) and that which is permitted (*mubāḥ*). Al-Ṭabasī refers to the first as condemned and rejected sorcery (*siḥr*) based on

90. On Faqṭiṭiyūs, see al-Ṭabasī, *Shāmil*, E fols. 70a-73a; B 74-76; P 76b-79.

91. Al-Ṭabasī, *Shāmil*, E fol. 5b; P fols. 3b-4a. For a similar story of Fuqṭus and Solomon, see Ibn al-Nadīm, *Fihrist*, ed. Sayyid, 3:335.

92. Al-Jāḥiẓ, *Kitāb al-ḥayawān*, 6:232. Carl Ernst, «India as a Sacred Islamic Land», in *Religion of India in Practice*, ed. Donald Lopez (Princeton 1995), 556-63. For the ancient associations between India and Adam, see Elizabeth Price, *The Barāhima's Dilemma: Ibn al-Rāwandī's Kitāb al-Zumurrud and the Epistemological Turn in the Debate on Prophecy* (PhD diss., Yale University 2021), 77-82, 107-11.

infidelity and polytheism. As for the permitted, it is rooted in complete piety (*waraʿ kāmil*), total probity (*ʿafāf shāmil*), and it is undertaken through the purity of seclusion (*ṣafāʾ khalwa*), and by devoting oneself to God (*inqiṭāʿ ilā llāh*). Al-Ṭabasī's division between lawful enchantment and condemned sorcery and the Solomonic origins of the field find notable parallels in Ibn al-Nadīm's treatment of the topic[93]. These points of confluence likely reflect an early written discourse justifying in Islamic terms the discipline, which in al-Ṭabasī's hands contains spells to summon and subjugate the devil and his many progeny through the use of sacred incantations, bejeweled signet rings, written seals, and *mandal* diagrams.

Just as there were many among the past nations (*al-umam al-sābiqa*) who learned to subjugate jinn, al-Ṭabasī explains that the discipline then continued on "in our nation". The genealogy presented is designed not only to situate the field within the frameworks of prophetic history, but also to advance a particular set of Muslim authorities. This, in turn, reveals a good deal about al-Ṭabasī's own traditionalist and Sufi allegiances. Al-Ṭabasī's line of authorities begins with the son-in-law and nephew of the Prophet, ʿAlī b. Abī Ṭālib (d. 40/661), who we are told was renowned in the field. ʿAlī is followed by his great-grandson Zayn al-ʿĀbidīn (d. 95/713). At this stage Sufi mystics frequently turned to the sacred linage of ʿAlī as a basis for esoteric knowledge[94].

By al-Ṭabasī's day, Sufism (*taṣawwuf*) had become one of the primary frameworks for the development of Sunni piety. Notably, al-Ṭabasī follows this list of masters of incantations with the famed ascetic Abū Muḥammad Sahl al-Tustarī (d. 283/896), whom he identifies as one of the shaykhs of the Sufis. Al-Ṭabasī credits al-Tustarī with a powerful invocation (*daʿwa*) that was passed down from the Prophet Seth. In addition to his piety, al-Tustarī is remembered for his commentary of the Qurʾān, in which he discusses how, through seclusion (*khalwa*), one can befriend angels and jinn. Moreover, al-Tustarī also reports in a gloss on Sūrat al-Jinn, that during his own travels he came across a long-lived jinn who had met Jesus and was among the delegation of jinn who had converted upon hearing the Prophet recite the Qurʾān. Al-Tustarī then inquired whether jinn also enter

93. Al-Ṭabasī, *Shāmil*, E fols. 3a–4a; P fols. 2a–3a; B 3–4; cf. Ibn al-Nadīm, *Fihrist*, ed. Sayyid, 3:332–35.

94. Al-Ṭabasī, *Shāmil*, E fol. 6a; P fol. 4a; B 5.

paradise, to which his otherworldly interlocutor replied that he believed that indeed they did. Al-Ṭabasī reports that al-Tustarī called for forty days of spiritual discipline (*riyāḍa*) and acts of worship (*ʿibāda*) in preparation for procedures to summon forces from the unseen[95].

Next on al-Ṭabasī's list comes al-Ḥallāj (d. 309/922). By this point, the image of al-Ḥallāj in Sufi circles was transforming from an impudent heretic and crass charlatan to a pious miracle worker. A key element in the earliest biographies of al-Ḥallāj are his extensive travels, not only in Khurasan and Central Asia, but also in India. The association of India with ancient sages and occult learning is old and reflects a storied discourse of traveling to India to master esoteric knowledge[96].

Al-Ṭabasī praises al-Ḥallāj for magnificent wonders (*al-ʿajāʾib al-ʿaẓīma*), which nonetheless led to his execution. Al-Ṭabasī's placement of al-Ḥallāj is an important, if overlooked, testament to the historical metamorphosis of al-Ḥallāj into a Sufi martyr and a master of jinn. A key figure in this process of rehabilitation among Sufis of Khurasan was Ibn Bākuwayh (d. 428/1036), whose treatise on al-Ḥallāj's life and death served to combat the image of al-Ḥallāj as an imposter. Ibn Bākuwayh reports that al-Ḥallāj's wonders originated not in deceptions (*ḥiyal*) or sleight-of-hand trickery (*shaʿūdha*); rather he was served (*makhdūm*) by jinn. While in Nishapur, Ibn Bākuwayh resided in the Sufi cloister (*duwayra*) of Abū ʿAbd al-Raḥmān al-Sulamī (d. 412/1021), one of the key figures in the development of Sufi piety in the East. Al-Sulamī included al-Ḥallāj in his collection on Sufi lives, though he stresses that there was still debate about him among leading authorities. For his part, al-Sulamī also knew of reports that al-Ḥallāj had mastery over jinn. Notably, al-Ṭabasī's own network of teachers included both Ibn Bākuwayh and al-Sulamī[97].

95. See al-Tustarī, *Tafsīr*, ed. Muḥammad Bāsil ʿUyūn al-Sūd (Beirut 2002), 114 (Q. 25:28), 179 (Q. 72:1); al-Tustarī, *Tafsīr al-Tustarī*, trans. Annabel Keeler and Ali Keeler (Louisville, KY 2011), 139–40, 251; cf. al-Iṣfahānī, *Ḥilyat al-awliyāʾ*, 10 vols. (Cairo 1932–8), 10:198–212, section 546.

96. Louis Massignon, *The Passion of al-Hallāj: Mystic and Martyr of Islam*, trans. Herbert Mason (Princeton 1982), 1:11, 18, 26, 170–73, 178–89. See broadly John Walbridge, *The Wisdom of the Mystic East: Suhrawardī and Platonic Orientalism* (Albany 2001), 5, 8, 13.

97. Al-Ṭabasī, *Shāmil*, E fol. 6b; B 5. Ibn Bākuwayh (d. 428/1036), *Bidāyat ḥāl al-Ḥallāj*, in *Quatre textes inédits relatifs à la biographie d'al Ḥosayn-Ibn Manṣoūr*

Al-Ṭabasī's lineage of masters of jinn points to ways in which al-Ḥallāj's miracles were rationalized and his authority was bolstered in Sufi circles, even while the martyr continued to be a polarizing figure[98]. Al-Ḥallāj's treatise *Ṭāwāsīn*, redacted after his death, highlights how the strange master (*al-ʿālim al-gharīb*) powerfully reimagined the purpose and piety of Iblīs with the use of circular diagrams and letter symbolism as the basis for obtaining higher levels of spiritual gnosis[99]. The point deserves noting, for it is with al-Ḥallāj that al-Ṭabasī ends his list of those who had attained the highest ranks in the art of controlling jinn.

From here the chain of authorities moves to those who did not reach the same degree as the sanctified masters (*al-sādāt al-mutaḥarramīn*), and were not among the abodes of the saints (*maḥāll al-awliyāʾ*), and thereby failed to obtain the same stations (*maqāmāt*), or produce the same saintly miracles (*karāmāt*). The vocaculary used here is drawn from normative Ashʿarī theology and Sufi cosmology. Al-Ṭabasī's spiritual genealogy from Adam through Solomon and from ʿAlī to al-Ḥallāj advances a very particular claim to the science. In addition to the precedent of the prophets, al-Ṭabasī roots the discipline in the authority and the miraculous power associated with the lineage of Muḥammad and with the *awliyāʾ*, the pious saints who followed.

al Ḥallāj, ed. Louis Massignon (Paris 1914), 38–39, 46, sections 11, 21; cited in Abū Bakr al-Khaṭīb al-Baghdādī (d. 463/1071), *Tārīkh Baghdād*, ed. Bashshār ʿAwwād Maʿrūf, 17 vols. (Beirut 2001), 8:703–4; clarified as to pertaining specifically to the jinn by al-Dhahabī, *Siyar aʿlām al-nubalāʾ*, ed. Shuʿayb al-Arnāʾūṭ et al., 24 vols. (Beirut 1996), 14:322; cf. Massignon, *The Passion of al-Hallāj*, 1:293–94, cf. 1:154. On Ibn Bākuwayh in Nishapur, see ʿAbd al-Ghāfir al-Fārisī (d. 529/1134), *al-Muntakhab min al-Siyāq*, ed. Muḥammad Kāẓim al-Maḥmūdī (Qom 1983), 26–27, section 35. See also Abū ʿAbd al-Raḥmān al-Sulamī, *Tārīkh al-ṣūfiyya*, in *Quatre textes*, 18, sections 4–6; cf. al-Sulamī, *Ṭabaqāt al-Ṣūfiyya*, ed. Nūr al-Dīn Shurayba (Cairo 1953), 307–11. For al-Ṭabasī with Ibn Bākuwayh and al-Sulamī, see ʿAbd al-Karīm al-Samʿānī (d. 562/1166), *al-Muntakhab min muʿjam shuyūkh al-Imām Abī Saʿd ʿAbd al-Karīm*, ed. Muwaffaq b. ʿAbdallāh, 4 vols. (Riyadh 1996), 1:554; al-Dhahabī, *Siyar*, 18:558, no. 309.

98. By al-Ṭabasī's day, the restoration of al-Ḥallāj was by no means complete, even in the East; see the negative portrayal of al-Ḥallāj, with details of his writings in Sharaf al-Zamān Ṭāhir al-Marwazī (fl. 523/1128), *Ṭabāʾiʿ al-ḥayawān*, ed. Yūsuf al-Hādī, 2 vols. (Tehran 2020), 1:19–20.

99. See al-Ḥallāj, *Kitāb al-ṭawāsīn*, ed. Louis Massignon (Paris 1913), 25–28 (*Ṭāsīn al-dāʾira*), 41–55 (*Ṭāsīn al-azal wa-iltibās*).

After the saints, al-Ṭabasī turns to a lower, but still powerful tier. This includes Ṣāliḥ al-Mudaybirī, known to al-Jāḥiẓ, and counted by Ibn al-Nadīm as among the conjurers (*muʿazzimīn*) who followed the praiseworthy path (*al-ṭarīqa al-maḥmūda*) and who could produce lofty results and noble actions (*afʿāl jalīla wa-aʿmāl nabīla*). Then follows Maymūn, whose name means auspicious. Al-Ṭabasī notes that Maymūn had a signet ring activated through astral enchantment (*tanjīm*). He could draw a diagram on the ground with the aim of reaching a particular place. As soon as Maymūn set his feet inside the diagram he could project himself into that location and witness the events going on there. Maymūn is then followed by ʿAbdallāh b. al-Hilāl, the *ṣadīq iblīs* (companion of the devil), the famed Umayyad-era conjurer. He could travel in one night from Baghdad to Samarqand and back. Al-Ṭabasī notes that there were indeed multiple figures by the name Ibn al-Hilāl. The appellation may well have become a kind of guild name[100]. The use by Ibn Hilāl and Maymūn of diagrams to travel vast distances is a practice with clear analogues in Hebrew, Aramaic, and Judeo-Arabic[101]. The others listed as having obtained high stations are Ibn al-Faraj al-Anbārī, Khalaf b. Yūsuf, and Ibn Qanān, otherwise obscure names. This ends al-Ṭabasī's overview of early Muslim practitioners who had achieved a level lower than saints and prophets[102].

100. Al-Ṭabasī, *Shāmil*, E fols. 6b-7a; P 5a; B 5. See the authority Awḥad al-Dīn Maḥmud b. ʿUmar b. Muḥammad b. Ilyās al-Andalusī, who claimed descent from ʿAbdallāh b. Hilāl. Awḥad al-Dīn features as a primary authority of Sirāj al-Dīn al-Sakkākī, see Awḥad al-Dīn al-Andalusī, *Tarjuma-i Sirr al-asrār*, British Library, London, Or. 11041, fol. 86a-b; Bodleian Library, Oxford University, MS Walker 91, fol. 183a. This Persian miscellany also contains selections from al-Ṭabasī, al-Rāzī, al-Sakkākī, and al-Sakkākī's son and great-grandson. For two further copies held in the Reza Rampur Library, see Waqār al-Ḥasan Ṣiddiqī, *Fihrist nuskhahā-yi khaṭṭī-i Fārsī-i kitābkhāna-yi Riḍā-Rāmpūr*, 3 vols. (Rampur 1996-2000), 1:520, 522, sections 1714, 1715.

101. Compare Mark Verman and Adler Shulamit, «Path Jumping in the Jewish Magical Tradition», in *Jewish Studies Quarterly* 1.2 (1993/4), 131-48; Fodor, «An Arabic Version of the 'Sword of Moses'», 353; Gideon Bohak, «Specimens of Judaeo-Arabic and Arabic Magical Texts from the Cairo Genizah», in *Amulets and Talismans of the Middle East and North Africa in Context*, ed. Marcela Garcia Probert and Petra Sijpesteijn (Leiden 2022), 24-26. For further references to Maymūn, see Zsom, «A Judeo-Arabic Fragment», 98, 103.

102. Al-Ṭabasī, *Shāmil*, E fol. 7b; P fol. 5b; N fol. 2a; the spelling of Ibn Qabān's name is conjecture, cf. al-Jawbarī, *Kitāb al-mukhtār*, 8.

It is noteworthy that al-Ṭabasī explicitly identifies al-Mudaybirī, an authority know to al-Jāḥiẓ, as giving ritual instructions for the *mandal* ceremony. Al-Jāḥiẓ, followed by the Brethren and Ibn al-Nadīm, identified the *mandal* as a tool used by early conjurers in the course of communing with jinn and demons. It may well be the case that the *mandal* which the early conjurers were using was identical to the procedure spelled out by al-Ṭabasī as a magic encirclement, though we cannot know from the earliest literary references. But al-Ṭabasī's treatment would suggest that both the term and this particular form of the ceremony date to the late Umayyad period in Iraqi circles. This certainly risks a bit of circular reasoning, were it not for the other attestations by earlier literary authorities. Al-Ṭabasī's genealogy is meant to trace these practices through a continual, unbroken chain across Islamic history, all the way back to Adam – cast out of paradise only to land in India, known to al-Ṭabasī as the abode of the king of the jinn.

Finally, al-Ṭabasī turns to the recent authorities (*muta'akhkhirūn*). Here we move from the Hijaz and Iraq to eastern Iran. Al-Ṭabasī starts with his own teacher, Abū l-Qāsim al-Anṣārī, who exhibited magnificent splendor in this matter; al-Anṣārī was honored as the great master (*al-ustādh al-akbar*). Al-Ṭabasī quotes him as teaching that "the path of conjuration" (*ṭarīq al-taʿzīm*) is the same as the path (*ṭarīq*) of the Sufis, and that the spiritual disciplines (*riyāḍāt*) of one are the same as the other, in an explicit bid to align the science of incantations with Sufi spiritual practice. Al-Anṣārī envisions one to two years of continual preparation to undertake the *mandal* ceremony, while other authorities reduce the preparation time down to a number of days[103].

Al-Ṭabasī does not give his teacher's name in full. However, one Arabic manuscript copy adds after al-Anṣārī's name the customary benediction, "may God sanctify his spirit" (*qaddasa llāhu rūḥahu*), indicating that the master was deceased[104]. If so, this would appear to rule out the Ashʿarī theologian, Shāfiʿī jurist, and leading Sufi ascetic of Nishapur, Abū l-Qāsim al-Anṣārī (d. ca. 512/1118). Al-Anṣārī ran the library of the Niẓāmiyya *madrasa* in the city, was a stu-

103. Al-Ṭabasī, *Shāmil*, E fols. 15b-16; P fol. 12b; B 11.

104. See al-Ṭabasī, *Shāmil*, P fol. 5b; N fol. 6a, both have prayers that are missing from E fol. 7b; B 6.

dent of the famed Ashʿarī authority Imām al-Ḥaramayn al-Juwaynī (d. 478/1085), and became a renowned authority in his own right. Al-Anṣārī the theologian was also known to have the power to speak with jinn, and his surviving theological critique of philosophers teaches that jinn, demons, and angels surround people at all times. Al-Anṣārī upholds the reality of demon possession and takes an interest in the unique properties of physical substances. He also encouraged the formal study of sorcery (*siḥr*) as a way of distinguishing it from prophetic miracles (*muʿjiza*)[105].

For al-Ṭabasī's teacher to be the same renowned Ashʿarī authority, though, the prayer indicating that al-Anṣārī was deceased would need to be a later addition by the compiler or copyist of al-Ṭabasī's handbook. It could also be that the date of 482/1089 for al-Ṭabasī's death in his hometown is wrong. Later biographers merely note that al-Ṭabasī was a contemporary of al-Ghazālī (d. 505/1111); this is likely based on the famed story of their encounter referenced by al-Qazwīnī[106]. A later date for al-Ṭabasī would also make the dedication in the opening of his grimoire to Abū l-Barakāt ʿAbdallāh al-Furāwī (d. 549/1155), a powerful Nishapuri notable, all the more reasonable. Al-Furāwī was renowned for his knowledge of legal contracts (*shurūṭ*) and court records (*sijillāt*). But he would have been just eight years old when al-Ṭabasī died, an age that would appear discordant with the august description of al-Furāwī's assembly given in al-Ṭabasī's introduction[107]. Notably, in the biographical literature, al-Ṭabasī is referred to as a compiler who had produced many books (*muṣannafāt*). In the dedication to al-Furāwī, al-Ṭabasī stresses that the collection was made at the end of years of travel and consultation, drawn from previous notes (*taʿlīqāt*), recollections (*maḥfūẓāt*), and compositions (*muṣannafāt*). The introduction also notes that the compendium was based on an earlier work al-Ṭabasī had composed, entitled *Nuzhat al-āfāq* [The pleasure of the horizons], a title that al-Ṭabasī said was intended to obscure the nature of the work[108].

105. See the following passages in Abū l-Qāsim al-Anṣārī, *al-Ghunya fī l-kalām*, ed. Muṣṭafā Ḥasanayn ʿAbd al-Hādī (Cairo 2010), 1:225, 1:236, 2:723, 2:941.

106. On this see, Zadeh, *Wonders and Rarities*, 27, 346 n. 1.

107. Al-Samʿānī, *al-Muntakhab*, 2:953–54, section 517.

108. Al-Ṭabasī, *Shāmil*, E fol. 2b; P fol. 1b; B 1; N 1b–2a. In the Persian translation the last name of the dedicatee, Abū l-Barakāt, has been smudged out and replaced with al-Sakkākī.

Shifting the date of composition forward would also better fit with al-Ṭabasī's two primary transmitters. The first is Abū l-Futūḥ al-Shādhyākhī (d. 535/1141), a Sufi from a prominent family in Nishapur[109]. The second is Abū l-Qāsim al-Qāyinī (d. 547/1153), known as the "tanner" (*dabbāgh*), who studied with al-Ṭabasī in the master's hometown of Ṭabas, an outpost in the southwest of Khurasan. A trained Shāfiʿī jurist and scholar of *ḥadīth*, for forty years al-Qāyinī headed a group of Sufis in a monastic lodge (*ribāṭ*) outside Herat[110]. Another possible indication for a later date is that al-Ṭabasī transmits material from the *ḥadīth* collection on charms and amulets, the *Kitāb al-ruqā wa-l-tamā'im* by Abū ʿAbdallāh Ibn Fanjawayh (d. 414/1023), a religious authority who resided in Nishapur[111]. Al-Ṭabasī heard the collection from the muezzin Abū l-Ḥasan al-Ṣandalī (d. 494/1100), a Shāfiʿī jurist and ascetic from Nishapur who transmitted the work directly from Ibn Fanjawayh[112].

A final redaction of al-Ṭabasī's compilation toward the end of the fifth/eleventh or beginning of the sixth/twelfth century also makes al-Anṣārī the theologian a more likely candidate. Whether Abū l-Qāsim al-Anṣārī the conjurer, who features throughout al-Ṭabasī's handbook as an authoritative teacher in the *mandal* ceremony, was the same as Abū l-Qāsim al-Anṣārī, the Ashʿarī theologian of Nishapur, remains uncertain. What is clear is that al-Anṣārī the theologian was also a contemporary of al-Ṭabasī and a leading Sufi, who was also known to command jinn. Moreover, he had a deep distrust of natural philosophers. This may help explain the entire absence of Hermetic and more studied astrological discourses for summoning spirits from al-Ṭabasī's collection. Al-Ṭabasī makes no reference to Hermes, Aristotle, Apollonius, Ṭumṭum al-Hindī, or Teukros (Tankālūshā) the Babylonian, all standard authorities in the repertoire of natural philosophers; he also neglects such authorities as Ibn Waḥshiyya (fl. 318/930), the famed Iraqi esotericist frequently identified as a Sufi[113].

109. ʿAbd al-Karīm al-Samʿānī, *al-Ansāb*, ed. ʿAbd al-Raḥmān b. Yaḥyā l-Muʿallimī, 12 vols. (Hyderabad 1962-82), 7:241.

110. The list of works Dabbāgh transmitted from al-Ṭabasī does not include the *Shāmil*, see al-Samʿānī, *al-Muntakhab*, 1:551-60, section 218; 3:1144, 1488, 1828-29, 1893. On Dabbāgh, see al-Dhahabī, *Siyar*, 20:272-73, section 171.

111. Al-Fārisī, *al-Muntakhab*, 291-92, section 556.

112. Al-Fārisī, *al-Muntakhab*, 586, section 1037; al-Dhahabī, *Siyar*, 19:157-59, section 84.

113. See Liana Saif, «A Preliminary Study of the Pseudo-Aristotelian Her-

Many of these authorities were well known to Ibn al-Nadīm and the markets of Baghdad; they would come to find a welcome home in the succeeding generation of handbooks by the likes of Fakhr al-Dīn al-Rāzī and Sirāj al-Dīn al-Sakkākī, who in addition to the jinn magic of al-Ṭabasī, showcase an array of ancient writings associated with pagan philosophers and scholars of the stars. The distance between al-Ṭabasī and this succeeding generation is also marked by differing sensibilities and theological dispositions. It is a period that witnessed the absorption of Ibn Sīnā's metaphysics of the soul into the frameworks of Ashʿarī theology. Al-Rāzī, among others, played a pivotal role in this process.

Where the *mandal* fits into this journey is not entirely evident as it moves across the east and west. However, the following formations stand out. Al-Ṭabasī foregrounds the *mandal* as a chief means for mastering jinn and demons in a cosmology that highlights the high mountains of India as an abode of jinn. As a term, the *mandal* was known to al-Jāḥiẓ, who knew of enchanters from India. Further, the *mandal* has parallels in Sogdian and Khotanese (Iranian languages) before it made its way into early New Persian documented already in the third/ninth century, as seen in the poetry of al-Rūdakī. Moreover, Muslims had sustained significant contacts in Central and South Asia starting in the early Umayyad period. These details underscore the multiple routes the *mandal* could travel from the East to Iraq and then back again. It may well be that the *mandal* as al-Ṭabasī knew it represented only one particular form of ritual practice. Yet it is also clear that al-Ṭabasī cites a variety of authorities in the construction of the *mandal*. All this suggests a broader set of practices stretching back generations.

Toward Multiple Ends

Al-Ṭabasī frequently discusses divergences of practice in a discursive style that is at times shaped by a spirit of juridical inquiry. His

metica: Texts, Context, and Doctrines», in *ʿUṣūr al-Wusṭā: Journal of Middle East Medievalists* 29 (2021), 20-80; Manfred Ullmann, *Die Natur-und Geheimwissenschaften im Islam* (Leiden 1972), 278-79, 298-300, 368, 374-75, 379-81. See also Jaakko Hameen-Anttila, «Ibn Waḥshiyya and Magic», in *Anaquel de Estudios Árabes* 10 (1999), 39-48.

emphasis on the correct construction of the *mandal* and proper pronunciation of the incantations finds parallels with debates over normative forms of Islamic ritual activity. Particularly prominent here in this wider context are discussions on the proper recitation of the Qur'ān. These fit into larger discourses of sacred speech as *sui genius* and efficacious in its correct form[114]. Indeed, much anxiety on the topic of incantations, expressed by such traditionists as the Ḥanbalī Ibn Taymiyya (d. 728/1328), focused on Muslims reciting material that they did not understand. Underlying such critiques was the concern that unintelligible spells could very well contain illicit statements steeped in idolatry and disbelief[115].

In contrast, Fakhr al-Dīn al-Rāzī had a vision of language in which the unintelligibility of incantations and the use of unknown symbols served a psychic purpose of quieting the mind and stilling the soul, so as not to be distracted by the external meanings of the expressions. Al-Rāzī also notes that there were those who venerate these unknown words in a strange foreign language (*bi-lugha gharība ajnabiyya*). This group holds that incantations and spells (*al-ʿazā'im wa-l-ruqā*) were revealed by pure and powerful souls (*arwāḥ*) to the ancients who had perfected spiritual discipline and exercises of purification (*riyāḍāt*) in order to gain knowledge of spells and incantations[116].

Al-Ṭabasī and his teachers clearly followed this mold, viewing the correct pronunciation of the incantations as vital to the performance of the ritual. Yet al-Ṭabasī also documented divergences of pronunciation among those in Marw and Ghazna and others in Transoxiana, Nishapur, and Iraq. The diligent practitioner, he explains, must be able to distinguish the correct form of these expressions from mistaken ones, and be able to discern truth from falsehood. One

114. See Travis Zadeh, *The Vernacular Qur'an: Translation and the Rise of Persian Exegesis* (Oxford 2012), 97-99, 102-5, 107, 148, 164, 289-90; Shady Nasser, «(Q. 12:2) We have sent it down as an Arabic Qur'ān: Praying behind the Lisper», in *Islamic Law and Society* 23 (2016), 23-51.

115. Ibn Taymiyya, *Majmūʿ al-fatāwā*, ed. ʿAbd al-Raḥmān b. Muḥammad and Muḥammad b. ʿAbd al-Raḥmān, 37 vols. (Riyadh 2004), 19:45-46, 61; al-Shiblī, *Ākām*, 248. For more on Ibn Taymiyya as an exorcist and master of jinn, see Zadeh, «Magic, Marvel, and Miracle», 256-61.

116. Fakhr al-Dīn al-Rāzī, *Mafātīḥ al-ghayb*, 32 vols. (Beirut 1981), 1:161; Fakhr al-Dīn al-Rāzī, *al-Maṭālib al-ʿāliya min al-ʿilm al-ilāhī*, ed. Aḥmād Ḥijāzī l-Saqqā, 9 vols. (Beirut 1987), 8:183-84.

point of contention involved the correct pronunciation of *yashmakh* (?) versus *bashmakh*, evidently drawn from an Aramaic form of "in your name". The disputes also included allegations of substituting words, accusations of distorted interpretation (*tafsīr*) of the incantations, and claims that some forms were not truly Hebrew. Al-Ṭabasī does not elaborate on why Hebrew should feature, nor does he comment on its significance, though its association with incantations was already well established. Notably Ibn al-Nadīm observed that the demons of Solomon wrote incantations in both Hebrew (*ʿibrānī*) and Persian (*fārsī*), highlighting what was already, by his day, a multilingual field of writing[117].

In terms of the networks of practitioners, the biographical dictionaries note that though al-Ṭabasī taught in his hometown, he also traveled to Nishapur and to Marw. In Marw, he studied with Abū Ghānim al-Kurrāʿī (d. 444/1052), a renowned transmitter of the city who died at over a hundred years old. In the introduction to his handbook, al-Ṭabasī also notes that he had gathered these materials together during his various journeys, and thus it is likely that the disputes he recorded reflect actual regional divergences. Such comments suggest that practitioners exchanged materials and compared notes, and that different chains of authority, from master to disciple, also shaped the course of the field[118].

Al-Ṭabasī's teachers, ʿAbdallāh of Ṭabas and Abū l-Qāsim al-Anṣārī, are also evoked in these disputes. The discussion of correct pronunciation raises the problem of distortions in oral recitation and through textual corruption, with the explicit accusation of *taṣḥīf* (misspelling) in the course of written transmission[119]. Notably, the surviving manuscripts of al-Ṭabasī's collection frequently utilize diacritical marks to transcribe incantations, evidently so that readers could intone them correctly. In this way, his work is similar to many other Arabic and Persian collections of incantations. And there is reason to believe from his treatment of the material that al-Ṭabasī himself did not have a mastery of Hebrew or Aramaic, but knew key phrases and terms, at least in a general form. Moreover, al-Ṭabasī

117. Ibn al-Nadīm, *Fihrist*, ed. Sayyid, 3:335.

118. Al-Samʿānī, *Ansāb*, 10:374, al-Dhahabī, *Siyar*, 17:607, section 406; al-Ṭabasī, *Shāmil*, E fol. 3b; P fol. 1a; B 1.

119. Al-Ṭabasī, *Shāmil*, E fol. 9b; P fol. 7a; N fol. 7b.

clearly had a command of Persian, which he used in incantations with some frequency.

The surviving manuscripts exhibit what are at times obvious parallels with Jewish theophoric vocabulary; yet they are also clearly riddled with various distortions, and they speak to the inherent problem of textual transmission. The vocabulary of the spells shows that engagements with Jewish magical literature and Jewish authorities or recent converts were crucial in the formative transmission of incantations. Even before reaching al-Ṭabasī's hands, these discourses likely had already been fully Islamicized. Al-Ṭabasī's handbook is polyphonic and multilingual. But other than a passing reference to Hebrew, he does not identify the many elements of incantations with Hebrew or Aramaic parallels. Rather he seamlessly envelops Arabic prayers and Qur'ānic verses with mysterious and foreign words and phrases. No doubt there were significant, if largely obscure, contacts, exchanges, and forms of intelligibility that made such a collection possible.

One spell calls for summoning not only the jinn who live among the Muslims, but the jinn among the Jews, Christians, and Zoroastrians, whom al-Ṭabasī refers to as *ahl al-dhimma*, tolerated religious minorities[120]. The identification suggests a certain mutual intelligibility, as do the prayers taken from Christians. The same is true of the invocations that al-Ṭabasī explicitly identifies with Persian, such as *bi-nām-i mihtrān* (in the name of lords), or *bi-nāma-i īzad khudāyā pādhshāh* (in the name of God the lord, emperor). These spells evoke the names of the *mihtrān*, the great ones, the lords of powerful *dīvān* and *parīyān* (demons and jinn), as rendered in a distinctly Persian cosmology. So too does the name Jamshādh appear – the ancient Iranian king of mythical lore, famed for his command of demons and angels and his foundational inventions for the development of civilization[121].

It is also true that the graveyards of Jews and the ossuaries (*nāwūs*) of the Magi feature as regular locations for the performance of incantations, but the cemeteries of Muslims also make an appear-

120. Al-Ṭabasī, *Shāmil*, E fol. 74b, 104a, 131a; P fol. 81a, B 77.

121. Al-Ṭabasī, *Shāmil*, E fol. 70b; P fol. 77a; B 75. See Prods Oktor Skjærvø, «The Myth of Jamshīd», in *EIr*; Sarah Savant, *The New Muslims of Post-Conquest Iran* (Cambridge 2013), 149.

ance. Indeed, cemeteries were, like toilets and baths, long associated with transgressive spirits. Much of this reflects a broad idiom shared across sectarian divisions[122]. Yet, despite the clear points of intersection with the religious vocabulary of spirits and angels deployed by Jews, Christians, and Zoroastrians, there is clearly a good deal of boundary work that takes place in the collection, separating Muslim behavior, belief, and soteriological status from the practices and beliefs of non-Muslims. Notably, the only figure actually signaled as a Jew in the text is Labīd b. al-Aʿṣam, the magician who tried to cast a spell on the Prophet Muḥammad. This appears in a *historiola* for a therapeutic incantation. Throughout antiquity various groups identified Jews as magicians and religious outsiders, often thought to possess access to ancient secrets[123].

For all its universal ambitions, al-Ṭabasī's cosmic system, with *mandal*s, enchanted rings, seals, and talismans, expresses a distinctly Islamic vision of existence. In addition to the Qur'ānic phrases, prophetic *ḥadīth*, and pious Arabic prayers, al-Ṭabasī makes ample use of *historiolae* drawn from a formative Islamic repertoire, such as Ibn Masʿūd's night of the jinn (*laylat al-jinn*), when the Prophet guarded the boy through the use a circle on the ground. These moves of absorption point to a broader historical process of crafting an Islamic vocabulary for communing with intermediary beings[124].

Al-Ṭabasī's handbook marks a key stage in the development of Islamic ritual magic, through the preservation and absorption of earlier, otherwise lost materials in Arabic, which focused on specific names and formulae for commanding demons and jinn. This collection represents, as it were, a continuation of the writings of conjurers identified by Ibn al-Nadīm as following the praiseworthy path. But in addition to the divide that Ibn al-Nadīm makes between conjurers and sorcerers – the praiseworthy and the condemned –

122. Al-Ṭabasī, *Shāmil*, E fol. 13a, 54b-55a; P fol. 10a, 60b. Cf. Raʿanan Boustan and Joseph E. Sanzo, «Christian Magicians, Jewish Magical Idioms, and the Shared Magical Culture of Late Antiquity», in *Harvard Theological Review* 110.2 (2017), 217-40; Bohak, «Specimens», 40.

123. Al-Ṭabasī, *Shāmil*, E fol. 75b; P fol. 82a; B 78. See Ibn Hishām (d. ca. 218/833), *al-Sīra al-nabawiyya*, ed. ʿUmar ʿAbd al-Salām al-Tadmurī, 4 vols. (Beirut 1987), 2:157; Ibn Saʿd (d. 230/845), *Kitāb al-ṭabaqāt al-kabīr*, ed. ʿAlī Muḥammad ʿUmar, 11 vols. (Cairo 2001), 2:175-78. See Naomi Janowitz, *Magic in the Roman World* (London 2001), 1, 12, 18, 25-26.

124. Al-Ṭabasī, *Shāmil*, E fol. 75b; P fol. 82a; B 78.

there is a third category in Ibn al-Nadīm's typology, the philosophers (*falāsifa*) and worshipers of the stars. They construct talismans by observing the movement of the stars and are capable of producing amazing results with powerful rings and the like. If we were to follow Ibn al-Nadīm's scheme forward in time, then al-Ṭabasī's handbook represents the absorption and further elaboration in the East of earlier jinn magic by subsequent generations of Sufis. A key element to this field of learning was the use of *mandal* diagrams. In contrast, al-Rāzī and al-Sakkākī drew these streams altogether, leaning heavily on al-Ṭabasī's jinn magic, but also turning to Ṣābian star devotion and other forms of Hermetica, which Ibn al-Nadīm associated with philosophers[125]. Here too the use of the *mandal* features as a technique for harnessing spirits (*rūḥāniyyāt*) long identified with astral forces.

As for the social status of those who commanded and summoned intermediary beings through *mandal* diagrams, context is key. From al-Jawbarī's uncovering of the tricks of various charlatans, we get a sense of an underworld of rogues. This provides one take on the various craft or guild names of those who entered into al-Ṭabasī's orbit – the seller of sheep trotters (*kurrāʿ*), the farmer (*fallāḥ*), the tanner (*dabbāgh*), and the like. But such figures, despite various professional appellations, could also represent notables who had gained mastery, through Arabic, of scripture and law. Very few appear with the name conjurer (*muʿazzim*) in the literature dedicated to memorializing the religious elite[126]. But nor were al-Ṭabasī, al-Rāzī, or al-Sakkākī identified in these terms. In this sense, for many, knowledge of how to engage with intermediary beings reflects part of what it meant to be an *ʿālim* (sage), or a *pīr* (master). It is true that there were those who eschewed incantations with foreign words, phrases of questionable origin, and ritual ceremonies of dubious pedigree, but who were nonetheless skilled at commanding jinn. Yet many adepts encountered so much divine power in these ancient practices, prayers, and intricate diagrams that they sought to make them their own.

125. Ibn al-Nadīm, *Fihrist*, ed. Sayyid, 3:334. See Michael-Sebastian Noble, *Philosophising the Occult Avicennan Psychology and 'The Hidden Secret' of Fakhr al-Dīn al-Rāzī* (Berlin 2021), 8–25.

126. See, for instance, Ibn Fuwaṭī, *Majmaʿ al-ādāb fī muʿjam al-alqāb*, ed. Muḥammad Kāẓim, 6 vols. (Tehran 1995), 2:93, 4:500, 5:128.

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ABSTRACT

Travis Zadeh, *Tracing the Sorcerer's Circle: Demons, Polysemy, and the Boundaries of Islamic Normativity*

In the development of Islamic practices of summoning and controlling intermediary beings, the *mandal* features as part of a broader repertoire of rituals and diagrams designed to control unseen forces. As a term of art, this multivalent category is connected etymologically to the Sanskrit *maṇḍala*, for a circle or catchment, itself often used in Tantric esoteric rituals. This article traces the history of the *mandal* as it first emerged in the science of incantations (*ʿilm al-ʿazāʾim*), by drawing parallels with earlier practices of encirclement, as well as by following later developments and adaptations. In doing so, it also addresses the various manners in which incantations and the rituals surrounding them came to be understood in distinctly Islamic terms, rooted in ancient prophetic techniques for communing with otherworldly powers.

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TO WHAT EXTENT IS ALCHEMY AN ESOTERIC SCIENCE? A CASE STUDY OF IBN ARFAʿ RA'S (FL. SIXTH/TWELFTH CENTURY)

Recent years have seen an increased interest in the so-called occult or esoteric sciences: fields like magic, geomancy, and alchemy, long-neglected by scholars of the Middle East, are now receiving a fair amount of scholarly attention. Workshops and conferences are organized, articles, special issues of journals, conference volumes, and even handbooks are being published[1].

The term "occult sciences" refers to sciences that should not be disclosed to the masses, or sciences that should be kept secret[2]. It also refers to sciences that deal with the hidden properties of natural things that are not discernible by the senses[3]. In classical Arabic, they are primarily called *al-ʿulūm al-khafiyya* (the hidden sciences), which is extremely close to the English "occult sciences". Arabic terms more prominent after the fourth/tenth century include *al-ʿulūm al-gharība* (the obscure, difficult, or unusual sciences) and *al-ʿulūm al-ghāmiḍa* (the obscure, difficult, or concealed sciences)[4].

1. Prominent recent publications include M. S. Melvin-Koushki and N. Gardiner (eds.), *Islamicate Occultism: New Perspectives*, special double issue of Arabica 64.3-4 (2017); N. El-Bizri and E. Orthmann (eds.), *The Occult Sciences in Pre-modern Islamic Cultures* (Beirut 2018); S. Günther and D. Pielow (eds.), *Die Geheimnisse der oberen und der unteren Welt. Magie im Islam zwischen Glaube und Wissenschaft* (Leiden 2018); L. Saif (ed.), *Special Issue: Islamic Esotericism*, in *Correspondences* 7.1 (2019): 1-299; L. Saif et al. (eds.), *Islamicate Occult Sciences in Theory and Practice* (Leiden 2020).

2. M. Ullmann, *Die Natur- und Geheimwissenschaften im Islam* (Leiden 1972), 1.

3. Oxford English Dictionary, «Occult, adj. and n.», https://www.oed.com/view/Entry/130166?rskey=OsokhJ&result=1&isAdvanced=false [accessed 4 Aug. 2024].

4. L. Saif and F. Leoni, «Introduction», in *Islamicate Occult Sciences in Theory and Practice*, ed. L. Saif et al. (Leiden 2020), 2.

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In the following, I do not discuss alchemy as an occult science (although that would be the normal term for alchemy and also the one I prefer), but rather its status as an esoteric science; this allows me to pick up on the classical "occult" aspects of alchemy, such as secrecy, and to think about it in terms of "exoteric" and "esoteric" or *ẓāhir* and *bāṭin*.

I first discuss the philosophical context of "esoteric" as a term and its possible rendering in Arabic as *bāṭin*, then I introduce Ibn Arfaʿ Raʾs, a sixth-/twelfth-century Moroccan scholar and alchemist and his work. The main section of this contribution is concerned with what elements in Ibn Arfaʿ Raʾs's work may indicate that he conceived of alchemy as an esoteric science. Establishing this helps us more clearly understand whether we are dealing with a literary trope or with a conceptualization that was significant to post-classical Arabic alchemists.

Terminology: Exoteric and Esoteric, Ẓāhir *and* Bāṭin

The term "exoteric" (ἐξωτερικός) first appears with Aristotle, who classified some of his works as such. There is a long discussion in the scholarship about what Aristotle meant, but it seems that this "toward the outside" was used to mean "popular," "non-technical," or "propaedeutic"[5]. Of Aristotle's works, only his "esoteric" ones have come down to us; his exoteric teachings (which he alludes to in his *Nicomachean Ethics*, in his *Metaphysics*, and his *Politics*), especially his dialogues, are extant in small fragments only[6]. In fact, his exoteric writings were quite popular for a long time, it was only after the first century BCE that his esoteric teachings became more significant to his readers[7].

In Aristotle's conceptualization (as in Plato's), "esoteric" quintes-

5. K. Gaiser, «Exoterisch/esoterisch», in *Historisches Wörterbuch der Philosophie*, vol. 2: D-F, ed. J. Ritter (Basel 1972), col. 865; H. Traub, «Esoterologie–Ein philosophischer Beitrag zur Esoterikforschung», *Steiner Studies. Internationale Zeitschrift für kritische Steiner-Forschung* 2 (2021), 7.

6. G.W. Most, «Platons exoterische Mythen», in *Platon als Mythologe. Interpretationen zu den Mythen in Platons Dialogen*, ed. M. Janka and C. Schäfer (Darmstadt 2014), 16; Traub, «Esoterologie», 7-8.

7. Most, «Platons exoterische Mythen», 16.

sentially means that a work's intended audience is not the general public, but readers who are philosophically trained[8]. While Aristotle's opus (as we have it) consists of his esoteric writings, Plato's written work is exoteric, meant for a broad audience[9]. This is also apparent in the literary form: both Aristotle and Plato wrote dialogues for a broader public ("exoteric dialogues"). While Plato kept his esoteric teachings oral and did not write them down, Aristotle transmitted his esoteric thoughts in writing[10].

In the first centuries CE, attested for the first time with Lucian and Galen, "esoteric" came to mean "intended for schooled philosophers"[11]. It then also became connected to an – originally Pythagorean – idea of secrecy: special philosophical knowledge had to be hidden[12].

It is this late antique conceptualization that is revealed in modern usage, such that the entry for "esoteric" in the *Oxford English Dictionary* reads as follows: "Of philosophical doctrines, treatises, modes of speech, etc.: Designed for, or appropriate to, an inner circle of advanced or privileged disciples; communicated to, or intelligible by, the initiated exclusively. Hence of disciples: Belonging to the inner circle, admitted to the esoteric teaching"[13].

This more general usage of the terms is reflected partly in Arabic where the terms "exoteric" and "esoteric" are usually rendered by *ẓāhir* (apparent, outer, literal) and *bāṭin* (inner, hidden, deeper)[14]. *Ẓāhir* and *bāṭin* may be used in different ways[15]. First, they denote the inner

8. Traub, «Esoterologie», 8.

9. Cf. Traub, «Esoterologie», 15-16.

10. Cf. Traub, «Esoterologie», 16-17; Most, «Platons exoterische Mythen», 16-17.

11. Gaiser, «Exoterisch/esoterisch», col. 866.

12. Gaiser, «Exoterisch/esoterisch», col. 866.

13. Oxford English Dictionary, «Esoteric», https://www.oed.com/view/Entry/64367?redirectedFrom=esoteric [accessed 4 Aug. 2024].

14. In the Greco-Arabic translation movement, the word *exoterikos* found in the *Nicomachean Ethics* in the construction *exoterikois logois* was rendered as *al-aqāwīl al-khārija* («the outer words»), cf. A. Akasoy and A. Fidora, *The Arabic Version of the Nicomachean Ethics* (Leiden 2005), 57; M. Ullmann, *Wörterbuch zu den griechisch-arabischen Übersetzungen des 9. Jahrhunderts, Supplement 1: A-O* (Wiesbaden 2006), 371.

15. B. Radtke, «Bāṭen», in *EIr*, 3:859-61; D. De Smet, «Esotericism and Exotericism», in *EI*^{3} (fasc. 2015-2): 96-103.

and the outer meaning of the same thing, especially the same word or text, but possibly also a natural phenomenon. The inner meaning of the thing is not directly accessible to the senses, while the outer is. The knowledge of the inner meaning, for example, of the Qur'ān, is reserved for the educated elite (*khāṣṣa*), and should not be disclosed to the general public (*'āmma*)[16]. It is in respect to the audience that the terms *ẓāhir* and *bāṭin* can be seen as similar to esoteric and exoteric.

Second, the terms *ẓāhir* and *bāṭin* relate to the epistemological quality of knowledge which may be generally accessible (*ẓāhir*) or restricted to a trained audience (*bāṭin*). This would be a strong reflection of the Platonic-Aristotelian usage of exoteric and esoteric as descriptions of genres of texts, while the first usage relates to one and the same text and its various aspects.

The *ẓāhir-bāṭin* opposition is especially prominent in Sufi and Shī'ī circles[17]. The idea of the inner meaning of the Qur'ān (as well as the *sharī'a*) known to the imam, became a central element in Shī'ī doctrines[18]. The inner meaning and its knowledge are accessible to the elite (*khāṣṣa*) only, while the common people (*'āmma*) cannot reach it.

In a Shī'ī conceptualization, the *bāṭin* must be hidden – just as alchemical knowledge must be hidden[19]. In Ismā'īlī thought, the concept was considerably broader: in an adaptation of Neoplatonism, the lower world was considered the outer (*ẓāhir*) of the higher, hidden (*bāṭin*) world[20].

As for alchemy, it seems fitting to think about it both in the framework of "esoteric" and "exoteric" as well as of *ẓāhir* and *bāṭin*: the (late) antique discourse of "esoteric" versus "exoteric" might be applicable as alchemists saw themselves as philosophers. Therefore, their doctrines and writings could perhaps be "esoteric" in the sense of the *Oxford English Dictionary*. On the other hand, in an Arabic context, the terms *ẓāhir* and *bāṭin* would be the obvious renderings, *bāṭin*

16. De Smet, «Esotericism and Exotericism».

17. Radtke, «Bāṭen».

18. Radtke, «Bāṭen»; De Smet, «Esotericism and Exotericism».

19. E. Kohlberg, «Taqiyya in Shī'ī Theology and Religion», in *Secrecy and Concealment. Studies in the History of Mediterranean and Near Eastern Religions*, ed. H. G. Kippenberg and G. G. Stroumsa (Leiden 1995), 348-80; De Smet, «Esotericism and Exotericism».

20. De Smet, «Esotericism and Exotericism».

being the term most clearly defining a special, hidden meaning and a restricted audience[21].

Ibn Arfaʿ Raʾs and His Works

Ibn Arfaʿ Raʾs was a sixth-/twelfth-century Moroccan alchemist. He is traditionally identified with a Mālikī jurist (*faqīh*) with a similar name who died ca. 593/1197 and was active as a preacher (*khaṭīb*) at al-Qarawiyyīn Mosque in Fez. However, this identification is far from certain, and leaves us with few certain facts about the alchemist[22]. It seems likely that Ibn Arfaʿ Raʾs left the Maghrib at some point for Egypt (as many scholars from the Muwaḥḥid/Almohad realm did), but whether he settled there or returned to the West is not clear[23].

Ibn Arfaʿ Raʾs's fame stems from a collection of poems that usually goes by the title *Shudhūr al-dhahab* (The splinters of gold)[24]. The forty-three poems of the collection, more than 1,400 verses, are ordered by their rhyming letter, with each letter of the alphabet represented by at least one poem. The poems vary in length (between four and sixty-six verses); it is important to note that this is not one long didactic poem, but a collection of relatively shorter poems. Usually the alchemical content of the poems only becomes clear toward the end of a poem: very often, they are *ghazal* poems with an alchemical turn. Therefore, I argue that they might not be meant as didactic, strictly speaking, but directed to those already well-versed in the art of alchemy[25].

Ibn Arfaʿ Raʾs *dīwān* was well received, both as poetry and as alchemical literature: its poetic aspects were praised in the bio-bibliographical literature[26], and poetic reworkings exist in Arabic (as

21. Cf. T. Zadeh, «Postscript: Cutting Ariadne's Thread, or How to Think Otherwise in the Maze», in *Islamicate Occult Sciences in Theory and Practice*, ed. L. Saif et al. (Leiden 2020), 610.

22. R. Forster and J. Müller, «The Identity, Life, and Works of the Alchemist Ibn Arfaʿ Raʾs», *al-Qanṭara* 41.2 (2020): 373-408.

23. Forster and Müller, «The Identity», 400.

24. Ibn Arfaʿ Raʾs, *Shudhūr al-dhahab: Dīwān*, ed. al-H. Ghazzālī (Beirut 2018).

25. Cf. R. Forster, «Alchemical Stanzaic Poetry (*muwashshaḥ*) by Ibn Arfaʿ Raʾs (fl. twelfth century)», *Asiatische Studien–Études Asiatiques* 75.2 (2021), 651.

26. Al-Kutubī, *Fawāt al-wafayāt*, 2 vols., ed. M. M. ʿAbd al-Ḥamīd (Cairo 1951-

takhmīs)[27] and Turkish (as a Turkish alchemical *dīwān*)[28]. In alchemy, the *Shudhūr* was commented on many times: Ibn Arfaʿ Raʾs himself wrote a commentary, entitled *Ḥall mushkilāt al-Shudhūr*, and a steady commentary tradition extends all the way through to the nineteenth century[29].

Besides the *Shudhūr* and his commentary, Ibn Arfaʿ Raʾs authored other works on alchemy: two short treatises of a rather technical nature and at least one *muwashshaḥ* (stanzaic poem). The authenticity of the prose works remains an open question until now. Finally, other prose works on magic and healing have been attributed to him, though these are almost certainly spurious[30].

In the following, I focus on the *Ḥall mushkilāt al-Shudhūr* and discuss whether the version of alchemy it contains may be considered an esoteric science.

Esoteric (and Exoteric) Aspects of the Ḥall mushkilāt al-Shudhūr

As mentioned, Ibn Arfaʿ Raʾs wrote a commentary on his own *dīwān*, entitled *Ḥall mushkilāt al-Shudhūr* (The unravelling of the difficulties of the "Splinters")[31]. The *Ḥall* is presented as a dialogue

53), 2:181; al-Ṣafadī, *Kitāb al-wāfī bi-l-wafayāt*, ed. R. Baalbaki (Wiesbaden 1983), 22:260; al-Maqqarī, *Analectes sur l'histoire et la littérature des Arabes d'Espagne*, 2 vols., ed. R. Dozy et al. (Leiden 1855-61), 2:606. Cf. Ullmann, *Die Natur- und Geheimwissenschaften*, 231-32; Kh. al-Ziriklī, *al-Aʿlām*, 8 vols. (Beirut 1954-59), 5:26; E. Calvo Labarta, «Ibn Arfaʿ Raʾsahu», in *Biblioteca de al-Andalus*, ed. J. Lirola Delgado and J. M. Puerta Vílchez (Almería 2004-12), 2:334.

27. By Muḥammad b. Mūsā l-Qudsī (fl. eighth/fourteenth century), cf. A. Schippers, «al-Anṣārī, Abū l-Ḥasan», in *EI*[3] (fasc. 2009-1): 92-93; on *takhmīs* as a literary form see Ph. F. Kennedy, «Takhmīs», in *EI*[2] (1998), 10:123-25.

28. *Dīvān-i ḥikmet*, written before ca. 1000/1600, cf. T. Artun, *Hearts of Gold and Silver: The Production of Alchemical Knowledge in the Early Modern Ottoman World*, PhD diss., Princeton University 2013, esp. 36.

29. Cf. J. Müller, «Planets in Alchemy: Commentaries and Glosses on the Opening Verses of Ibn Arfaʿ Raʾs's *Shudhūr al-dhahab*», *JAIS* 22 (2022), 1-30, esp. 6-10.

30. Forster and Müller, «The Identity», 380-81; C. Braun and R. Forster, «Alchemist und Magier? Ibn Arfaʿ Raʾs (fl. 12. Jh.) im Kontext der arabisch-islamischen Gelehrsamkeit», in *Der Begriff der Magie in Mittelalter und Früher Neuzeit*, ed. J. Eming and V. Wels (Wiesbaden 2020), 15-34, here 26-32; Forster, «Alchemical Stanzaic Poetry», 641.

31. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr in the transmission of Abū al-Qāsim Muḥammad b. ʿAbd Allāh al-Anṣārī*, ed. J. Müller (Beirut and Berlin 2023).

between Ibn Arfaʿ Raʾs and his disciple Abū l-Qāsim al-Anṣārī. This Abū l-Qāsim is, at least in some manuscripts, called "not only the disciple (*tilmīdh*), but also the friend (*ṣāḥib*), heir (*wārith*), and son-in-law (*ṣihr*) of Ibn Arfaʿ Raʾs"[32]. In the dialogue, he is addressed as "my brother" (*akhī*) or "my dear one" (*ḥabībī*)[33], expressions that stress the close relationship between the master and his disciple. The *Ḥall* does not comment on all verses of the *Shudhūr*, it leaves out many verses and even some poems[34]. Ibn Arfaʿ Raʾs himself calls his text a short commentary (*mukhtaṣar*), and promises to write a longer one, yet there is no more extensive version available – so he might never have written it[35].

The attribution of the *Ḥall* to Ibn Arfaʿ Raʾs may be questioned on the following grounds[36]: (1) There are slight incongruencies between the verses cited in the *Ḥall* and their form in manuscripts of the *Shudhūr*; (2) the *Ḥall* reveals a familiarity with Sufi thought as developed by Ibn al-ʿArabī – who would have been too young to have influenced Ibn Arfaʿ Raʾs; (3) some manuscripts contain references and quotations from later works; and (4) al-Jildakī (fl. mid-eighth/fourteenth century), notorious for his familiarity with almost all alchemical works, does not seem to know the *Ḥall*.

However, even in the mid-seventh/thirteenth century, the alchemist al-Sīmāwī cites the *Ḥall* as a work by Ibn Arfaʿ Raʾs. Furthermore, the *Ḥall* refers to Ibn Arfaʿ Raʾs's *muwashshaḥ*, which was otherwise not very well-known[37], and the *Ḥall* is just as critical of Jābir b. Ḥayyān as is the *Shudhūr*. Both works share a critical approach to one of the most important authorities of Arabic alchemy, which could be an argument that they are by the same author. All in all, I think Juliane Müller is correct in crediting Ibn Arfaʿ Raʾs's with the authorship of the *Ḥall*.

In the very title of his commentary, Ibn Arfaʿ Raʾs refers to the esoteric and exoteric components of the work. While it deals with the

32. J. Müller, «Introduction», in Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr in the transmission of Abū al-Qāsim Muḥammad b. ʿAbd Allāh al-Anṣārī*, ed. J. Müller (Beirut and Berlin 2023), 11-31.

33. Cf. Müller, «Introduction», 13.

34. Cf. Müller, «Introduction», 14.

35. Müller, «Introduction», 14.

36. For a more complete discussion of the *Ḥall*'s authorship see Müller, «Introduction», 15-17.

37. Forster, «Alchemical Stanzaic Poetry».

problems (*mushkilāt*) of the text it comments on, that is, aspects that make the base text, his *dīwān Shudhūr al-dhahab*, accessible to a very few scholars, the commentary solves these problems, thus it is a *ḥall*, a solution[38]. Ibn Arfaʿ Raʾs therefore promises that this text will make the *Shudhūr* intelligible – perhaps not only to initiates. From the title, we could think of the *Shudhūr* as an esoteric text and of the *Ḥall* as its exoteric counterpart[39]. The combination of difficult ("esoteric") text (especially in poetic form) with a prosaic ("exoteric") commentary seems to be a typical phenomenon for texts of the sixth/twelfth and seventh/thirteenth centuries, as is also seen in the work of Ibn al-Fāriḍ (d. 632/1235) and Ibn al-ʿArabī (d. 638/1240)[40].

Hiding and promulgating knowledge

The classical esoteric topos prominent in most – or perhaps all – alchemical writings is the premise that alchemical knowledge should not be promulgated. Rather, it is meant for the initiated, the educated elite (*khāṣṣa*)[41]. This topos is also prominent in the *Ḥall*. For example, Ibn Arfaʿ Raʾs explains:

> This is a discipline (*fann*) of symbol and rhetoric, and it requires variety in expression according to the sages' use of repetition to further the knower's knowledge (*ʿilm*) and the ignorant's ignorance.

38. The title varies in the manuscripts and the work is sometimes simply called a *sharḥ* (commentary), cf. Müller, «Introduction», 22.

39. Obviously, we could argue that the *Shudhūr* are indeed so obscure that they could be openly spread, as there was no danger of them being understood by those not initiated, while the *Ḥall* had to be kept away from the masses as it was too clear and outspoken (I owe this idea to Sébastien Moureau). However, the fact that a text would not be understood by the masses does not make it exoteric; an exoteric text is meant for the masses, the general public is the intended reading public meant that is supposed to understand the text (as explained above), which is probably not the case of the *Shudhūr*.

40. Cf. commentaries to Ibn al-Fāriḍ's poetry, see G. Scattolin, «Ibn al-Fāriḍ and the Commentaries by al-Farghānī and by al-Tilmisānī», in *Les mystiques juives, chrétiennes et musulmanes dans l'Égypte médiévale*, ed. G. Cecere et al. (Cairo 2013), 37-62; on the (especially Persian) commentaries on Ibn al-ʿArabī's work, see W. C. Chittick, «Ebn al-ʿArabī, Moḥyī-al-Dīn,» in *EIr*, 7:664-70.

41. Ullmann, *Die Natur- und Geheimwissenschaften*, 1-4.

Know that from the knowledge (*ma'rifa*) of the truth of the connection one knows the science and the work completely. So, understand this and hide it[42]!

As in other places, Ibn Arfa' Ra'ṣ admonishes his pupil Abū l-Qāsim to understand and at the same time, hide the alchemical knowledge. The student is clearly considered a member of the distinguished elite, and therefore part of the next generation to maintain the secrecy of alchemy. Instruments for hiding alchemy include symbols (see below) and rhetorical language[43], according to a tradition set forth by the ancient sages.

The combination of the admonishment to understand and hide this knowledge is found repeatedly. For example, in the explanation of the poem on *thā'*, in a passage about the heat of the fire needed for a certain operation, which does not seem particularly problematic, we read, «Understand that, hide it and do not show it to anyone who is not from its [i.e., alchemy's] people»[44]. Similarly, Ibn Arfa' Ra'ṣ stresses his use of a symbolic language by adding imperatives to his pupil that he should understand, for example, "And the meaning is symbolized through the egg. Understand! Therefore, I have followed the tracks of the alchemists in all my speech"[45].

All these passages insist on the exclusiveness of alchemical knowledge, and stress the esoteric character of the divine art. However, Ibn Arfa' Ra'ṣ understands that he is not writing for his pupil Abū l-Qāsim only: "So, listen to my speech and be careful to understand my system, you and whoever comes after you, if you want to reach this knowledge and attain this art"[46].

42. Ibn Arfa' Ra'ṣ, *Kitāb Ḥall mushkilāt al-Shudhūr*, 13-14.
إنّ هذا فنّ رمز وبلاغة، فاقتضى التفنّن في العبارة على ما جرت به العادة من الحكماء في التكرير ليزداد العالم علمًا والجاهل جهلًا. واعلم أنّ من معرفة حقيقة المواصلة يعلم العلم والعمل كلّه، فافهم ذلك واكتمه.

43. The expression *fann ramz* (a discipline of symbol) is repeated later (Ibn Arfa' Ra'ṣ, *Kitāb Ḥall mushkilāt al-Shudhūr*, 157).

44. Ibn Arfa' Ra'ṣ, *Kitāb Ḥall mushkilāt al-Shudhūr*, 38.
فافهم ذلك واكتُمه ولا تظهر عليه أحدًا من غير أهله.

45. Ibn Arfa' Ra'ṣ, *Kitāb Ḥall mushkilāt al-Shudhūr*, 27.
فكان المعنى من البيضة في الرمز إيّاهما، فافهم. ولهذا اقتفيتُ أثر القوم في جميع كلامي.
In the work of Ibn Arfa' Ra'ṣ, the term *al-qawm* (the people) means the alchemists, cf. Ibn Arfa' Ra'ṣ, *Kitāb Ḥall mushkilāt al-Shudhūr*, 34, 38, 47, 49.

46. Ibn Arfa' Ra'ṣ, *Kitāb Ḥall mushkilāt al-Shudhūr*, 400.
فأصغ لكلامي وتنبّه لفهم نظامي، أنت ومَن بعدك، إن كنتَ تريد الوصول لهذا العلم والفوز بهذه الصناعة.

Abū l-Qāsim is not the only addressee of the *Ḥall*, but those who come after him are intended as well. Therefore, the esoteric instruction aimed at a direct disciple broadens: the target audience is not only the direct student, but also those who come later. These later pupils cannot be controlled by Ibn Arfaʿ Raʾs in the same way as his direct disciple: the esoteric science is bound to become exoteric at some point.

At the same time, there is a media shift from oral teaching to the written word. In its book form, the *Ḥall* can never be as exclusive as the actual oral exchange between Ibn Arfaʿ Raʾs and Abū l-Qāsim. In this media shift, the discussion about the medium of esoteric teaching in ancient philosophy seems to reverberate. While Plato's dialogues, as written texts, are his exoteric legacy, the actual oral interactions that served as the starting point for the literary form were conceived as esoteric (as explained above). The same may be the case here: the *Ḥall*, it seems, was never meant to be exclusive. Rather, Ibn Arfaʿ Raʾs insists that the clarity of his writing makes his work and its knowledge accessible for generations to come:

> If you are not informed by this, then neither you nor whoever comes after you will ever understand it from any book after this, for neither under the blue sky nor on the face of the earth – having wandered East and West –, have I seen anyone who has clarified (*ṣarraḥa*) what I have clarified to you in this short work (*mukhtaṣar*)…
>
> It was impossible for me not to comply and to help you.… And I did not hesitate like Jaʿfar did toward Jābir, but I hastened and complied[47].

Ibn Arfaʿ Raʾs wanted to teach generations to come although he could not judge whether his future readers would be worthy of his knowledge. Therewith, the esoteric knowledge becomes transgenerational and eventually exoteric. In addition, Ibn Arfaʿ Raʾs was the perfect teacher: he had superior knowledge, and he shared it in a way that was incomparable. As the perfect teacher, he was willing to go to great lengths simply to help his students and in this way, he was quite

47. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 518-19.
فإن لم تفهم منه وإلا لما بقيت تفهمه لا أنت ولا مَن بعدك من كتاب بعد هذا البتّة ، لأنّي ما رأيتُ تحت خضراء السماء ولا فوق صفيح الأرض، وقد جُلتُ المشارق والمغارب ، مَن صرّح مثّل ما صرّحتُ لك في هذا المختصر … فلم يسعني إلا إجابتك ولم يمكنّي إلا مساعدتك، …فلم أتوقّف كتوقّف جعفر لجابر ، بل بادرتُ وأجبتُ.

different from Jaʿfar al-Ṣādiq, who refrained from teaching Jābir b. Ḥayyān everything. This is a very bold statement given that – at least in Shīʿī circles – Jaʿfar was considered one of the founding fathers of the esoteric sciences[48]. In addition, Jābir's status as the alchemist per se, was hardly ever challenged. When Ibn Arfaʿ Raʾs boasted of being a better teacher than Jaʿfar, he also claimed to be a more accomplished alchemist than Jābir. This may be seen as in keeping with a passage in the *Shudhūr*, as well as in a passage earlier in the *Ḥall*, in which Ibn Arfaʿ Raʾs seems to be rather skeptical of Jābir's type of alchemy[49]. The esoteric-exoteric presentation here also serves to stress the author's own status and self-importance.

However, despite Ibn Arfaʿ Raʾs characteristics as a great teacher, there remains a tension between a symbolic language that is difficult to understand and his wish to expose alchemical instruction in a comprehensible way. For example, Ibn Arfaʿ Raʾs emphasizes the difficulty of reaching the alchemical goal:

> Its goal (*al-maṭlūb minhā*)… is encoded in symbols (*marmūz*), obscure (*mustaghliq*), and it is only reachable by scientific instruments, the principles of wisdom, long thinking, pertinent intellect and opinion and extended patience. I will give you the details one by one, until I crush all your doubt about it…[50].

In general, however, Ibn Arfaʿ Raʾs did not consider his *Shudhūr* to be incomprehensible at all: this is clear from the fact that he did not comment on all the verses, nor on all the poems. At times, he does not comment and instead says: "and the rest of the speech is understood" (*wa-bāqī l-kalām mafhūm/wa-bāqī l-kalām kulluhu mafhūm*)[51] or simply adds after the citation of a verse "understood" (*mafhūm*)[52]. Thus, he stresses that his addressees – his student Abū l-Qāsim as well as later readers – should be able to grasp the meaning of a verse or of the

48. D. De Smet, «Jaʿfar al-Ṣādeq. iv. Esoteric sciences», in *EIr*, 14:362-63.

49. Ibn Arfaʿ Raʾs, *Shudhūr*, 231; Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 284; cf. Forster and Müller, «The Identity», 401; Müller, «Introduction», 16-17.

50. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 402.
والمطلوب منها ... فهو مرموز مستغلق لا سبيل له إلا بآلات علمية وقواعد حكمية واستعمال أفكار طويلة وعقل سديد ورأي وصبر مديد. وأنا أفصّل لك ذلك أوّلًا فأوّل حتّى لا أدعك في شكّ منه.

51. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 36, 49, 335.

52. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 283, 423.

remaining verses of a poem. This might not be completely true – at least many later scholars commented on the parts Ibn Arfaʿ Raʾs did not –, but it shows how Ibn Arfaʿ Raʾs himself thought about the comprehensibility of his work. While he himself felt the necessity of writing a commentary, he did not feel that it needed to be very detailed. But, perhaps this is not the whole story: if we take the above citation that calls the *Ḥall* a short commentary (*mukhtaṣar*) and Ibn Arfaʿ Raʾs's insistence that he was going to write a more extensive one, he might have intended to comment on all the poems and verses in a later work. As there are no traces of a complete commentary and the *Ḥall* is not directly – in its title or preface – called a *mukhtaṣar*, we cannot judge whether Ibn Arfaʿ Raʾs thought his *Shudhūr* did or did not require a complete commentary. On the other hand, it is very clear that later alchemists were convinced that this was the case: al-Jildakī alone wrote no fewer than four commentaries on the *Shudhūr* and parts of it[53]. In the case of its reception, the *Shudhūr* seems to have been considered a typical esoteric work in need of an exoteric commentary. At least from the Mamlūk period onward, the so-called occult (or "esoteric") sciences became quite popular[54], and while this has been, so far, mostly been discussed in terms of lettrism, magic, and astrology, it seems to hold true for alchemy as well. Knowledge, by being written down, became widely and uncontrollably accessible[55]. Through later commentaries, secrecy became, no doubt, even more of a literary game than it had been, for a very long time. The idea that the art should be hidden was a literary topos that could be played with and varied and that was meant to stress alchemy's high rank and importance.

53. Müller, «Planets in Alchemy», 8-9.

54. See for example N. Gardiner, «Forbidden Knowledge? Notes on the Production, Transmission, and Reception of the Major Works of Aḥmad al-Būnī», *JAIS* 12 (2012): 81-143; N. Gardiner, «Esotericist Reading Communities and the Early Circulation of the Sufi Occultist Aḥmad al-Būnī's Works», *Arabica* 64.3-4 (2017): 405-41; N. G. Harris, «In Search of ʿIzz al-Dīn Aydamir al-Ǧildakī, Mamlūk Alchemist», *Arabica* 64.3-4 (2017): 531-56; M. Melvin-Koushki, «Introduction: De-Orienting the Study of Islamicate Occultism», *Arabica* 64.3-4 (2017): 287-95.

55. Cf. K. Hirschler, *The Written Word in the Medieval Arabic Lands. A Social and Cultural History of Reading Practices* (Edinburgh 2012).

Ẓāhir and bāṭin

To the best of my knowledge, the terms *ẓāhir* and *bāṭin* hardly ever appear in Arabic alchemical writings. In the Jābirian corpus, they appear in the *Kitāb al-bayān* (The book of proof) in a messianic context[56]. However, the *ʿulūm bāṭina* (inner sciences) mentioned are not identified and it is not clear what sciences are referred to by *bāṭin*[57]. The terms are more prominently used in the *Kitāb al-aḥjār* (The book of stones) and the *Kitāb al-khamsīn* (The book of fifty), both non-alchemical works. In both works, these terms do not refer to any type of knowledge or audience[58]. Rather, the Jābirian corpus suggests that every material thing consists of four natures, of which two are outward and manifest (*ẓāhir*), while two remain hidden (*bāṭin*) in the matter[59]. In this way, Maslama b. Qāsim al-Qurṭubī (d. 353/964), author of the famous *Rutbat al-ḥakīm* (The rank of the sage) and *Ghāyat al-ḥakīm* (The goal of the sage), in his less well-known *Kitāb al-rawḍa* (The book of the garden) used the terms to describe that all matters have two of the four basic qualities that dominate them on the outside, while the other two remain on the inside[60]. Yet, Maslama also uses *ẓāhir* and *bāṭin* in two places to indicate a way of dealing with and talking about the art of alchemy: he seems to refer to *Decknamen* (coded language)[61], and to the usage of a symbolic language[62].

56. S. N. Haq, «Greek Alchemy or Shīʿī Metaphysics? A Preliminary Statement Concerning Jābir ibn Ḥayyān's *ẓāhir* and *bāṭin*», *Bulletin of the Royal Institute for Inter-Faith Studies* 4.2 (2002), 23.

57. Jābir ibn Ḥayyān, *The Arabic works*, ed. E. J. Holmyard (Paris 1928), 12; Haq, «Greek Alchemy», here 23, translates «occult sciences», yet without discussing which sciences could be meant.

58. P. Kraus, *Jābir ibn Ḥayyān: Contribution à l'histoire des idées scientifiques dans l'Islam*, 2 vols. (Cairo 1942-43), 1:147 and 2:178; S. N. Haq, *Names, Natures and Things: The Alchemist Jābir Ibn Ḥayyān and His Kitāb al-Aḥjār (Book of Stones)* (Dordrecht 1994), esp. 153 [Indian pagination 35].

59. Haq, *Names*, 96; Haq, «Greek Alchemy», esp. 26-30; S. N. Haq, «Occult Sciences and Medicine», in *The New Cambridge History of Islam*, vol. 4: *Islamic Cultures and Societies to the End of the Eighteenth* Century, ed. R. Irwin (Cambridge 2010), 655-57.

60. V. Ziegler, *Im Garten der Alchemie. Traditionsgeschichtliche Einordnung des arabisch-alchemischen Werks Kitāb ar-Rauḍa mit deutscher Übersetzung und kritischer Edition* (Baden-Baden 2022), 197, 346-47, 370-71.

61. Ziegler, *Im Garten*, 344-45.

62. Ziegler, *Im Garten*, 360-61.

It is therefore not surprising that the terms *ẓāhir* and *bāṭin* are not very prominent in Ibn Arfaʿ Raʾs's works. The most obvious starting point is the ninth verse of poem 24 of the *Shudhūr* (on *ṭāʾ*):

بَاطِنُهُ ظَاهِرٌ وَظَاهِرُهُ إِنْ شَكَّ عَنْ كَاللُّجَيْنِ يَنْكَشِطُ[63]

Its inside is apparent, and its outside
if one doubts, like silver is pulled off

Ibn Arfaʿ Raʾs explains this verse, yet not in his owns words, but with a quotation of Hermes Trismegistus:

> Its meaning is what the lord of the great sages, the father of the noble philosophers, said, when he was asked about the process, and he is Hermes the prophet (peace be upon him). He said: showing the inner and hiding the outer. Likewise, here the inner is shown, and this is the redness, and the outer is hidden and pulled off, and this is the whiteness. This is meant for those who are doubtful [about] whether the inside of the stone is gold. This is the most perfect sign (*dalīl*) and the most eloquent testimony for one who doubts and negates that the alchemists' stone (lit. "the stone of the people") is gold[64].

The terms *ẓāhir* and *bāṭin* here are used not in the sense of "esoteric" and "exoteric" but to mean the outer and inner parts of the stone, a usage that had already occurred in Maslama al-Qurṭubī's *Kitāb al-rawḍa*.

However, there is a single passage in the *Ḥall* where *ẓāhir* and *bāṭin* seem to be used to mean "esoteric" and "exoteric." Here, Ibn Arfaʿ Raʾs explains that normal people's distillation is *ẓāhir* ("outward"), while "our" distillation is inward (*bāṭin*). He finishes the sentence with the admonishment: "so understand this and be certain about it"[65].

63. I follow the reading of Svetlana Dolgusheva's forthcoming edition of the *Shudhūr*, that Ghazzālī also gives in his apparatus, while he has a slightly different reading in his text for the second half-verse: لا شَكَّ عَنْهُ اللُّجَيْنُ (Ibn Arfaʿ Raʾs, *Shudhūr*, 195). Most of the *Ḥall* manuscripts offer عَنْكَ اللُّجَيْنُ (Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 177).

64. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 177-78.
معناه ما قال سيّد الحكماء العظماء وأبو الفلاسفة الكرماء حين سُئل عن التدبير، وهو هرمس النبي عليه السلام ، فقال: إظهار الباطن وإبطان الظاهر. فهكذا هنا ظهر الباطن وهي الحمرة، وبطن الظاهر وانكشط وهو البياض، وذلك لمن شكَّ هل باطن الحجر ذهب أم لا، فهذا أتمّ دليل وأبلغ شاهد للشاكّ المنكر لحجر القوم أنّه ذهب.

65. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 250.
فافهم ذلك وكُن منه على يقين.

The difference of the processes depends on whether one belongs to the in-group or not – a clearly esoteric conceptualization.

Symbolization

One of the features that most clearly marks alchemy as an esoteric science is its very specific language. This is most evident in the usage of the famous *Decknamen*, the code names (*rumūz*) that make alchemical texts inaccessible or perhaps esoteric. The *rumūz*, in alchemy, but also in other fields, are considered "a device deliberately used by philosophers, prophets or alchemists to hide their knowledge from the ignorant and a touchstone intended to distinguish the intelligent. The code is reserved for an elite, it is the instrument of the wise to speak to the wise and to deceive the ignorant"[66]. *Decknamen* feature more or less prominently in all alchemical works: some of them have become so standardized that their usage seems to be no more than an indication that this is actually an alchemical text. In other cases, texts may use a set of codes that is very distinct and almost incomprehensible. The establishment of dictionaries and lists for *Decknamen* is therefore an old phenomenon[67]. In the work of Ibn Arfaʿ Raʾs, it is not always easy to understand whether he is using a code name, and whether he does so in the standardized way or not. There are multiple instances in which he speaks about the symbolic usage of language, about *ramz*[68]. For example, he explains that both the eggs and the parts of animals, plants, and minerals that alchemists talk about are but symbols and similes no one should be fooled by and that only

66. S. Moureau and G. de Callataÿ, «In Code We Trust: The Concept of *Rumūz* in Andalusī Alchemical Literature and Related Texts», *Asiatische Studien–Études Asiatiques* 75.2 (2021), 444.

67. A. Siggel, *Decknamen in der arabischen alchemistischen Literatur* (Berlin 1951); G. Ferrario, «Understanding the Language of Alchemy: The Medieval Arabic Alchemical Lexicon in Berlin, Staatsbibliothek, Ms Sprenger 1908», *Digital Proceedings of the Lawrence J. Schoenberg Symposium on Manuscript Studies in the Digital Age* 1.1 (2009), Art. 2, https://repository.upenn.edu/ljsproceedings/vol1/iss1/2 [accessed 4 Aug. 2024]; G. Ferrario, «An Arabic Dictionary of Technical Alchemical Terms: MS Sprenger 1908 of the Staatsbibliothek zu Berlin (fols. 3r-6r)», *Ambix* 56.1 (2009), 36-48.

68. Müller's index lists more than fifty occurrences for *ramz* (Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 40).

the ignorant try to hold on to them[69]. The "egg" for example, is no more than a simile (*mathal*), an indication (*dalīl*), an allusion (*kināya*), and a metaphor (*majāz*)[70]. Yet, it seems possible that an expression is both true and symbolic (*ramz wa-ḥaqīqa*), as are the properties of the sulphurs that kill those who smell them[71].

The ancient alchemists, like Zosimus, Democritus, and Aras, spoke in *ramz*[72], and it is a general practice (*ʿāda*) among the alchemists (*al-qawm*) to use *ramz*[73], at least to speak about some aspects of alchemical work[74]. In addition, *ramz* as a practice is found among Indian sages and in the books of the sages, in which the symbols are juxtaposed with *alghāz* (riddles)[75]. In fact, most stories and similes are but symbols for the art[76].

Ibn Arfaʿ Raʾs, however, solves the symbols for his interlocutor (and his readers)[77]. He even claims to have explained to Abū l-Qāsim how to attain the real gold of the sages without any symbol, so that his explanation will be completely sufficient[78].

Borrowing of terminology and the status of the sciences

Even more interesting than the ongoing reference to a symbolic language is the way in which Ibn Arfaʿ Raʾs uses technical vocabulary from other sciences as alchemical terminology[79]. For example, in the

69. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 50-51.
وذلك أنّ بيض الحيوان وجميع أجزاء الحيوان والنبات والمعدنيات رمز وتمثيل، فلا يغترّ أحد به البتّة، ولا يتمسّك به إلا جاهل خسيف العقل.
70. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 51.
71. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 47.
72. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 11, 53, 180, 460, 510.
73. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, e. g. 27, 217, 302, 412, 518.
74. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 54, 334.
75. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 189.
76. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 201.
لأنّ كثيرًا من الحكايات والأمثلة كلُّها رموز على الصناعة.
77. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 189 (see also 339).
وأنا أحلّ لك رمزه إن شاء الله تعالى.
78. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 300-1.
79. At a first glance, this seems reminiscent of an Ismāʿīlī text on astrology, *Kitāb al-fatarāt wa-l-qirānāt al-ʿashara* (Book of intervals and the ten conjunctions) that stipulates an inner sense of astrological terminology (cf. E. Orthmann, «*Ẓāhir* und *bāṭin* in der Astrologie: Das *Kitāb al-Fatarāt wa-l-qirānāt al-ʿašara*», in *Differenz und Dynamik im Islam. Festschrift für Heinz Halm zum 70*. Geburtstag, ed. H.

first verse of the *Shudhūr*'s first poem, we encounter two technical terms that are well-known from astronomy and astrology, *tathlīth* (the trigon or trine) and *muqārana* (the conjunction)[80]. In the *Ḥall*, Ibn Arfaʿ Raʾs explains *tathlīth* as follows:

> The trigon (*tathlīth*) is sufficient in everything and has a variety of meanings (*ḥukm*) in the science of the stars, in natural science (*al-ṭabīʿa*), and in the art [i.e., alchemy]. For its meaning in the science of the stars there are three zodiacal signs between two planets […] And in natural science, it refers to the tertian fever among the various fevers […] Concerning the trigon of the art, it is close to the other two in its form (*ṣūra*), but different from them in its sense (*mafhūm*) and accidentals (*ʿawāriḍ*)[81].

Similarly, Ibn Arfaʿ Raʾs explains that the term *muqārana* has two meanings: "The conjunction (*muqārana*) has a meaning in the science of the stars and another one for us. Concerning the first, it is that two planets are in the same zodiacal sign, and this is commonly understood (*wa-huwa mafhūm*). For us, [it is] an expression of the marriage (*al-muzāwaja*) and the union (*ittiḥād*)"[82].

Alchemy, at least in Ibn Arfaʿ Raʾs's conceptualization, does not use a specific terminology, it uses terms from other sciences and applies specific meanings to these terms. This might be the case because alchemy is the pinnacle of all sciences:

> […] for this art's knowledge is different from all other knowledge (*maʿlūmāt*) and its inventions from all other inventions because it [the art] is the basis of this world (*dunyā*), the system of the universe (*ʿālam*), the essence (*zubda*) of philosophy, and the fruit of wisdom […]

H. Biesterfeldt and V. Klemm (Würzburg 2012), 337-58). However, in the *Kitāb al-fatarāt*, an allegorical interpretation is claimed to be necessary, while for Ibn Arfaʿ Raʾs, the same terms may simply be used differently in different sciences.

80. Cf. Müller, «Planets in Alchemy», 16-27, 21-22.

81. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 2-4.
والتثليث في كلّ شيء مُرض وله في النجوم حكم، وله في الطبيعة حكم، وله في الصناعة حكم. أمّا حكمه في النجوم فهو أن يكوّن بين الكوكب والكوكب ثلاثة بروج، ... وأمّا حكم الطبيعة فهو كالحمّى المثلّثة في باب الحمّيات، ... وأمّا التثليث الصناعي فهو قريب منهما في الصورة، ويخالفهما في المفهوم والعوارض.

82. Ibn Arfaʿ Raʾs, *Kitāb Ḥall mushkilāt al-Shudhūr*, 7.
المقارنة لها عند أهل النجوم معنى، وعندنا معنى. أمّا الأوّل فهو أن يكون الكوكبان حالّين في برج واحد، وهو مفهوم، وعندنا عبارة عن المزاوجة والاتحاد.

One must read the ten propaedeutic philosophic sciences, which are (1) logic… (2) medicine… (3) natural science (*ṭabīʿa*)… (4) the science of the stars (*nujūm*)… (5) geometry (*handasa*)… (6) arithmetic… (7) music (*al-adwār*)… (8) wisdom (*ḥikma*)… (9) the absolute propaedeutic science (10) theology (*ilāhī*).… And only it (alchemy) is called science and made special because of its nobility[83].

This closely resembles Maslama al-Qurṭubī's insistence on the ascension through the sciences toward first alchemy and then magic[84]. Yet, Ibn Arfaʿ Ra's also stresses the fact that alchemy is much more than just another science; rather, alchemy is the basis of the world and the essence of philosophy. The true adept of the art will not just learn yet another science but understand the world per se. In our paradigm of "exoteric" vs. "esoteric", this insistence on the centrality of alchemy as the peak of the sciences and the basis of the world seems to belong to an esoteric discourse rather than a exoteric one.

Manuscript evidence

As with many alchemical texts, there is a very large body of manuscript evidence not only to the *Shudhūr* but also to its commentary, the *Ḥall*. Of the *Shudhūr*, nearly one hundred manuscripts dating from the eighth/fourteenth to the twentieth century are extant. These come from a variety of geographical areas and societal contexts and seem to suggest a wide audience over a long period of time[85]. Nearly

83. Ibn Arfaʿ Ra's, *Kitāb Ḥall mushkilāt al-Shudhūr*, 402-6.
لأنّ معلوم هذه الصناعة مخالف لجميع المعلومات وأوضاعها لجميع الأوضاع، لأنّها قوام الدنيا ونظام العالم وزبدة الفلسفة وثمرة الحكمة. … فيقرأ العلوم العشرة الرياضية الفلسفية، وهي المنطق … ثم الطبّ … ثمّ الطبيعة … ثمّ النجوم … ثمّ الهندسة … ثمّ الأرتماطيقي … ثمّ الأدوار … ثمّ الحكمة، … ثمّ العلم الرياضي مطلقًا … ثمّ الإلهي … وإنّما سمّيت علمًا وخصّت لشرفها …
See also G. de Callataÿ, «Dividing Science By Ten», *SI* 111 (June 2020): 1-32 (where a list from al-Makīn's *al-Majmūʿ al-mubārak* is discussed; its division is very similar to the one presented here).

84. Cf. G. de Callataÿ, «Encyclopaedism on the Fringe of Islamic Orthodoxy: The *Rasā'il Ikhwān al-Ṣafā'*, the *Rutbat al-ḥakīm* and the *Ghāyat al-ḥakīm* on the Division of Science», *Asiatische Studien–Études Asiatiques* 71.3 (2017): 857-77.

85. Cf. C. Braun and R. Forster, «The Alchemist's Work: Ibn Arfaʿ Ra's and the Reception of His Collection of Alchemical Poems *Shudhūr al-dhahab*», *Asiatische Studien–Études Asiatiques* 75.2 (2021): 611-36.

one hundred manuscripts are, by any standard, a very substantial textual transmission that cannot be dismissed easily.

But even of the lesser known *Ḥall*, there are more than thirty copies. These mostly date from the tenth/sixteenth to the nineteenth century[86]. While this is less impressive, it is still a considerable number that suggests an ongoing interest and will to invest money and time.

Were all these manuscripts copied and read by an esoteric group of adepts? This seems doubtful at least: These many traces are unexpected with truly esoteric instruction. Alchemy, at least at some point in the intellectual history of the Islamicate world, perhaps after the "occultist turn" of the late Mamlūk period, became not so much an esoteric science, but a science that was read and studied intensively, though perhaps it was less often practiced in the laboratory.

Conclusion

To sum up, is alchemy an esoteric science – and is alchemy as conceptualized by this sixth-/twelfth-century Moroccan scholar an esoteric science? There is no doubt that there are many aspects of alchemy that make it decidedly esoteric, as evidenced by its continuous stress on secrecy and on knowledge reserved for an elite that must not be passed on to the masses. Yet the Arabic terminology of *ẓāhir* and *bāṭin*, which are central to esoteric movements such as the Ismāʿīliyya, is largely absent from most alchemical writings.

These two general observations hold true for Ibn Arfaʿ Raʾs and his works. Yet despite his many admonitions to keep alchemical knowledge secret, he is well aware that his *dīwān* and his commentary were passed on beyond his immediate circle of disciples: in commenting on his poetry in sometimes quite clear terms and in considering the generations to come, he even stresses that his work should be transmitted further, even if that meant that it would go beyond his control. It is striking that his commentary takes the form of a literary dialogue – the form adopted by Plato and Aristotle for their exoteric works! Perhaps the *Shudhūr* are Ibn Arfaʿ Raʾs's esoteric works, while the *Ḥall* is the exoteric, dialogic part. Yet, tempting as this would be, the manuscript evidence seems to suggest otherwise: the – esoteric?

86. Müller, «Introduction», 18-21.

– *Shudhūr* are extant in a far greater number than the exoteric *Ḥall*. However, even this fact of transmission could serve as an indication that the hypothesis is actually correct. Just as Aristotle's exoteric works are almost completely lost and became less important during late antiquity, Ibn Arfaʿ Raʾs's exoteric *Ḥall* was far less important than his – esoteric ? – *dīwān Shudhūr al-dhahab* that reached an audience well beyond the happy few.

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Abstract

Regula Forster, *To What Extent Is Alchemy an Esoteric Science? A Case Study of Ibn Arfaʿ Raʾs (fl. sixth/twelfth century)*

This chapter discusses the status of alchemy as an esoteric science, oscillating between 'exoteric' and 'esoteric' and between the not quite synonymous Arabic *ẓāhir* (outer or apparent meaning) and *bāṭin* (inner or hidden meaning). Taking the works of the sixth-/twelfth-century Moroccan alchemist Ibn Arfaʿ Raʾs as a case study, I discuss what elements in Ibn Arfaʿ Raʾs's work may be interpreted as hints that he conceived of alchemy as an esoteric science. At the center of the contribution is a reading of Ibn Arfaʿ Raʾs's commentary *Ḥall mushkilat Shudhūr al-dhahab* (The unraveling of the difficulties of the "Splinters") which already, in its title, promises a clarification and might therefore be considered an 'exoteric' work. While alchemy with its stress on secrecy seems to be an upfront candidate for consideration as an esoteric science, the Arabic terminology *ẓāhir* and *bāṭin* is largely absent from most alchemical writings. Rather, alchemists in general, and Ibn Arfaʿ Raʾs in particular, seem to play a game of hide and seek in which seemingly esoteric works become far more widespread than their exoteric counterparts.

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JĀBIR B. ḤAYYĀN'S ALCHEMY, IBN ʿARABĪ, AND THE READING OF THE BOOK OF NATURE

This article is designed to shed some modest light on this volume by providing data and reflections related to the history of science, religious esotericism, and mysticism. I examine the notion of transmutation in alchemy and mysticism. Transmutation plays an obvious role in the theory and work of alchemists, as it is the science that aims to precisely transform base metals into noble metals and, more generally, transform one substance into another. As we know, from its origins to the modern era, alchemy has long been considered a path to wisdom. Even if the language of alchemy remains mostly abstruse, we sense a deep connection between the alchemical enterprise and other paths of wisdom that are considered philosophy proper (*falsafa*) or mysticism. It is this link between alchemy and wisdom that I comment on here. In what way is the transmutation of metals linked to a philosophical or spiritual evolution in the mind of the alchemist? This question has been of interest to Muslim intellectuals for centuries. In al-Andalus, in particular, it was introduced in the famous *Rutbat al-ḥakīm* of Maslama b. Qāsim al-Qurṭubī[1].

1. Maslama al-Qurṭubī writes, for example: «They are two conclusions. The Ancients called one of them *kīmiyā'* and they called the other one *sīmiyā'*. These are the two sciences of the ancients from which one can profit. Whoever has not achieved them is no sage until he masters them, and he who masters [only] one of them is [only] half a sage. Both share [the quality of] being subtle. For *kīmiyā'* is the knowledge of earthly spirits and the advantageous extraction of their subtleties. The other is called *sīmiyā'*, and is the *tarjīḥ* (literally, «the fact of giving the preponderance to something»), the [art of] talismans and of syllogisms, and this is the science of the superior spirits and of how to call down their powers advantageously», cited and trans. by G. de Callataÿ and S. Moureau, «Again on Maslama Ibn Qāsim al-Qurṭubī, the Ikhwān al-Ṣafā' and Ibn Khaldūn: New Evidence from Two Manuscripts of *Rutbat al-ḥakīm*», *al-Qanṭara* 37 (2016), 342. See also P. Carusi, «Appendice – Le traité alchimique

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Maslama cites the most important ancient pseudepigraphic writings in Arabic, including the works of great names such as Khālid b. Yazīd and Jābir b. Ḥayyān[2]. This chapter is based on the study of two great bodies of work, two great written corpora, that of Jābir b. Ḥayyān and the mystic Ibn ʿArabī. Indeed, their ambition and their impact in specific intellectual circles were such that they can be considered representative of two ways of approaching the question of alchemical transmutation. One might even say that these two authors represent two paradigms of the idea of the transmutation of elements in medieval Islam. These two paradigms were present from the second/eighth century.

Jābir b. Ḥayyān

Let us begin with Jābir's conception of transmutation. The difficulty of treating Jābir's corpus as a whole is well recognized. Indeed, we know from the work of Paul Kraus, in particular, that all the treatises attributed to Jābir b. Ḥayyān were the work of a school that probably produced these texts over a period of almost two centuries. This raises the question of whether it is legitimate to speak of Jābir's doctrine as a unified and homogeneous theory. The unity of thought among the various treatises can be questioned with each quotation. However, reading the whole corpus, it appears that we can conclude, following Kraus, that there is at least a homogeneous "Jābirian tradition". More precisely, with regard to material transformations, the purpose of these works is quite unified and coherent.

Rutbat al-ḥakīm – Quelques notes sur son introduction», *Oriente Moderno* 80-83 (2000), 491-502, although it is partly outdated by subsequent research. In addition, the *Epistles of the Ikhwān al-Ṣafāʾ* also proposes a mineralogy and a conception of alchemy and metallic transmutations, see Y. Marquet, *L'alchimie des philosophes et la philosophie des alchimistes*, Paris 1988, 15-47.

2. Concerning the *Rutbat al-ḥakīm* and its links with the *Ghāyat al-ḥakīm* and the *Epistles of the Ikhwān al-Ṣafāʾ*, see G. de Callataÿ, «Magia en al-Andalus: *Rasāʾil Iǰwān al-Ṣafāʾ*, *Rutbat al-Ḥakīm* y *Gāyat al-Ḥakīm* (*Picatrix*)», in *al-Qanṭara* 34.2 (2013), 297-343; and G. de Callataÿ and S. Moureau, «Towards the Critical Edition of the *Rutbat al-ḥakīm*: A Few Preliminary Observations», in *Arabica* 62 (2015): 385-94. Maslama al-Qurṭubī's conception of alchemy as the pinnacle of wisdom and that of Jābir, however, do not seem to coincide completely; hence the purpose of this chapter. After the publication of the critical edition of the *Rutbat al-Ḥakīm* by G. de Callataÿ and S. Moureau a full study ought to be undertaken.

The problem of Jābir and Jābir's alchemical teachings have been discussed in detail by great historians of science: Paul Kraus, of course, and others before[3] and after him[4]. Without dwelling on well-known doctrines, it is important to recall a few basic points. The doctrine of transmutation of Jābir's corpus is based on the following.

(1) The idea that the four elements are reducible to the four elemental qualities[5]. Jābir's corpus repeatedly describes how it is possible to extract heat and dryness from fire, moisture and heat from air, etc. using various procedures[6]. There is an essential choice that breaks the classical system of the four elements. The hidden structure of matter is modified; and, consequently, the relations between bodies and spirits is also found in more mobile, fluid relationships.

(2) Jābir's corpus explains how the four elemental qualities are blended with the universal soul and fixed in prime matter, the passive substance. In several texts, Jābir mentions the cosmological basis of his system: the universal soul penetrates the prime matter, mixes with it according to its desire and choice, and then mixes with the

3. E. J. Holmyard, «Jābir ibn Ḥaiyān», in *Proceedings of the Royal Society of Medicine* 16 (1923), 46-57; E. J. Holmyard, «An Essay on Jābir ibn Ḥaiyyān», in *Studien zur Geschichte der Chemie* (Berlin 1927), 28-37. Several articles of J. Ruska deal with the question, see «Die bisherige Versuche, das Dschābir-Problem zu lösen», in *Dritter Jahresbericht des Forschungsinstitut für Geschichte der Naturwissenschaften in Berlin* (Berlin 1930), 7-22.

4. M. Plessner, «Ǧābir ibn Ḥayyān und die Zeit der Entstehung der Ǧābir-Schriften», in *Zeitschrift der deutschen morgenlandischen Gesellschaft* 115 (1965): 23-35. F. Sezgin has produced the most comprehensive attempt to counter the ideas of P. Kraus on the dating of Jābir's corpus, F. Sezgin, *Geschichte des Arabischen Schrifttums* (Leiden 1971), 4:132-269. See also H. Corbin, *Alchimie comme art hiératique* (Paris 1986), 147-219; Marquet, *La philosophie des alchimistes et l'alchimie des philosophes - Jâbir ibn Hayyân et les «Frères de la Pureté»*; P. Lory, *Alchimie et mystique en terre d'Islam* (Paris 1989), 47-165; S. Nomanul Haq, *Names, Natures, and Things: The Alchemist Jābir ibn Hayyān and His Kitāb al-Ahjār (Book of Stones)* (Dordrecht 1994).

5. Jābir Ḥayyān, *K. al-sab'īn*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 474-76, 481-84; P. Kraus, *Jābir ibn Ḥayyān - Contribution à l'histoire des idées scientifiques dans l'Islam - Jābir et la science grecque* (Cairo 1942; repr. Paris 1986), 6-18, 148-61.

6. Jābir Ḥayyān, *K. al-sab'īn*, 472-74. Cold resembles pieces of salt; moisture resembles a sticky substance; heat resembles a transparent, red, and shiny body; and dryness resembles a powdery, siccative solid.

elemental qualities[7]. The universal soul and the prime matter (*hayūlā*), mixed together, form an inseparable whole. The soul becomes a material substance by mixing with the *hayūlā*[8]. Substance is sometimes identified with the soul (*nafs*) and sometimes distinguished from it[9]. This point is not always clear. Thus, it is written in the *Kitāb al-sabʿīn*:

The foundation of all things are the four elemental qualities, to which must be added a fifth, which is the simple substance called "prime matter"; it is the dust that fills the voids, it is the dust that can be seen when the sun shines on it. It is also called "soul", know this. It is in that substance that figures and forms are assembled, everything is merged in it. It is the foundation of everything that is composed, and it exists in everything that is composed. It is the foundation of everything, it will exist permanently until the end of the time allotted to it".

Wa-aṣl al-ashyāʾ arbaʿu ṭabāʾiʿ, wa-la-hā aṣlun khāmis wa-huwa al-jawhar al-basīṭ al-musammā hayūlā; wa-huwa al-habāʾ al-mamlūʾ bi-hi al-khalal, wa-huwa bayyin idhā ṭalaʿat ʿalay-hi al-shams. Wa-qīla anna-hu al-nafs, fa-iʿlam-hu. Wa-ilay-hi tajtamiʿ al-ashkāl wa-l-ṣuwar, wa-kullun munḥallun ilay-hi; wa-huwa aṣl li-kulli murakkab, wa-l-murakkab aṣlun la-hu. Wa-huwa aṣl al-kull, wa-huwa bāqin ilā l-waqt al-maʿlūm[10].

7. Jābir b. Ḥayyān, *K. al-taṣrīf*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 405f.; Kraus, *Jābir ibn Ḥayyān*, 137–47, 159–61. And Jābir b. Ḥayyān, *K. al-sabʿīn*, 460, 463, where it is specified that man can imitate this work of nature.

8. Kraus, *Jābir ibn Ḥayyān*, 155–56, 145; Jābir b. Ḥayyān, *K. al-taṣrīf*, 173; and Jābir b. Ḥayyān, *K. al-baḥth*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 501–27; Jābir b. Ḥayyān, *K. al-mīzān al-ṣaghīr*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 431f.; and Kraus, *Jābir ibn Ḥayyān*, 180–84.

9. Jābir b. Ḥayyān, *K. maydān al-ʿaql*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 208, 211, 212; where the «choice» of the soul is discussed. This raises questions about the use of the term «substance», see Kraus, *Jābir ibn Ḥayyān*, 170–71; Lory, *Alchimie et mystique*, 40.

10. Jābir b. Ḥayyān, *K. al-sabʿīn*, 482, trans. P. Lory. See also in Jābir b. Ḥayyān, *K. al-mawāzīn al-ṣaghīr*, in *La chimie au Moyen Âge*, ed. M. Berthelot and O. Houdas (Paris 1893), 3:428–29, another passage on this substance is the body of the sphere «… *wa-min-hu kullu shayʾ wa-ilay-hi yaʿūdu kullu shayʾ kamā khalaqa-hu al-Bāriʾ taʿālā*…». This is followed by the enumeration of Aristotle's categories. Then: «… *fa-yanbaghī an taʿlam anna dhālika huwa nafs jirm al-falak al-munīr al-aʿẓam… wa-huwa al-jisma alladhī fī sāʾir al-mawjūdāt al-thalātha allatī hiya al-ḥayawān wa-l-nabāt wa-l-ḥajar*». This is followed by a passage where he specifies that this *jawhar* is not sensitive, that God directs it as He wants, but that He can show its effects to His prophets, saints, and to whomever He wants.

This idea of mixing the soul with matter, common to many religious and philosophical systems, is central here. This is the first link between alchemy and mysticism. It concerns the fate of human beings before and after their physical deaths. The specifically human soul – *nafs nāṭiqa*, [or] *ʿaql* – is involved in this mixture[11]. The theme of liberation, of releasing the essences of this "mixture" and liberating this human soul appears here. This is an important point in Jābir's doctrine: it explains the role of his doctrine of the reincarnation of souls and his soteriology. Similarly, his political eschatology, his conception of the coming of the Mahdī, is closely linked to this idea of the progressive purification of human souls, or at least of the souls of the elect.

Here I provide some observations.

(1) If we follow the exposition of Jābir's thought, the four elemental qualities never cease to increase or decrease in intensity, thus producing infinite permutations. All existence below is in the process of transmutation, everything is being transmuted at every moment, in the three realms and also within the human being. In the material operations described in the alchemical laboratory processes, these transmutations can be perceived in two ways, according to two aspects: one is "horizontal", from one material to another; for example, the transformation of lead into silver or vice versa, as observed by the external, visible qualities of matter. The other is "vertical": it is the intensification or weakening of the energy in the substance, as well as the distribution of these energies of the soul according to the qualities of each, though it is not necessarily visible to the naked eye in the material operation[12]. The two aspects of transmutation always occur together; for example, in the work of obtaining purified gold. In Jābirian texts, the alchemist can either describe the apparent transformation of materials as he observes it in his laboratory, or he can evoke the evolution of the intensity of

On the handling of the concepts of *jawhar* and *hayūlā* in Jābir with regard to the Hellenic tradition, see Haq, *Names, Natures and Things*, 49-57.

11. Note the diversity of expressions concerning this «mixture», e.g., in Kraus, *Jābir ibn Ḥayyān*, 167.

12. Jābir b. Ḥayyān, *K. maydān al-ʿaql*, 211f.; Kraus *Jābir ibn Ḥayyān*, 159. Note the question of the free choice of the soul in this text, in Kraus, *Jābir ibn Ḥayyān*, 160.

the "spirit" at work in the same operation. This second reading is obviously speculative, hence the ongoing ambiguity of alchemical language. The two transmutations, horizontal and vertical, interact. What is more, Jābir uses philosophical vocabulary as a toolbox, his approach is different from that of the philosophers. He is primarily concerned with describing processes.

In an earlier study of *Kitāb al-sabʿīn*[13], I made a systematic index of the main terms used to describe the great work – the main alchemical operation to obtain a transmutation from a metal into gold: body, soul, spirit, fire, water… I soon reached a dead end. Certain developments based on the Aristotelian concept of the four elemental qualities manifested in the four elements, which the alchemist seeks to understand and master experimentally, certainly posed no problem for analysis. Elsewhere, however, many terms were found to have completely different meanings depending on the context. For example, the term *ḥayawān*, animal (as a noun and adjective), emphatically refers to mineral matter, without anything to suggest a metaphorical use[14]. Even more strikingly, *rūḥ* ("vital spirit") refers not only to known mineral substances (sulphur, arsenic, mercury, ammoniac salt, camphor)[15] in their gaseous state, but it can also designate liquids or even solids[16]. An analogous ambiguity is found in the term *nafs* ("living soul"), which is clearly distinguished from "spirit" in crucial passages. Similarly, *nār* ("fire") refers not only to ordinary combustion and especially to the eminently volatile hot/dry element present in primordial matter, but also to solid or liquid substances. Parallel remarks can be made about the terms *mā'* ("water"), *arḍ* ("earth"), and *hawā'* ("air")[17]. It is important to realize that the alchemical terms Jābir used are not of an ordinary descriptive nature. They aim to go beyond the changes in consistency and color of the primordial matter, to express a different way of perceiving and expressing the flow of phenomena. In short, they aim to describe the processes and dynamics of the alchemical work, not

13. Thesis presented at the University of Paris III - Sorbonne Nouvelle, 1983; Lory, *Alchimie et mystique*, 38, 41-42.

14. See Jâbir ibn Hayyân, *Dix traités d'alchimie par Jâbir ibn Hayyân*, trans. P. Lory (Paris 1996), 247, 259-61, 281.

15. Kraus, *Jābir ibn Ḥayyān*, 18-9, 24-27.

16. Jâbir ibn Hayyân, *Dix traités d'alchimie*, 247, 256-58, 279f.

17. Jâbir ibn Hayyân, *Dix traités d'alchimie*, 262-67 and 281f.

permanent or repetitive states. The terms we use in everyday language mostly clarify substances and their degree of permanence, or static states. A description of a simple pharmacological operation, for example, identifies each substance at the beginning and follows its evolution through the various changes of state it may undergo[18]. Contrary to essentialist philosophies, Jābir proposes a way of thinking that perceives in each being, in each matter, a simple "moment," a particular circumstance situated in a flux of evolution of the soul of the world imprinted in the primordial matter. Jābir's text seeks to give an account of the ongoing process of transformation. Consequently, it does not refer to a substance in terms of what it was at the beginning, but in terms of what it is expected to become. This transformation takes place according to the amount of energy that comes from the soul that animates it, and the consistency and the external aspect that it assumes in such a precise operation[19]. Such a solid substance is called "spirit" because it is destined to evaporate. Another substance, solid or gaseous, is called "water" because it is intended to be liquified. A material that has nothing mineral about it, but corresponds to the densest, most solid stage of its evolution, is called "stone". Jābir seeks to comprehend the spirit, the universal and inconceivable agent of all events that occur on earth, to estimate its power, to understand its tropism, and finally to master it.

Let us now return to the question of alchemical transmutation.

(2) The possibilities of transmutation are infinite[20]. Whoever follows the instructions of Jābir knows that the secret of creation,

18. A lexicological classification would follow other criteria. It would consist of bringing together the similar and differentiating the dissimilar in what is constant according to the usual criteria of the time: color, consistency, taste, sound, etc. The whole taxonomy is based on an approach of inclusion and exclusion. If A is different from B and C identical to B, A can never be identical to C. And it is precisely this rule of the excluded third that does not always work in the alchemical discourse and that sometimes makes it confusing, even impenetrable.

19. See Lory, *Alchimie et mystique*, 38-45; and Jâbir ibn Hayyân, *Dix traités d'alchimie* par Jâbir ibn Hayyân, 278ff.

20. Jābir b. Ḥayyān, *K. al-sabʿīn*, 463f., 470; Jābir b. Ḥayyān, *K. al-mīzān al-ṣaghīr*, 449: «There are two creations (*khalqāni*), the second resembling the first because it is *ṣanʿa*». Kraus, *Jābir ibn Hayyān*, 2, 57-58, 99 n.5 citing *K. al-baḥth*, where Jābir states that man can reproduce God's actions, but to the extent of his human capacity: «[…] *wa-hādhā huwa ghāyat (al-ṣanʿa) fī l-ḥikma al-mutaqabbil bi-hā l-insān afʿāl Allāh taʿālā wa-l-mutashabbih bi-hā bi-qadri ṭāqati-hi*», 188; Lory, *Alchimie et mystique*, 149.

"attains all science and grasps the science of the creation and production of nature" (*fa-qad waṣala ilā kulli ʿilmin wa-adraka ʿilm al-khalīqa wa-ṣanʿat al-ṭabīʿa*)[21]. Any substance can be transformed into any other, provided the work is done with enough patience. Needless to say, this assertion is consistent with the claim that transmutation imitates the creative action of God Himself.

The philosophical problem of the transmutation of material substances arose in medieval thought. Are essences mutable, as current alchemy assumes, or immutable? In a specific treatise, al-Kindī (d. 260/873) refuted the alchemists' claim, which he saw as nothing more than deceptive procedures. In a passage of his *Shifāʾ*, Ibn Sīnā (d. 428/1037) also rejects the idea that the inner substance of metals can be changed. Without ruling out the possibility of transmutation, Ibn Khaldūn considered it almost impossible. Al-Fārābī (d. 339/950), on the other hand, believed that metals are only distinguished from each other by accidental properties and that man is capable of acting upon them. Fakhr al-Dīn al-Rāzī, on the other hand, openly supported the possibility of transmuting metals by imitating the laws of nature[22].

In fact, Jābir himself is not very precise in his definitions[23]. As we have seen above in relation to his language, Jābir adopted a vision of the world based not on the transformation of substances, but rather on an uninterrupted flow of changing polarities[24]. He does not even draw a clear line between the three kingdoms: he says minerals, plants, and animals are produced by an effect, be it strong or weak, of the rotation of the celestial sphere, which determines the mixture of soul and matter. It simply happens that the soul gives them different forms. Jābir's corpus mentions the use of minerals, but also vegetable and animal matter to obtain the philosopher's stone[25]. It

21. Jābir b. Ḥayyān, *K. al-sabʿīn*, 481.

22. Manfred Ullmann, *Die Natur-und Geheimwissenschaften im Islam (*Leiden 1972), 249-55.

23. Kraus, *Jābir ibn Hayyān*, 258, where he explicitly refers to Aristotle: the *ʿayn*, or *dhāt*, or *ḥaqīqa* of things is independent of their existence with respect to us. But is it a purely logical difference, or one that exists in itself? Haq, *Names, Natures, and Things*, 49f.

24. «*Fa-iʿlam yā akhī anna al-maḥsūsāt hiya allatī lā wujūda la-hā, wa-la-hā kawn, wa-li-dhālika tarā-hā bi-ṣūrat al-thābit, wa-hiya sāʾila*», Jābir b. Ḥayyān, *K. al-maʿrifa*, in *Majallat taʾrīkh al-ʿulūm al-ʿarabiyya wa-l-islāmiyya* 1 (1984), 84.

25. Scattered quotations from *K. al-sabʿīn* quoted in Kraus, *Jābir ibn Hayyān*, 3, 4, 41.

also mentions the production of living beings[26], and goes so far as to affirm – at least by quoting the so-called *aṣḥāb al-ṭabāʾiʿ* (proponents of the four natures) – that it is possible to create a non-intelligent animal and even a human being endowed with reason and capable of religious belief. But we cannot rely on these passages to develop Jābir's theory of transmutation. Either we take them literally and find them too extreme, or we see a symbolic meaning in them, but any interpretation would be highly speculative.

(3) In any case, what draws the boundaries between one kingdom and another, between one substance and another, is the intensity of the soul of each of the four elemental qualities in it. The right proportions between these intensities are called "balances"[27]. Each substance depends on a different balance, which conditions it and makes it what it is[28]. The whole alchemy of Jābir consists of measuring the intensity of the soul and imitating the action of that same world soul in its laboratory work[29]. It should be noted that there is an immense effort to rationalize the laws of the universe, far removed from mystical speculation.

(4) Let us now come to the main question that concerns us: in what way can alchemical work according to Jābir stimulate, accompany, or even join, a philosophical and especially a spiritual, mystical vocation? What about the transformation of the human being? First, there is a philosophical question: what is a "human being"? How is he different from animals?

It is here that the concept of *ʿaql* appears. It is crucial for our purpose because it denotes both a cosmic entity – the universal intellect – and at the same time an individual faculty[30]. The human being is

26. Scattered quotes from *K. al-sabʿīn*, *K. al-baḥth*. For the idea that what God creates at once, the alchemist does in several, less perfect ways, see Jābir b. Ḥayyān, *K. al-mīzān al-ṣaghīr*, 439, 444-45, 449. In Jābir b. Ḥayyān, *K. maydān al-ʿaql*, 221, it is said that «you become the soul and the substance» in the operation, reproducing the genesis of earthly beings.

27. Kraus, *Jābir ibn Hayyān*, 30, for the quote, 188 n.3: there are balances for all things, intellect, soul, nature etc., but the most complete is the balance of letters.

28. Jābir b. Ḥayyān, *K. al-aḥjār*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 129f.

29. Jābir b. Ḥayyān, *K. maydān al-ʿaql*, 221. Kraus, *Jābir ibn Hayyān*, 99-101.

30. See Kraus, *Jābir ibn Hayyān*, 97-103 and on the artificial generation of man, see 103-19, 147. See in particular Jābir b. Ḥayyān, *K. al-tajmīʿ*, in *Mukhtār*

composed of a vital soul and an intellect (*nafs nāṭiqa*). This pure, luminous intellect distinguishes humans from animals. In fact, this individual intellect emanates from the universal intellect. Jābir goes so far as to call it, the individual intellect, the "little brother" of the universal intellect: "Indeed, he is its little brother. By 'little' I simply mean that he comes after it and is supported by it through providence. He is the effect (*athar*) of the first intellect, and its orphan child, and the effect of the first cause through the Intellect"[31]. Here we find a framework of thought common to the philosophers (*falāsifa*) and the Ismāʿīlīs.

Here the key to human destiny lies in the theory of knowledge. Indeed, to learn the truth of things and the world is to make a decisive act, a profound commitment; for knowledge is nothing other than the coming into action of an element of the universal intellect in the individual intellect. It is knowledge that brings about the transformation, or liberation, of the human compound. Of course, this statement does not include all kinds of knowledge. There are two kinds of knowledge[32]. Jābir distinguishes the weak alchemists who rely solely on sense observation (*maʿrifa*) from those who have access to direct intellective knowledge (*ʿilm*)[33]. The human being, as

rasāʾil Jābir ibn Ḥayyān, ed. P. Kraus (Cairo 1935), 342f. with a wealth of details; and Jābir b. Ḥayyān, *K. al-sabʿīn*, 461. Note the importance of the «mold», i.e. the form (vs. *jawhar*, or *dhāt*) of what is generated, which is then filled with sperm, flesh of the desired being, blood, and brain. The opinions are numerous and varied.

31. Cf. Jābir b. Ḥayyān, *K. al-qisma*, in *Majallat taʾrīkh al-ʿulūm al-ʿarabiyya wa-l-islāmiyya* 1 (1984), 64: «[…] *dhālika li-anna-hu akhū-hu al-aṣghar, wa-lastu urīdu bi-l-aṣghar illā kawna-hu baʿda-hu wa-maḥmūlan fī-hi bi-l-qisma; fa-huwa athar al-ʿaql al-awwal wa-waladu-hu al-yatīm, wa-athar al-ʿilla al-ūlā bi-tawassuṭ al-ʿaql*». On the parable of the two brothers, see *Mukhtār rasāʾil Jābir ibn Ḥayyān*, 333f. On the definition of *ʿaql*, see also Jābir b. Ḥayyān, *K. al-ḥudūd*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 101, 102, 105, 109 (the intellect grasps things as a mirror grasps colored forms), 110 (where *nafs nāṭiqa*, *ʿaql* and *ʿilla ūlā* are juxtaposed as a sequence).

32. The first one is inductive, based on sensitive things: it is the *istiqrāʾ*, the instrument of the earthly soul (*nafs*), which is weak and fallible, and leads to partial knowledge, the *maʿrifa*. The second one, universal and illuminative, is the one that interests Jābir. Through it, the human intellect reaches the universal intellect, from which it derives its knowledge, *ʿilm*.

33. This is the main theme of Jābir b. Ḥayyān, *K. al-maʿrifa*, 52-57; see also Jābir b. Ḥayyān, *K. al-bayān*, in *The Arabic Works of Jābir ibn Ḥayyān*, ed. E. J. Holmyard (Paris 1920), 5-12. See also Lory, *Alchimie et mystique*, 43, 158-60, and 231 n.60. In Jābir b. Ḥayyān, *K. al-raḥma* (The book of mercy/Le Livre de la

mentioned, is physically immersed in the mixture of intellect/soul/matter. In every human being, every act of thinking involves his soul, his intellect, and his substance itself. It defines his existence in the world, it determines the orientation of his life. To "understand," according to *ʿilm*, is to perform an act of purification, an act of liberation. Indeed, this is what qualifies true being (*wujūd*) – as opposed to apparent being at the level of mixture (*kawn*)[34]. Through this connection between the cosmic intellect and the human intellect, the wise man becomes what he knows. This is a long process, marked by many reincarnations[35]. Note that this process only affects certain souls, those of the "philosophers" (i.e., the alchemists), and not those of ordinary people[36].

Alchemy, however, adds another term. In order to understand, according to *ʿilm*, one needs an object of science, a support on which to rest the object of one's own act of thinking. The thinking person cannot be both the subject and object of his own act of thinking, of his own constant evolution. He needs an object of knowledge that corresponds to the universal balances and leads to them. The role of the alchemical operation is an intermediate world, a "mesocosm". Jābir's texts emphasize this explicitly: just as the human being is a microcosm, a precise reflection of the whole cosmic structure, so the alchemical work is a mesocosm (*ʿālam awsaṭ*):

> There are two worlds, the great and the small. The great one is the superior heavenly body with the heavenly beings (*al-jawāhir al-rūḥāniyya*) above it.... It is said that the small world is man, who is called "small" in relation

Miséricorde), in *La chimie au Moyen Âge*, ed. M. Berthelot and O. Houdas (Paris 1893), 3: 134, the term *ʿaql* refers to the ability to think what is perceived by the senses, it concludes: «*Al-ḥawāss ālāt al-nafs, wa-l-nafs wa-l-ḥawāss ālāt al-ʿaql*». It is clear from what follows that this *ʿaql* is not mere reasoning, but also an intuitive perception.

34. Jābir b. Ḥayyān, *K. al-maʿrifa*, 54; Jābir b. Ḥayyān, *K. al-bayān*, 9–10. On the role of human language as an act of the soul, involving its substance, see Haq, *Name, Natures, and Things*, 83–84, 90, 226.

35. See especially Jābir b. Ḥayyān, *K. al-ishtimāl*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 548f. on whether it is an alchemical parable; Jābir b. Ḥayyān, *K. al-khawāṣṣ*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 378; Jābir b. Ḥayyān, *K. al-usṭuqus al-uss*, in *The Arabic Works of Jābir ibn Ḥayyān*, ed. E. J. Holmyard (Paris 1920), 100; Jābir b. Ḥayyān, *K. al-maʿrifa*, 57; Jābir b. Ḥayyān, *K. al-khalīl*, in *Majallat taʾrīkh al-ʿulūm al-ʿarabiyya wa-l-islāmiyya* (1985), 82–83; Lory, *Alchimie et mystique*, 67f.

36. Jābir b. Ḥayyān, *K. al-maʿrifa*, 62.

to the great, to whom he is similar (*li-anna-hu mithla-hu sawā'*). The wise Plato said: "The alchemical work (*al-ṣanʿa*) is a third world, because it is similar to each of the other two"[37].

Here the parallel between the three worlds is in a rigorous order. It allows the alchemist to use the reference points of astrology as well as those of medicine to evoke, for example, the process of making gold. This contemplation of the alchemical work sets the human intellect (*ʿaql*) in motion; it is transformative, for the human intellect contemplates in the alchemical operations the same divine secrets that are hidden and buried within it. In this way, alchemical science is the path of wisdom par excellence, a redemptive path of transformation of the human compound. Henry Corbin wrote:

> To measure the nature of a thing, whatever that thing may be, [involves] measuring the quantities that the soul has appropriated, and measuring the intensity of the desire of the soul that descends into matter. Conversely, it is the transmutation of the soul that conditions the transmutation of the bodies; it is in the soul that they are transmuted, the soul is the place of their transfiguration[38].

The true alchemist therefore acquires a science of timeless principles, the science of balances. The science of balances is, in a way, above the universal intellect. First, the intellect itself contains the balances. Second, it is the universal intellect who transmits the numerical harmonies to the hypostases below him and to the sublunary world. Moreover, some passages seem to suggest that the balances are the essence of the first intellect, but these passages are not very clear[39]. In any case, Jābir stresses that the *ʿilm al-mawāzīn* is a divine science entrusted to the prophets and Imams – including

37. Cf. Jābir b. Ḥayyān, *K. al-raḥma*, 149–50; and Jābir b. Ḥayyān, *K. ikhrāj mā fī l-quwwa ilā l-fiʿl*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 71: «(*al-Ṣanʿawiyyūn*) … *yaʿtaqidūn anna al-ʿālam insān kabīr wa-l-ṣanʿa insān awsaṭ wa-l-insān insān ṣaghīr*». German trans. F. Rex, *Zur Theorie der Naturprozesse in der früharabischen Wissenschaft* (Wiesbaden 1975), 116. Elsewhere in Jābir's corpus, it is written: «In (the alchemical mesocosm), the forces of the macrocosm come together in the microcosm», Jābir b. Ḥayyān, *K. al-raḥma*, 149. This text develops the idea of the tried and tested, experimental character of the junction of these two worlds.

38. Corbin, *L'alchimie*, 179–80.

39. Jābir b. Ḥayyān, *K. al-khawāṣṣ al-kabīr*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 250, 252; Kraus, *Jābir ibn Hayyān*, 311–13.

Jaʿfar al-Ṣādiq (d. 148/765) in his time. This purpose of purification is cited as the real reason for the composition of Jābir's corpus. Jaʿfar al-Ṣādiq justifies writing his treatises on the basis of the instructions given to him; for Jābir adds that "this will undoubtedly purify me from the impurity of this world"[40]. This is a crucial point; we see how it differs from the vision of human transformation among Sufis such as Ibn ʿArabī.

To express this inner transformation, several of Jābir's treatises use a Shīʿī vocabulary. The disciple must join the Imām. The Imām is the philosopher's stone[41] that acts as an elixir that allows metals to be transmuted. The disciple who understands alchemy becomes the Imām, in the sense that he acquires the same level of knowledge as the Imām[42]. The disciple is then liberated from the cycle of reincarnation. Jābir calls the alchemist who has reached this level of knowledge an "orphan". The "orphan" (*al-yatīm*), is neither a prophet nor an Imām, but he rises to their level of knowledge because he draws from the source of all light[43]. The parallel between the Imām and the

40. «… *fa-asā-hu an yukhalliṣa-nī min wasakh hādhā l-ʿālam*», Jābir b. Ḥayyān, *K. al-raḥma*, 95.

41. Jābir b. Ḥayyān, trans. M. Berthelot and O. Houdas, *Le Livre de la Miséricorde/* (*Kitāb al-raḥma*), in *La chimie au Moyen Âge*, vol. 3 (Paris 1893), 132–60 (Ar.) and 163–90 (Fr. trans.)] (where the imām = the Stone), 94 («… *fa-ʿasā an yaʿrifa al-tadbīr bi-hādhi-hi al-lafẓa man shāhada-hu wa-waṣala ilay-hi, wa-huwa qawlī: illā an yusʿidu-ka Allāh bi-ruʾyat al-Imām*» (follows a mention of Jaʿfar al-Ṣādiq), 95; Lory, *Alchimie et mystique*, 64–66, and related notes, 211–12.

42. Recall here the role of the *ashkhāṣ rūḥāniyya*, explained in terms that are often rather confused by Jābir; notably in allusions to the triad intellect/soul/*ashkhāṣ*, Jābir b. Ḥayyān, *K. al-baḥth*, 506–8, 526–27, where these *ashkhāṣ* can be identified with the stars, but also with the prophets and saints; curiously, Jābir does not take sides. See Jābir b. Ḥayyān, *K. al-khamsīn*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 491, 497 on the role of the Imam as the first silent one, the origin of everything; Jābir b. Ḥayyān, *K. al-ishtimāl*, 551–52 on the unity in essence of the fifty-five *ashkhāṣ* – and their numerous differences in *maqāmāt*; P. Kraus, «Les dignitaires de la hiérarchie religieuse selon Gābir ibn Ḥayyān…» in *BIFAO* 41 (1942), 92; Lory, *Alchimie et mystique*, 71–81, 115. Finally, note that: «The angel is the goal toward which all the universe tends», according to Jābir in the *K. al-khamsīn*. On this subject, see Lory, *Alchimie et mystique*, 28f. and 64f.; and P. Lory, «Eschatologie alchimique chez Jâbir ibn Hayyân», in *Revue des mondes musulmans et de la Méditerranée* 91–94 (2000), 75.

43. Thus in Jābir b. Ḥayyān, *K. al-khalīl*, 81: «… *anna al-yatīm tarbiyatu al-Imām, wa-nāʾibun ʿan-hu wa-qāʾim maqāmi-hi baʿda-hu idh kāna la-hu walad*». Lory, *Alchimie et mystique,* 55–56, 208, and the related notes.

universal intellect is explained in the *Kitāb al-bayān*: "It is this vocalized hamza who is the origin of all things, the composer of books. […] He manifests that he is the first cause"[44].

Man's existence has no value and no interest except in relation to his future, his destiny as a "great man"[45]. The goal of all this is the attainment of human perfection. Hence the eschatological dimension of Jābir's project[46]. At the end of a period of change in esoteric knowledge, an eschatological figure will come, the Bayān. He will restore science and destroy the ignorance that leads to degrading reincarnations. This perfect person will mark the end of earthly history. It should be noted that there are many points of comparison with other schools of thought – especially with the Ikhwān al-Ṣafāʾ. I draw a parallel with Ibn ʿArabī, although he is later than the period considered here. In fact, he helps us clearly mark the boundary between material and mystical alchemy.

Transmutation and Enlightenment According to Ibn ʿArabī

Let us now turn to Ibn ʿArabī's ideas on transmutation. The comparison can be fruitful, despite the temporal difference that separates these two corpora. Indeed, these two major works present a complete cosmology articulated around a "lettrist" vision of language. According to this vision, letters play a role in structuring the levels of existence. The permutation of (cosmic) letters thus accompanies the evolution of beings created in the sublunary world. It is doubtful that these two systems have a common origin or that Ibn ʿArabī drew on the writings of Jābir. In his essay on the science of letters

44. Jābir b. Ḥayyān, *K. al-bayān*, 9-10; note the use of the term *al-jawhar al-sharīf*. See also Jābir b. Ḥayyān, *K. al-khalīl*, 84.

45. Jābir b. Ḥayyān, *K. ikhrāj*, 71, where the accomplished alchemist becomes *insānan kabīran lā nihāyata la-hu*; what differentiates the alchemist from the philosopher is that he does not need anyone else, Jâbir ibn Hayyân, *Kitāb al-ḥudūd*, 110: Lory, *Alchimie et mystique*, 45.

46. Jābir b. Ḥayyān, *K. al-ishtimāl*, 553, where the coming of the Qā'im is mentioned, when the deliverance of matter will appear; Jābir b. Ḥayyān, *K. al-khamsīn*, 490f., enumeration of the different «grades»; Jābir b. Ḥayyān, *K. ikhrāj*, 71-72; Lory, *Alchimie et mystique*, 117-19, 225 n. 225. The fifty-five hierarchs collectively assume the role of the Imam, perhaps absent since the death of Jaʿfar al-Ṣādiq.

in the works of Ibn ʿArabī, Denis Gril notes the striking similarities between the two systems of esoteric thought. He states:

> The study of the relationship between these two works, separated by at least three centuries, remains to be done, not on the secondary level of a possible literary transmission, but in order to understand how *taṣawwuf* integrated elements of which only it [*taṣawwuf*] knew the true origin[47].

This last assertion, which has yet to be tested and discussed, is one of the aims of this article: What is the deep connection between Jābir's alchemy and mystical vision in the world? How might the transformation of metals in an alchemical laboratory lead to, or at least signify, human transformation? In Jābir and in Ibn ʿArabī we find common discourses on the transmutation of materials and humanity. Ibn ʿArabī's vision, like that of Jābir, encompasses a complex and comprehensive cosmology. It describes the role of the elements, the three realms, etc. in the details of the constitution of the universe. The earthly world is the emanation of the universal intellect, from which emanates the universal soul and nature, united with universal matter. The universal or first intellect is also called the Muḥammadan reality. The earthly world is a world of change. It is in constant mutation, in constant "journey". It is the world of transience (*ʿālam al-fanā'*) and constant change, in contrast to the heavenly world. As he strikingly sums up in the *Kitāb al-isfār*:

> Existence has movement as its origin. Therefore, there can be no motionlessness in it, for if it were motionless, it would return to its origin, which is nothingness. The journey never ceases in the lower and higher worlds… In reality, we never cease to be on a journey from the moment of our original constitution and the moment of the constitution of our physical principles until infinity. When a stage (*manzil*) appears to you, you say to yourself: here is the end… But as soon as you arrive, you do not hesitate to leave to take the road again[48].

Of course, the "journey" described here by Ibn ʿArabī takes place in a metaphysical framework. It seems to refer to a purely spiritual

47. D. Gril, «La science des lettres», in Ibn ʿArabī, *Les Illuminations de La Mecque/The Meccan Illuminations* [English and French], ed. M. Chodkiewicz (Paris 1988), 415.

48. Ibn ʿArabî, *K. al-isfār ʿan natā'ij al-asfār*, *Le dévoilement des effets du voyage*, ed. and trans. D. Gril (Paris 1994), 4-6.

evolution. But the adverb "purely" must be used with caution, for the material constitution also comes into play. For al-Shaykh al-akbar, too, the macrocosm corresponds to the microcosm[49]. Adam is the summation of the constitution of the material universe. He is endowed with a mind and a soul corresponding to the universal mind and soul. The dense Adamic body is composed mainly of earth and water. His spirit (*rūḥ*) is itself a subtle, imaginal body centered on the heart[50]. It is on earth as a replica of the universal intellect, the Muḥammadan reality. "The first thing that God created was the intellect, and it is from this intellect that these other intellects were manifested through the intermediary of natural souls (*al-nufūs al-ṭabīʿiyya*). This intellect is the first of the fathers; God called it 'spirit' (*rūḥ*) in His glorious book"[51]. The human form is created "of divine origin" (*ʿalā l-ṣūra al-ilāhiyya*). This means that man was created to be a perfect being reflecting all the divine names. According to a *ḥadīth*, God created Adam in His own image, that is, in all His beautiful names. This point is essential. Man is a complete expression of the whole universe, of the three realms (summary, microcosm, and as an image of the world in miniature). He is a microcosm encompassing the whole macrocosm. In most cases, however, this form remains in a purely potential state. It is fully realized only in the saint, the *walī* of God. The goal of Sufism is to actualize these divine names, station by station. As for the one who does not correspond to this elevation, «he is not really a human being, but rather an animal whose external form resembles that of a human being"[52].

49. On microcosmism in Ibn ʿArabī, see, for example, Ibn ʿArabī, *al-Futūḥāt al-Makkiyya* (Cairo 1911), 2:71, in answer to al-Tirmidhī's question about the precedence of Adam over the angels; and Ibn ʿArabī, *al-Futūḥāt*, 3:315, trans. W. Chittick, *The Sufi Path of Knowledge* (Albany 1989), 359. M. Takeshita, *Ibn ʿArabī's Theory of the Perfect Man and Its Place in the History of Islamic Thought* (Tokyo 1987). Now, Sophie Tyser, *Dans les horizons et en eux-mêmes, L'homme, le monde et la Révélation dans l'enseignement d'Ibn al-ʿArabī* (PhD diss., Paris Sciences et Lettres - École Pratique des Hautes Études, Paris 2022).

50. See, for example, Ibn ʿArabī, *al-Futūḥāt*, 3:156. A certain vacillation in the vocabulary sometimes appears: the body and its faculties of growth, its humors, etc. is governed by the rational soul/spirit, for example, Ibn 'Arabî, *K. al-isfār*, 17-19.

51. Ibn ʿArabī, *al-Futūḥāt*, 2:66-67, in answer to al-Tirmidhī's question about the relationship between the prime intellect and the particular intellects of men.

52. «… *fa-laysa bi-insān, wa-innamā huwa ḥayawān, yushbihu fī l-ṣūra ẓāhir al-insān*», Ibn ʿArabī, *al-Futūḥāt*, 3:154; Chittick, *The Sufi Path*, 275-76.

Ibn ʿArabī quotes Jābir several times, but as far as I know only in the context of the science of letters. He notes that Jābir separates the hamza from the alif as if they were two separate letters[53]; he does not mention, and perhaps did not know, that this distinction is based on the order of Shīʿī metaphysics: it is the separation of the silent (*ṣāmit*) alif from the vocalized hamza, the speaking Imām.

Alchemy as such is of only passing interest to Ibn ʿArabī, the Shaykh Akbar. He alludes to it in chapter 167 of *al-Futūḥāt al-makkiyya*, entitled *Bāb fī maʿrifat kīmiyāʾ al-saʿāda* ("Chapter on the knowledge of the alchemy of happiness"). This chapter compares the scientific journey of the one who trusts in rational approaches (*naẓar*) with that of the follower of the prophetic tradition. It begins by noting that there is an analogous relationship between the universal soul and nature, the particular human spirit (*rūḥ, nafs*) and the human body, the partial souls and the mineral bodies they animate. This point is subtle because these three relationships are not identical but parallel, and their evolution allows us to clarify them in relation to each other. In fact, the souls of the minerals, like the souls of human beings, are of different degrees; and each soul of each compound seeks its own completeness, which differs from that of the others by its nature and by its accidents. Ibn ʿArabī comments on the two different ways of understanding these processes in terms of the journey of two pilgrims traveling from one celestial sphere to another. The spheres influence the natural bodies, according to the teachings of traditional astrology[54]. He explains that there are innumerable causes influencing the sublunary world that affect natural souls without the earthly observer (*ṣāḥib al-naẓar*) having access to them. The "rational" inquirer cannot understand the true metaphysical causes that come from the divine order. Ibn ʿArabī himself states that he has received this hidden science, which is "the science of the elixir through natural alchemy" (*ʿilm al-iksīr fī l-kīmyāʾ al-ṭabīʿiyya, fa-hādhā huwa iksīr al-ʿārifīn*); and that he is only revealing its mean-

53. *Kitāb al-mīm wa-l-wāw wa-l-nūn*, 85. In Jābir's speculations on letters, the hamza and alif are not dissociated.

54. In premodern times, it was widely believed that the stars gravitating on the celestial spheres exerted a constant and determinative influence on the various realms of terrestrial life; they were regarded as intermediaries of the divine will. As a result, the extremely rigorous calculations of medieval astronomers concurred with the speculations of the highly influential astrologers of the time.

ing here by divine order to warn the Muslim community and the human community.

Ibn ʿArabī shows a real knowledge of alchemical theory, and especially of its very close connection with astrology. Moreover, he believes that for him, alchemy (*kīmiyā'*) is a true form of wisdom, celestial and angelic, a mirror of the numerical harmonies of the universe. However, the rest of the text shows that it serves to support his central point, namely that followers of the prophetic life are transformed; they are not deficient like those who follow reason alone. The parallelism between alchemy and mysticism continues throughout the text. Ibn ʿArabī explains the two ways alchemy transforms metals into gold; this is its *aṣl* and purpose[55]. The first is the science of letters, letters that carry the divine creative breath, and modify the metaphysical structure, the root of what exists in the divine order. This first process enabled Jesus to give life to a clay bird and to raise the dead[56]. The second process corrects the inadequacies of what exists at the natural level.

Man is also called to transform himself[57] so that he can attain a dimension of saintliness (*walāya*). Transformation consists in conforming to the higher worlds, and in freeing oneself from the usual attachments to this world and the body. Each degree of knowledge is a transformation and continues until one transcends the sensible world and enters the intelligible world[58]. Note that all these transformations take place according to the norms of traditional Sufism. Through the account of the journey of the two seekers, the "rational" and the worshiper, Ibn ʿArabī offers a cosmological picture of the spiritual evolution taught in classical Sufism. The integral human

55. One takes place by rebalancing the properties of the elementary qualities. The concept of «balances» is mentioned, but not the work of Jābir. The other way is through the production of an elixir that transforms them.

56. Ibn ʿArabī, *al-Futūḥāt*, 2:274-75.

57. Man is transformed by his gestation, birth, growth, adulthood, death, and even beyond his physical death, see Ibn ʿArabî, *K. al-isfār*, 6. This transformation takes place in and through his body, for a man cannot understand himself without his body: «*Dhālika anna al-rūḥ lā yaʿqil nafsa-hu illā maʿa hādhā l-jism, maḥall al-kam wa-l-kathra, wa-lam yashhad nafsa-hu qaṭṭ waḥda-hu maʿa kawni-hi fī nafsi-hi ghayr munqasim*», Ibn ʿArabī, *al-Futūḥāt*, 2:618; trans. Chittick *The Sufi Path*, 235.

58. Ibn ʿArabī, *al-Futūḥāt*, 2:279-83. In the ascensional journey, the Muḥammadan traveler goes beyond the material spheres.

transformation leads to total submission (*ʿubūdiyya*) and annihilation (*fanāʾ*) in God[59]. The pilgrim who follows the Prophet

> knows from this presence the science of the elixirs that transform the mineral bodies through the spirit that it [the science] contains. He contemplates Michael and Abraham and the science of the provisions (*arzāq*) which they possess to nourish forms and spirits, and which will maintain them in existence. He knows which elixir is food for which particular metal, which he can turn into gold or silver after it has been iron or copper: this is the good health of that metal and the removal of the disease that has entered its mine and turned it into iron[60].

From there a new ascent can begin, that of the knowledge of the material degrees of substances[61]. The end of the chapter indicates that resurrection is the completion of the human transformations.

In short, Ibn ʿArabī alludes to the evolution of metals. He speaks of the balances of the spiritual bodies[62] and of the degrees of soul present in the mineral bodies, but in fact the alchemical references serve him more as a reservoir of images and parallels to trace spiritual growth. As S. Tyser writes,

> In this passage where Ibn al-ʿArabī alludes to the parallelism between the growth of minerals and that of human beings, as well as to the evils that can tarnish the original purity of minerals and that of humans, he refers to the path of equilibrium, the path that leads human beings in the direction of the "excellent, golden and perfect city"[63].

He who achieves this, Ibn ʿArabī points out, is no longer subject to transmutation to that which is inferior to this perfect form of gold, gold corresponding to the degree of perfection[64].

59. See, for example, Chittick *The Sufi Path*, 309.
60. Ibn ʿArabī, *al-Futūḥāt*, 2:282.
61. Ibn ʿArabī, *al-Futūḥāt*, 2:282.
62. Ibn ʿArabī, *al-Futūḥāt*, 2:275, about Joseph's ability to interpret sensitive apparitions, dreams.
63. Tyser, *Dans les horizons et en eux-mêmes*, 261.
64. Tyser, *Dans les horizons et en eux-mêmes*, «Dans ce passage où Ibn al-ʿArabī fait allusion au parallélisme entre la croissance des minéraux et celle des êtres humains, ainsi qu'aux maux qui peuvent ternir la pureté originale des minéraux comme celle des hommes, il fait référence au chemin de l'équilibre (*ṭarīq al-iʿtidāl*), voie (*maḥağğa*) qui mène l'être humain en direction de la 'cité excellente, dorée et parfaite' (*al-madīna al-fāḍila al-ḏahabiyya al-kāmila*). Celui qui y parvient, précise le maître andalou, cesse d'être sujet à la transmutation

Alchemy is not, as in Jābir, the engine of a transformation of the human compound. If we look at the reasons for these differences, we can make some observations. Despite certain similarities, there are profound differences between the two systems.

(1) According to Ibn ʿArabī, the mystic does not expand his consciousness by working in an object outside himself, like a laboratory. The assistance of alchemical operations is not invoked as useful for the advancement of spiritual knowledge. If Jesus is a master of transformation, it is because the secrets of language were revealed to him, not because he worked in a material way. This progression takes place through the application of religious law, and/or Sufi exercises; but these are not an absolute requirement. The seeker of truth approaches the divine presence and understands it, not by himself, but only through a divine impulse. Not only is this a matter of divine mercy, but above all, the whole mystical experience is a progressive awareness of the divine omnipresence: it is God who contemplates Himself through the human form. For Ibn ʿArabī, transmutation can be summarized as "the self-disclosure of God", to use Chittick's title.

We find nothing similar in Jābir's corpus, which describes procedures and teachings designed to guide the reader on a path of understanding and personal action. Of course, Ibn ʿArabī also describes the path that leads the Sufi to the path of saintliness (*walāya*). But he seeks to awaken a knowledge that germinates within the human individual, who is a mirror of divine attributes. We are far from the orphan of Jābir, who speaks of a gradual rise to the level of the Imām through tireless personal research into the alchemical mesocosm. Material alchemy has a truly redemptive role. It is about the liberation of souls immersed in matter and ignorance. This progressive liberation takes place through work on the alchemical mesocosm and the material elaboration of the philosopher's stone. It is enlightening, but not mystical in the Sufi sense. It even has an eschatological dimension, that of the liberation of the whole human race, as explained in the *Kitāb al-bayān*. Ultimately, it will make the return of the awaited Imam possible. According to Ibn ʿArabī, transmuta-

vers ce qui est inférieur à cette forme d'or parfaite (*al-istiḥāla ilā l-anqaṣ ʿanhā*), l'or correspondant au degré de la perfection (*darajat al-kamāl*)», Tyser, *Dans les horizons et en eux-mêmes*, 251–52.

tion is a way to reach the divine eternal present. Jābir works for the future of humanity, for the coming of a perfect man. Can we compare this allusion to the coming of the "great man" (*al-insān al-kabīr*) of Jābir with Ibn ʿArabī's idea of the perfect man (*al-insān al-kāmil*)? Given the highly allusive nature of Jābir's writings and their specifically Shīʿī expressions, it seems risky to attempt such a comparison.

(2) For Ibn ʿArabī, alchemy is purely "vertical" and spiritual: it is the alchemy of happiness, the only one that matters. As James Morris writes:

> [...] the process of "dissolution" or "disassembly" into its constituent elements (organic, mental, psychic and spiritual) of the original "composition" (*tarkib*) constituting the psychosocial "self" (*dhat*) in the broadest sense – as opposed to the *sirr*, the "innermost reality" or "secret" that is the true essence of each individual. The terms "dissolving" (*tahlil*) and "reintegration" (*tarkib*) are drawn from a larger body of alchemical vocabulary which Ibn ʿArabi uses in this spiritual sense throughout the *Futuhat*, most notably in chapter 167...[65]

The *kīmiyā' al-ṭabīʿa* is only a discrete mirror of it, and for good reason: essences do not change in any way. As Ibn ʿArabī writes: *aʿyān al-ṣuwar lā tanqalib* or *al-istiḥālāt muḥāl* is the sensitive perception that varies, as the example of Moses' staff shows[66]. In other words, "transmutation" can only take place in order to realize the substance that constitutes it from all eternity: lead and silver are destined to become gold because gold is their essence. But, a prophet or a true *ʿārif* can manifest an object or a being in the form (*ṣūra*) of another being. Moses' staff suddenly took the form of a snake, but it did not become a snake in its essence. God took away some of its attributes and created others in it. The knower (*ʿārif*) knows how to discern the *ʿayn*, the *jawhar* (essence) of things beyond the sensible form. Like Joseph, he knows the balances of imaginal appearances. He is not deceived by earthly forms. He understands that everything is only theophany (*tajalliyāt ilāhiyya*)[67].

65. J. W. Morris, «The Spiritual Ascension: Ibn ʿArabī and the Miʿrāj», in *JAOS* 107, no. 4 (1987): 629-52 [pt 1]; and 108, no. 1 (1988): 63-77 [pt. 2], see 639 n.53.

66. Ibn ʿArabī, *al-Futūḥāt*, 2:277-78.

67. Ibn ʿArabī, *al-Futūḥāt*, 2:282, 275. Subtle bodies cannot become dense; but they can appear in the world of nature; see Chittick, *The Sufi Path*, 141.

Jābir's perspective is profoundly different. First, as we have seen, he asserts that transformations have no real limits, that any substance can be transformed into any other through variations in the elemental qualities. In fact, he does not speculate about the eternity of substances. He is not a metaphysician; he uses Neoplatonism as a tool to explain his vision of transformations.

(3) Moreover, Ibn ʿArabī's system of correspondence gives a central role to the Qur'ān. The correspondences are largely textual; for example, the letters of the alphabet, and the divine names are the basic structures of the whole universe:

> The manifestation of the letters in the path of the breath and in words is similar to the manifestation of the cosmos from the Cloud, which is the Real's All-merciful Breath, within the ordained levels along the supposed extension – not within a body – which is the Void filled by the cosmos[68].

The mixture of soul and matter in the sublunary world is a linguistic, syntactic combination. More specifically, it is the text of the Qur'ān that plays the role of the "mesocosm" here.

In Jābir, too, language, the balance of letters, occupies a central place. But it owes little to the Qur'ānic word. It is based on the common use of the common language, and indeed of any language, not just Arabic. There is scarcely a question here of the sacred dimension of the Arabic language. The perspective owes much to the philosophical traditions of late antiquity. References to the Qur'ān are numerous in Jābir's corpus, but one does not find anything resembling Ibn ʿArabī's exegetical approach of *iʿtibār*[69]. More profoundly, the balances are not on the order of language but of number; they are mathematical matrices, not linguistic ones.

(4) Finally, I comment on their literary forms. As explained above, for Jābir, language is multidimensional and dynamic. Indeed, Jābir understands the world as a continuous and complex process, one that is physical, energetic (in relation to the universal soul), and spir-

68. Ibn ʿArabī, *al-Futūḥāt*, 2:395, quoted by Chittick, *The Sufi Path*, 129.

69. *Iʿtibār* involves commenting on the Qur'ān not only by means of reasoning, but also by allowing oneself to be guided by intuition, by the spiritual «taste» of the moment. In this way, one can go beyond the apparent meaning of the sacred text to reach its hidden meaning.

itual. He seeks to understand how these multiple dynamics are at work in an alchemical operation. Hence his discourse breaks the passage from one register to another. By contrast, for Ibn ʿArabī, language does not accompany transmutation. It is, of course, also a language of awakening. It obeys an associative, exegetical logic that moves back and forth between a text (e.g., the Qur'ān) and a spiritual state of knowledge that has nothing to do with the reality of the external, sensible world. It is a fragmented, impressionistic language describing successive *maqāmāt* (stations), numerous "stills". Hence its great prolixity. This is, of course, only a linguistic observation. The two authors are not concerned with the same thing: Jābir is concerned with concrete alchemical processes, and Ibn ʿArabī with the evolution of souls toward saintliness. But it seems to me that there is much more to this way of seeing the world, even a way of living in this world. At the beginning of this chapter, we suggested that these two positions would express paradigms present in the culture of Islam from its first centuries. Alchemy presents itself as a way of universal wisdom, hence its proximity to Sufism. As Regula Forster points out:

> But alchemy was also a natural philosophy that sought to explain the world. It was believed that whoever was able to produce the *prima materia*, the base material that contained no accidental qualities, and transform it into gold by means of the elixir, had understood the principles of the world and, consequently, had gained a deep insight into the nature of God himself. Arabic-Islamic alchemy therefore developed a strong affinity with Sufism: some Sufis used alchemical terms to describe their experiences, and alchemical treatises were attributed to Sufi authorities such as al-Ḥasan al-Baṣrī (d. 110/728), Dhū l-Nūn al-Miṣrī (d. 246/861), al-Junayd (d. 298/910), or even Abū Ḥāmid al-Ghazzālī (d. 505/1111)[70].

Indeed, one could outline obvious convergences. But this vision is not identical to the Sufi approach. We must be very careful in making comparisons between these two forms of wisdom. While it is possible that some Sufis practiced alchemy, or that some alchemists had mystical tendencies, it is likely that the two esoteric disciplines never merged into a single line of thought. It is interesting to note

70. R. Forster, «Arabic Alchemy: Texts and Contexts», in *al-Qanṭara* 37 (2016), 270-71. Needless to say, these attributions are apocryphal, as suggested by the titles of some works attributed to them.

Ibn al-Qifṭī's comment on Jābir: "In addition [to his alchemical works], Jābir mastered many philosophical sciences, and he followed the path of the 'inner science', i.e., the school of Muslim Sufis like al-Ḥārith b. Asad al-Muḥāsibī, Sahl b. 'Abdallāh al-Tustarī, and their like"[71].

At the time of Ibn al-Qifṭī, in the seventh/thirteenth century, a kind of proximity between alchemy and mysticism was suggested. The two are not confused, but brought closer together, as if they belonged to the same horizon. The fundamental differences between Jābir's alchemy and Sufism proper, noted above, are not mentioned at all. They are two different visions of man and his destiny; different visions that are not opposed or antagonistic, like two companions traveling in the same direction in different vehicles.

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71. Ibn al-Qifṭī, *Tārīkh al-ḥukamā'*, ed. J. Lippert (Leipzig and Cairo 1903), 160: «[…] *wa-kāna ma'a hādhā mushrifan 'alā kathīr min 'ulūm al-falsafa wa-mutaqallidan li-l-'ilm al-ma'rūf bi-'ilm al-bāṭin, wa-huwa madhhab al-mutaṣawwifīn min ahl al-islām ka-l-Ḥārith b. Asad al-Muḥāsibī, wa-Sahl b. 'Abd Allāh al-Tustarī wa-naẓā'iri-him*».

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ABSTRACT

Pierre Lory, *Jābir b. Ḥayyān's Alchemy, Ibn ʿArabī, and the Reading of the Book of Nature*

The debate over the possibility of the transmutation of matter involves profoundly divergent visions of the world, of man, and of God. The comparison attempted here between the conceptions of Jābir b. Ḥayyān and Ibn ʿArabī illustrates quite distinct ideas. According to Jābir, no being on earth has a fixed essence: all creation is subject to transmutation. A man's effort to acquire the science of these transmutations is itself transformative, elevating souls mired in ignorance. This is why, for Jābir, alchemy is the philosophy par excellence; this is why he believed it would pave the way for a new humanity, at the coming of the Mahdī. According to Ibn ʿArabī, the expansion of consciousness does take place; it is described in terms of the Sufi spiritual path, but it is the effect of divine grace with the saint (*walī*). Material alchemy is known and recognized, but its role remains discrete, because for him the essences of things are immutable in God. The renewal of humanity is also conceived by Ibn ʿArabī, but it is the work of God's self-realization.

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Elaine van Dalen

WHO ARE THE SETHIANS IN THE *NABATEAN AGRICULTURE*?

In memory of Jaakko Hämeen-Anttila

The Nabatean sages of *al-Filāḥa al-nabaṭiyya* (*Nabatean agriculture)* were in sectarian conflict with a faction called the Sethians (Banī/Shīʿat Ishīthā). The identity of these Sethians has not yet been established in the scholarship; they may well be a fictional group devised by one of the work's anonymous Syriac compilers, or its fourth-/tenth-century translator Ibn Waḥshiyya (d. ca. 318/930). The *Nabatean agriculture* presents them as a group of pagans with Jewish characteristics, such that they resembled and possibly preceded the Kentaeans who lived in Sassanian southern Mesopotamia in the fifth century CE. The Nabatean Sethians appear to be related to certain groups among the Ṣābians of the Sawād in southern Iraq, mentioned in classical Arabic sources, but not to the Mandaeans. Although the *Nabatean agriculture* may only be used as a historical source with great care, its account of the Sethians may prove valuable to further understand the religious landscape in southern Sassanid Iraq, the history of Mandaeaism, and the development of late antique Sethian attitudes. The Sethians may also advance insight into the several editorial layers of the *Nabatean agriculture* itself.

Nabatean Sethians: Status Quaestionis

Previous scholarship has attempted to identify the Sethians and the biblical patriarchs in the *Nabatean agriculture* in various ways. The French orientalist Étienne Quatremère held that the figures of Adam, Seth, and others were borrowed from the Bible through the mediation of Jews[1]. Daniel Chwolson objected, stating that these

1. Daniel Chwolson, *Über die Überreste der Altbabylonischen Literatur in Arab. Übersetzungen* (St Petersburg 1859), 44.

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characters, who in name vaguely resemble their biblical equivalents, are otherwise completely different and so cannot have been borrowed from the Bible[2]. Jaakko Hämeen-Anttila similarly remarked that those characters with biblical names in the *Nabatean agriculture* "have little to do with their Biblical counterparts"[3], but further asserts that similar "changes in the evaluation of Biblical characters are well known from several traditions in the area (Gnostics, Mandaeans, even Hellenistic magic), which does not help us in identifying any particular group as being behind these changes". He argues that "the redactor responsible for these names knew the Biblical tradition, at least by hearsay", and that these names probably derive from the Syriac version[4]. The editor of this version of the *Nabatean agriculture* "was already heavily influenced by either Judaism or Christianity, or both, in some of their forms", as indicated by these biblical elements[5]. Early scholars of the *Nabatean agriculture* indicated the Sethians are a coded term for Muslims, but as Hämeen-Anttila pointed out, numerous other descriptions, especially references to their polytheism, make this not just unlikely but impossible[6].

Ernest Renan recognized a gnostic connection in the Sethians, asserting that they relate to "Seth and the family of Sethians who played such an important role in the first centuries of our era"[7]. In his earlier work Toufic Fahd pointed out that the figures of Adam and Seth in the *Nabatean agriculture* resembled their role in Manicheanism[8]; he posited Pahlavi as a source language for the work. Pinella Travaglia has suggested that the Sethians might be identified as the Ṣābians of Ḥarrān[9]. She argues that Seth in the Ṣābians tradition is identified with Agathodaimon, the Ḥarrānian

2. Chwolson, *Über die Überreste*, 44.
3. Jaakko Hämeen-Anttila, *Last Pagans of Iraq* (Leiden 2006), 24.
4. Hämeen-Anttila, *Last Pagans of Iraq*, 24.
5. Hämeen-Anttila, *Last Pagans of Iraq*, 29.
6. Hämeen-Anttila, *Last Pagans of Iraq*, 295 n. 276, 274 n. 245.
7. E. Renan, «Mémoire sur le traité de l'agriculture nabatéenne», in *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 4 (1860), 54.
8. Toufic Fahd, «Retour à Ibn Waḥshiyya», *Arabica* 16, no. 1 (1969), 87.
9. P. Travaglia, «Asclepio e la produzione artificiale della vita nella Agricoltura Nabatea», in *Hermetism from Late Antiquity to Humanism,* from La tradizione ermetica dal mondo tardo-antico all'umanesimo: atti del Convegno internazionale di studi, Napoli, 20-24 November 2001, ed. Paola Lucentini, Ilaria Parri, and Vittoria Perrone, (Turnhout 2003), esp. 320-21.

prophet[10]. This idea is found in the sixth-/twelfth-century work of al-Shahrastānī and in the works of other Arabic writers[11]. However, although the Ḥarrānians worshiped a prophet called Seth, he does not typically appear to be viewed as identical with Agathodaimon, whom they acknowledged as a separate prophet. Seth, Agathodaimon, and Hermes were considered the three Urānis, central prophets in the Ḥarrānian tradition[12]. Agathodaimon and Hermes are mentioned in the *Nabatean agriculture*, too, but only twice in one passage[13]. They are presented as foreign to the Nabatean belief system[14], and do not seem to be connected to the Sethians in the work. A fourth Ḥarrānian figure, Bābā, is mentioned, too[15]. This undoubtedly suggests a familiarity with the Hermetic tradition among the Nabateans[16], but does not necessarily tie the Sethians to the Ḥarrānians[17]. Travaglia further points out that al-Birūnī called the Ṣābians followers of Seth, and that some Sethian customs seem similar to those of the Ṣābians of Ḥarrān[18]. Although some customs of the Sethians are no doubt similar to the Ḥarrānian Ṣābians, the Sethians most likely have more affinity with the Ṣābians of southern Iraq, as will be discussed below.

10. Travaglia, «Asclepio», 320.

11. E. Cottrell, «Adam and Seth in Arabic Medieval Literature», *ARAM Periodical* 22 (2010), 545; T. Gluck, *The Arabic Legend of Seth, the Father of Mankind* (PhD diss., Yale University 1968), 97–99.

12. K. Van Bladel, *The Arabic Hermes: From Pagan Sage to Prophet of Science* (Oxford 2009), 188.

13. Toufic Fahd (ed.), *Ibn Waḥšiyya*, *L'agriculture nabatéenne. Traduction en arabe attribuée à Abū Bakr Aḥmad b. 'Alī al-Kasdānī connu sous le nom d'Ibn Waḥšiyya (IV/X^e siècle) [= al-Filāḥa l-nabaṭiyya]*, 3 vols. (Damascus 1993–98), 1:499, 500.

14. Cf. Hämeen-Anttila, *Last Pagans of Iraq*, 181.

15. Fahd (ed.), *L'agriculture nabatéenne*, 1:184.

16. Cf. Van Bladel, *The Arabic Hermes*, 97.

17. Moreover, as Hämeen-Anttila points out, «Travaglia… identifies Dawānāy with Hermes and, in general, reads the *Nabatean Agriculture* in Hermetic terms. There are some undeniable similarities between the Hermetic tradition and the *Nabatean Agriculture* but they are not conclusive enough to warrant any final conclusions.» Hämeen-Anttila, *Last Pagans of Iraq*, 169 n. 3.

18. Cf. Van Bladel, *The Arabic Hermes*, 69–70.

The Origins and Geography of the Nabatean Agriculture

In the early fourth/tenth century, the Nabatean scholar Ibn Waḥshiyya (d. ca. 930) allegedly translated *al-Filāḥa al-nabaṭiyya* (*Nabatean agriculture*) into Arabic from what he called ancient Aramaic (*al-siryāniya al-qadīma*). It was subsequently transmitted by his student al-Zayyāt (d. 340/951). Among modern scholars, Chwolson, Ernest Renan, Ullmann, Nöldeke, and others have variously accepted the work's own claims of being an ancient Babylonian compilation or rejected it as a fourth-/tenth-century fabrication. While Ibn Waḥshiyya's role as a translator has long been doubted, Hämeen-Anttila has convincingly argued that the work is a fourth-/tenth-century translation from a Syriac version that can be dated no earlier than the fifth century CE. Based on the Greek material in the work, Hämeen-Anttila argues that it is unlikely that the work dates from a time before such material became widespread in Syriac[19]. Ibn Waḥshiyya and other editors added material from a variety of sources including the Greek Vindianus, Aristotle, and Theophrastus, whose ideas they attributed to Nabatean sages[20]. It is possible, however, that such Greek material was a later addition to older Syriac material, and that Nabatean sages composed material themselves at an earlier date. Hämeen-Anttila agrees that the religious practices in particular probably indicate the presence of older material, as he points out, «[t]here is also a layer of popular beliefs which often sounds Mesopotamian enough and… demonstrably goes back to Ancient Syro-Mesopotamian religion"[21]. Hämeen-Anttila is hesitant, however, to establish an earlier date for the latest Syriac version because there is no trace anywhere in the corpus before it was translated by Ibn Waḥshiyya. Therefore, he says the Syriac version

19. Hämeen-Anttila, *Last Pagans of Iraq*, 29.

20. These editors were compilers responsible for earlier versions of the work. They collected existing material, possibly deleted parts, added other passages, and added their own writing. In the text, two fictional editors are mentioned by name, Qūthāmā and Yanbūshād, in addition to the [fictional] composer of the first version of the work (*ṣadr al-kitāb wa-ibtidā'uhu*), Ḍughrīth or Ṣughrīth. These figures are said to have lived tens of thousands of years apart. See Fahd (ed.), *L'agriculture nabatéenne*, 1:10.

21. Hämeen-Anttila, *Last Pagans of Iraq*, 16.

might even be as late as the second/eighth century. However, the rural location of the last Syriac editor Qūthāmā and the attitudes of secrecy toward religion (*dīn*) and knowledge (*ʿulūm*)[22], may explain why the work did not circulate in other sources.

The *Nabatean agriculture* itself claims it was composed by three editors, whose names appear to be coded. The oldest sage Sugrīth lived thousands of years before the second editor Yanbūshād b. Kāmāṭā. Yanbūshād was a monotheist ascetic, who, as local villagers believed, rose to heaven after his death. Yanbūshād is said to have spoken both Aramaic (Kardānī) and Arabic due to his many travels. He wrote a book called *Kitāb khawāss ʿilāj al-manābit*. He was so loved that after his death people wept for him as they did for the ancient Mesopotamian deity Tammūz. Yanbūshād was not known to Ibn Waḥshiyya's Nabatean contemporaries, and Hämeen-Anttila suggested that Yanbūshād was likely a fictional character invented by Qūthāmā. Although I agree that Yanbūshād was probably a constructed protagonist, some of his descriptions may contain truthful elements.

The most recent sage, Qūthāmā l-Qūqānī, presents himself as the last editor of the work, and is generally taken as the compiler of the Syriac version that Ibn Waḥshiyya translated. Toufic Fahd tried to relate him to the Edessan sect of the Quqites, arguing he was a chief of their sect[23]. However, little in the *Nabatean agriculture* seems to point at a Quqite background[24]. Qūthāmā owned estates in the Iraqi countryside, at Ṭayzanābādh[25] and Bet Garme (Bāgarmā) and lived

22. Fahd (ed.), *L'agriculture nabatéenne*, 1:6-7.

23. Fahd (ed.), *L'agriculture nabatéenne*, 3:327. The Quqites were a sect originating in Edessa in the second century CE, founded by Qūq, who did not use the New Testament, but adhered to the Old Testament. See H. Drijvers, «Quq and the Quqites», in *Numen* 14.1 (1967): 104-29.

24. Hämeen-Anttila finds the connection unwarranted and points out that *nisba*s usually refer to places. A work by Pseudo-Teukros, the *Kitāb Tashkalushana al-Bābilī l-Quqānī fī suwar daraj al-falak* (as mentioned by Ibn al-Nadīm) is likewise attributed to one Quqānī. Kayvan Tahmasebian relates this *nisba* to Aqar Quf, as does Hämeen-Anttila. On the identification of this work, see Kayvan Tahmasebian, «Arbitrary Constellations: Writing the Imagination in Medieval Persian Astrology, with Translations from Tanklūshā (11th-12th century)», in *Licit Magic - Global Lit Working Papers* no. 7 (2021), online: http://dx.doi.org/10.17613/mwtj-p261 (consulted 14 March 2024).

25. Ṭayzanābādh was situated one mile from al-Qādisiyya, on the way to the Hijaz (Yohanan Friedman (trans.), *The History of al-Ṭabarī*, vol 12: *The Battle of*

in Babylon (Bābil)[26]. In addition, Qūthāmā had some monotheist tendencies that Ibn Waḥshiyya believed he tried to hide out of fear. In Qūthāmā's time, the Kanʿānites, who were connected with the Jordan River and were especially devoted to Jupiter, reigned over Babylon.

Hämeen-Anttila situates an edited layer of the text in northern Mesopotamia, while otherwise he associates the geography of the work with the Sawād of Iraq[27]. The *Nabatean agriculture* was clearly compiled in a central-southern Mesopotamian context. Ibn al-Nadīm describes Ibn Waḥshiyya as belonging to the people of Qussin, which was located near Kufa[28]. This gives Ibn Waḥshiyya himself a central Iraqi location, similar to Qūthāmā. This area formed part of various empires. It was known as Mesene, Maysān, or Charasene under the Seleucids and the Parthians, and part of the Asoristan province in the Sassanid Empire, which was divided into Babylon, Kaskar, and Maysān[29]. This area was known in Sassanid times for its flourishing agriculture thanks to its extensive irrigation systems; these were damaged at the time of the Islamic conquest but restored in Umayyad times. The city of Sūrā, the region in which a Jewish academy was located, is mentioned in the *Nabatean agriculture* as the hometown of the Nabatean sage Māsā[30], although the Jews, according to the Talmud, distanced themselves from the Jews in Maysān, as they viewed that as a separate region.

al-Qādisiyyah and the Conquest of Syria and Palestine (Albany 1992), 60 n. 233. Al-Qādisiyya was located at the border of the Sawād and the Arabian desert, southwest of Ḥīra, west of the Euphrates River. The historian Yāqūt al-Ḥamawī (d. 626/1229) described it as «a resort, surrounded by vineyards, winepresses, trees, and inns. It was a place of amusement and idleness». Yāqūt al-Ḥamawī, *Muʿjam al-buldān*, ed. Ferdinand Wüstenfeld, *Jacut's Geographisches Wörterbuch*, vol 3 (Leipzig 1868), 3:569-70, as cited by Friedman. It also features in the poetry of Abū Nuwās, *Khamriyyat: poesia bàquica*, trans. Jaume Ferre and Anna Gil (Barcelona 2002), 283.

26. Fahd (ed.), *L'agriculture nabatéenne*, 2:1046.

27. Hämeen-Anttila, *Last Pagans of Iraq*, 14, 18.

28. Ibn al-Nadīm, *The Fihrist of Ibn al-Nadīm: A Tenth-Century Survey of Muslim Culture*, trans. Bayard Dodge, 2 vols. (New York 1970), 2:731.

29. Michael G. Morony, «Continuity and Change in the Administrative Geography of Late Sasanian and Early Islamic al-ʻIraq», *Iran* 20 (1982): 1-49.

30. John Simpson, «The Land behind Ctesiphon: The Archaeology of Babylonia during the Period of the Babylonian Talmud», in *The Archaeology and Material Culture of the Babylonian Talmud* (Leiden 2015), 18.

Sethians and Ṣābians in Classical Arabic Sources

In the fourth/tenth century and onward several Arabic sources mention "Sethians" living in southern Iraq. Some of these references indicate the Mandaeans, who are also called Ṣābians. The term Ṣābians, which occurs in the Qur'ān, has been widely studied. The fourth-/tenth-century Arabic sources used the term Ṣābian broadly, to describe pagan Ḥarrānians as well as various groups living in southern Iraq[31]. With the exception of the Ṣābian followers of Mandaeaism, Ṣābians and Sethians seem to have adhered to a type of paganism quite similar to what those in the *Nabatean agriculture* followed.

The *Nabatean agriculture* exhibits many Ḥarrānian features. In spite of their distance from the northern Mesopotamian city state of Ḥarrān, the Nabateans resembled the Ḥarrānians in their worship of the astral deities, and their emphasis on the Moon and Sun[32]. The historian al-Mas'ūdī saw at the door of the Ṣābian meeting place in Ḥarrān an inscription in Syriac letters which read "Man is a celestial plant. In fact, man resembles an upturned tree, the root being turned towards the sky and branches [sunk] in the ground"[33]. This statement, *al-shajara insān maqlūb ilā asfal wa-l-insān shajara maqlūb ilā fawq*, is also found in the *Nabatean agriculture*, as noted by Toufic Fahd[34]. The southern Mesopotamians in the *Nabatean agriculture* and the Ḥarrānians undoubtedly shared many pagan beliefs. However, these similarities are not necessarily related to the Sethians, and are not enough to exclusively link the Sethians to Ḥarrān.

Hämeen-Anttila argued that the community Ibn Waḥshiyya describes in the *Nabatean agriculture* "might well be labeled the Babylonian Sabians in contrast to both Ḥarrānian Sabians and Man-

31. K. van Bladel, *From Sasanian Mandaeans to Ṣābians of the Marshes* (Leiden 2017), 14; Hämeen-Anttila, *Last Pagans of Iraq*, 50. For a discussion of various Ṣābians and the identification of south Ṣābians to Mandaeans, also see Ş. Gündüz, *The Knowledge of Life: The Origins and Early History of the Mandaeans and Their Relation to the Ṣābians of the Qur'ān and to the Ḥarrānians* (Oxford 1994); Daniel Chwolsohn, *Die Sabier und Sabismus* (St. Petersburg 1856).

32. According to Green, it was only during the Hellenistic period that the Sun gained prominence in Mesopotamia. T. Green, *The City of the Moon God: Religious Traditions of Ḥarrān* (Leiden 1998), 64.

33. Michel Tardieu, *Le manichéisme* (Paris 1981), 13.

34. Fahd (ed.), *L'agriculture nabatéenne*, 2:973.

daeans (the Sabians of al-Baṭā'iḥ)"[35]. Ibn Waḥshiyya references both the Babylonian (Bābilī) and the Ḥarrānian (Ḥarnānī) Ṣābians in the *Nabatean agriculture*. He does not associate either of them with the Sethians, but does seem to consider both as descendants of the Nabateans and the ancient people in the book who cried for Tammūz and Yanbūshād. None of these Ṣābians, he finds, has any precise knowledge regarding the origin of the crying for Tammūz, nor do they know Yanbūshād[36].

Ibn al-Nadīm (d. ca. 385/995) identifies a number of different Ṣābians. He first discusses the Ṣābians of Ḥarrān, and then distinguishes these from the Ṣābians of the marshes of southern Iraq (Ṣābat al-Baṭā'iḥ), whom he describes as a pagan people "who follow the school of the ancient Nabateans (*ʿalā madhhab al-Nabaṭ al-qadīm*), venerate the stars, and possess statues and idols"[37]. These are "generally speaking (*ʿāmmat*) the people of the Ṣābians called the Ḥarrānians, but it is said that they differ from them completely (*jumlatan wa-tafṣīlan*)"[38]. This description matches both the Nabateans and the Sethians in the *Nabatean agriculture*. As Van Bladel points out, these were not Mandaeans[39].

This description is added to that of a group of Ṣābians whom Ibn al-Nadīm identifies as the Mughtasila, who are also among the Ṣābians of the swamps. These are the Elchasites founded by Elchasai (al-Ḥasīḥ). They are numerous in the marshes, wash themselves, and everything they eat. They tell many strange stories (*khurāfāt*), and some of them worship the stars up to the present day[40]. The Elchasites were a sect active in Asoristan between 100 and 400 CE, who performed baptisms frequently and had gnostic tendencies. Epipha-

35. Jaakko Hämeen-Anttila, «Ibn Waḥshiyya and Magic», *Anaquel de Estudios Árabes* 10 (1999), 42.

36. Hämeen-Anttila, *Last Pagans of Iraq*, 228.

37. Ibn al-Nadīm, *Fihrist*, ed. Ibrāhīm Ramaḍān (Beirut 1997).

38. Ibn al-Nadīm, *Fihrist*, ed. Ramaḍān, 414; Ibn al-Nadīm, *Fihrist*, trans. Dodge, 2:811.

39. Van Bladel, *From Sasanian Mandaeans*, 72.

40. Cf. Van Bladel, *From Sasanian Mandaeans*, 71; Chwolsohn, *Die Sabier*, 11, 543-44; C. Buck, «The Identity of the Ṣābʿūn: An Historical Quest», *Muslim World* 74.3-4 (1984), 179. Dodge translates this as, they «belong to the community of the Sabians known as al-Ḥarnāniyūn», (Ibn al-Nadīm, *Fihrist*, 2:811), but the Arabic allows for both translations, and Ibn al-Nadīm makes it clear that these people differ from the Harranians completely. Cf. Ibn al-Nadīm, *Fihrist*, ed. Ramaḍān, 414.

nius equates the Elkasaites with the Sampsaeans, whom he describes as "no longer no longer either Jews or Christians"[41]. "These Sampsaeans… are neither Christians, Jews nor pagans; since they are just in the middle, they are nothing"[42]. He relates these to the Ebionites, who are a sect whose people "immerse themselves in water regularly, summer and winter for supposed purification, like the Samaritans"[43]. Mani, the founder of Manicheanism, grew up among them.

ʿAbd al-Qāhir al-Baghdādī (d. 429/1037) similarly argued there were two groups of Ṣābians, one Ḥarrānian and one from Wāsiṭ[44], the second did not adhere to the eternity of the world. This second group partly came from Greece, and another prayed toward the north, ate pork, and called themselves followers of the religion of Seth, and possessors of his holy book[45]. In his *Kitāb al-āthār al-bāqiya*, al-Bīrūnī (d. 442/1048) distinguishes the Ṣābians of Ḥarrān, whom he did not consider real Ṣābians, from a separate group of Ṣābians, those of the Sawād of Iraq[46]. The latter claimed to descend from Enos, son of Seth[47].

A certain Abū ʿAlī (possibly the vizier Abū ʿAlī Muḥammad b. Muqla (d. 328/940), describes a sect of Ṣābians, different from the Ḥarrānians who lived in the districts of Wāsiṭ; he met some of them in Baghdad and described them as similar to the Mandaeans[48]. Abū ʿAlī writes that their religion was called the religion of Seth, whom they called their prophet, and they also acknowledged John the Baptist; they had two scriptures, one attributed to Seth and one to John

41. Frank Williams (trans.), *The Panarion of Epiphanius of Salamis, Book I (Sects 1-46)* (Leiden and Boston 2009), 55. L. Ginzberg, «Elcesaites», in *Jewish Encyclopedia*, ed. Isidore Singer (New York and London 1906), 5:89-90.

42. Frank Williams (trans.), *The Panarion of Epiphanius of Salamis: De Fide, Books II and III* (Leiden and Boston 2013), 71.

43. Williams (trans.) *The Panarion of Epiphanius*, *Book I*, 60.

44. J. M. Fiey, «Le nabat de kaskar et wasit», in *Mélanges de l'Université Saint-Joseph* 51 (1990): 51-87. The new city of Wāsiṭ was founded by al-Ḥallāj across from the Sassanid city of Kaskar (Kashkar in Syriac), which was built in the third century CE.

45. Discussed by Cottrell, «Adam and Seth», 522. Gündüz, *The Knowledge of Life*, 41. Abū Manṣūr ʿAbd al-Qāhir al-Baghdādī, *Kitāb uṣūl al-dīn* (Istanbul 1928).

46. Al-Bīrūnī believed the Ṣābians of Ḥarrān only took the name Ṣābians in 228/843; see Hämeen-Anttila, *Last Pagans of Iraq*, 51.

47. Van Bladel, *From Sasanian Mandaeans*, 44.

48. Quoted by Bar Bahlul (fl. ca. 950-1000) in *Kitāb al-Dalā'il* (Book of indications), translated and discussed by van Bladel, *From Sasanian Mandaeans*, 48-49.

the Baptist. They wrote in ancient Nabatean script, not in Arabic. They prayed in the direction of Jerusalem, and worshiped on Sunday. Their prayers and ordinary speech were in ancient Aramaic (*al-nabaṭiya al-qadīma*). Kevin van Bladel identified Abū ʿAlī's description of the Ṣābian rituals as matching those of the modern Mandaeans. This passage makes a clear connection between a "Sethian religion" as the term used in the *Nabatean agriculture*, the southern Iraqi region of the *Nabatean agriculture*, and the Mandaeans. Thus far, these sources establish that in Ibn Waḥshiyya's time, some Ṣābians were Elchasites, others Mandaeans, while some exhibited a general Ḥarrānian paganism.

The Sethians are again mentioned two centuries later. Yāqūt al-Ḥamawī (d. ca. 626/1223) writes about Sethians in his entry to al-Ṭīb, which he describes as a "small village between Wāsiṭ and Khūzistān"[49]. He writes that the people who live there are Aramaeans (*Nabaṭ*) even up until his time, who speak Aramaic (*Nabaṭiyya*). Yāqūt cites Dāwūd b. Aḥmad b. Saʿīd of al-Ṭīb as saying: "It is common knowledge among us that aṭ-Ṭīb was founded by Seth son of Adam – peace be upon him – and its people continued to follow the sect (*milla*) of Seth, which is the doctrine of the Ṣābi'a, until Islam came; then they converted to Islam"[50]. Drower identified this Seth with the Mandaean Shitil[51]. Van Bladel identifies them as Mandaeans. While Michael J. Decker took this as a reference to the Mandaeans or Ṣābians. I believe they could be Mandaeans or a poorly defined group of Sethians.

Another late passage linking the Sethians to southern Iraq is found in Shams al-Dīn al-Shahrazūrī, who writes that "the Sabeans who are in the marshes of Iraq claim that they are descended from [Seth] and they acknowledge his prophecy"[52].

Al-Masʿūdī (d. 345/956), relying on Abū Bakr al-Rāzī (d. 313/925), defined yet another group of Ṣābians in the marshes. He distinguishes these, whom he calls the Kimāriyyūn, from the Ṣābians in Ḥarrān[53]. Kevin van Bladel reconstructed this name as

49. Yāqūt, *Muʿjam al-buldān*, ed. Wüstenfeld, 3:566, line 10 onward.

50. Van Bladel (trans.), *From Sasanian Mandaeans*, 75; E. S. Drower, *The Secret Adam: A Study of Nasorean Gnosis* (Oxford 1960), 62, 105.

51. Drower, *The Secret Adam*, 62, 105.

52. Cottrell, «Adam and Seth», 545.

53. Al-Masʿūdī, *Murūǧ al-dhahab wa-maʿādin al-ǧawhar*, ed. Charles Pellat, 7 vols. (Beirut 1965), 1:263, as cited in van Bladel, *From Sasanian Mandaeans*, 43.

Kinthāwiyyūn, or Kentaeans[54]. Not much is known about this group. In Bar Konay's account, the Kentaeans are presented as an ancestor of the Mandaeans. They come from a pagan background and "revered the luminaries (sun and moon) and fire"[55]. The Kentaeans used to have a festival in which they gathered to mourn the fall of a figure represented as their idol[56]. Moreover, Bar Konay calls them "Sons of Seth"[57]. They also appear to feature in the Mandaean *Ginza Rabba* as the "people of Saturn"[58]. In addition, they are said to fast frequently and carry a sign of a cross on their left shoulders. They are said to have been active in fifth-century Iraq.

The Ṣābians in the marshes have most often been identified with the Mandaeans[59]. Passages like that of Abū ʿAlī leave no doubt about the presence of Mandaeans in fourth-/tenth-century southern Iraq, and it appears that they were identified as Sethians or followers of the religion of Seth. Van Bladel says the language of Ibn Waḥshiyya is probably Mandaic[60]. This raises the question as to the connection between three groups: (1) one group called Sethians in the *Nabatean agriculture*, located in central-southern Iraq; (2) Mandaean Sethians (called Sethians but not like those referred to in the *Nabatean agriculture*); and (3) Ṣābians (mentioned in other sources, not called Sethians, but resembling the Sethians in the *Nabatean agriculture*), also in southern Iraq.

Many elements of *Nabatean agriculture* are fictional and we must be cautious when using the work as a historical source. If Ibn Waḥshiyya invented the Sethians as a scapegoat for negative sectarian sentiments, then the Sethians could be a group inspired by one of these contemporaries. However, this seems unlikely. Ibn Waḥshiyya's probing of the Ṣābians of Ḥarrān and Babylon about older Nabatean customs does not read as a rhetorical ploy to make a pseudo-translation more trustworthy. Rather, it indicates that the Sethians and Nabateans of the *Nabatean agriculture* actually were an older group. In addition, the work provides a much more detailed account of the

54. Van Bladel, *From Sasanian Mandaeans*, 43.
55. Van Bladel, *From Sasanian Mandaeans*, 45.
56. Van Bladel, *From Sasanian Mandaeans*, 20.
57. Van Bladel, *From Sasanian Mandaeans*, 42.
58. As identified by van Bladel, *From Sasanian Mandaeans*, 3.
59. Gündüz, *The Knowledge of Life*; van Bladel, *From Sasanian Mandaeans*.
60. Van Bladel, *From Sasanian Mandaeans*, 128.

Sethians than any other contemporary Arabic source, which moreover matches late antique pagan ideas. Although descriptions and statements were attributed to some sages and Sethians, many Sethian characteristics may give us information about this historical group. It is necessary to consider these characteristics and place them in their historical contexts to determine their historical reality.

Who are the Sethians in the Nabatean Agriculture?

The Sethians (*Shīʿat/Banī Ishīthā*) are the hegemonic people of Qūthāmā's time[61]. They were already a powerful group at the time of Qūthāmā's predecessor Yanbūshād, but after a period of sectarian upheaval they became the majority in Babylon, Syria (*al-Shām*), al-Jazīra[62], and adjacent areas[63]. Their supremacy coincided with the arrival of the Kanʿānites who established themselves as rulers and kings over Babylon and the Chaldeans[64]. The Kanʿānites and Chaldeans were presented as descendants from Adam by the same mother[65]. In ancient times, the Kanʿānites from Kanʿān had settled in Babylon under the leadership of Nimrūd b. Kanʿān[66]. This generation is described as the ancestors of Abraham (Ibrāhīm), who was born in the Kūthā Rabbā after their migration[67]. Several wars between the Kanʿānites and the Chaldeans followed, and the Chaldeans pushed the Kanʿānites to "the edges of Syria" for being arrogant and envious. Abraham was among those banished to Syria, partly for his monotheist ideas that posited the existence of a power higher than the sun[68]; in this respect his views were similar to those of Yanbūshād. The Kanʿānites returned as rulers over Babylon, they "behaved well", and Qūthāmā no longer wished to slander them[69].

61. Fahd (ed.), *L'agriculture nabatéenne*, 2:1337.
62. A region in northern Mesopotamia.
63. Hämeen-Anttila, *Last Pagans*, 235; Fahd (ed.), *L'agriculture nabatéenne*, 1:541.
64. Hämeen-Anttila, *Last Pagans*, 305.
65. Hämeen-Anttila, *Last Pagans*, 280.
66. Hämeen-Anttila, *Last Pagans of Iraq*, 280.
67. Hämeen-Anttila, *Last Pagans of Iraq*, 280, cf. 174 where he was born according to Islamic myth.
68. Fahd (ed.), *L'agriculture nabatéenne*, 1:264.
69. Hämeen-Anttila, *Last Pagans of Iraq*, 281.

Although *Nabatean agriculture* does not appear to explicitly associate the Sethians with the Kanʿānites, the two new groups who became dominant in Qūthāmā's time logically needed to be the same. The Kanʿānites might be the ethnic designation and the Sethians the religious appellation.

The Sethians followed the law (*sharīʿa*) of Seth, a law that replaced that of his father Adam, and was used (*al-mustaʿmala al-bāqiya*) from the time of Seth until the time of Qūthāmā. The Nabateans blamed Seth for deviating from his father's doctrines[70]. With the growing influence of the Sethians, Seth's law became increasingly dominant, leading Qūthāmā to think it might obliterate the other Chaldean laws (*nawāmīs* al-Kasdānian) and that of other Nabatean peoples[71].

In Qūthāmā's time, the Sethians joined the followers of the sage Māsā l-Sūrānī, described as a trusted ancient Chaldean sage, and became one interwoven group, who believed in each other's doctrines[72]. Māsā l-Sūrānī was called a sophist (*al-sūfisṭay*) and was considered one of the ancestors of the Chaldeans, and hence also of the Sethians[73]. Māsā was presented as Adam's great-grandson[74] and Qūthāmā believed that Māsā may have lived in Adam's lifetime and known him[75]. Māsā was said to have invented the various uses of the vine plant, by inspiration from Jupiter, and his name is inscribed both at the entry and the sides of the temple of the idol Jupiter, located in Sūrā[76]. This temple was, in Qūthāmā's time, still managed by the offspring of Māsā's own servant.

70. Fahd (ed.), *L'agriculture nabatéenne*, 1:322; Hämeen-Anttila, *Last Pagans of Iraq*, 175.

71. Fahd (ed.), *L'agriculture nabatéenne*, 1:730.

72. Fahd (ed.), *L'agriculture nabatéenne*, 2:1106.

73. Hämeen-Anttila, *Last Pagans of Iraw*, 276.

74. Hämeen-Anttila, *Last Pagans of Iraw*, 284. Here the Jewish academy of Sūrā was founded in 225 CE. When Abbā Arīkhā, the rabbi who founded the academy arrived, he found there was no Jewish life in Sūrā. Adam is believed to have had «64 children, 22 female and 42 male», Hämeen-Anttila, *Last Pagans of Iraq*, 280.

75. Hämeen-Anttila, *Last Pagans of Iraq*, 269, 276; Fahd (ed.), *L'agriculture nabatéenne*, 2:1237, 1243.

76. Fahd (ed.), *L'agriculture nabatéenne*, 2:1106; Hämeen-Anttila, *Last Pagans of Iraq*, 265. This probably stems from before Sūrā became a predominantly Jewish town. This vine was loved more than theriac (*diryāq*). Theriac was first coined by the Greeks in the first century CE, see Véronique Boudon-Millot, «Aux origines de la thériaque: la recette d'Andromaque», in *Revue d'histoire de la pharmacie* 58 (2010): 261–70.

The Sethians and the Nabatean sages diverge regarding a variety of legal and religious issues. The Sethians censored these sages, and expressed fear for them[77]. Qūthāmā refused to contradict the sage Ṭāmithrā, as this would imply that he renounced the religion (*dīn*) of Seth, which he thought he should appear to follow and obey[78]. However, this affection for the Sethian religion appears to have been a pretense. It is best, according to Qūthāmā, to let the Sethians think one is friends with them, and follow their religion[79]. Ideally, one would shun them, but if the Sethians noticed, they would slander those who shunned them, like they did Yanbūshād. Elsewhere Qūthāmā said, «if not for the fear of the Sethians I would have related what he mentioned of the causes of the constellation and the causes of the conditions of the planets"[80].

A leading cause of the conflict between the Sethians and the Nabatean sages were confessional differences. The Sethians were polytheists dedicated to Saturn[81], and the worship of astral deities. The planets were viewed as the sole causes of influence on the sublunar world. These ideas were attributed specifically to the Kanʿānite sage Ṭāmithrā; denying them would be "deviating from the religion of Seth"[82]. The Sethians worshiped idols. Ibn Waḥshiyya called them the "servants of the idols of the astral deities"[83]. In Tishrin I, they attended the festival of the idols (*ʿīd tabrīk al-aṣnām*), and in front of each idol, they cried out "we humbly revere the idols"[84]. The Nabatean sages themselves also engaged in idol worship. However, Yanbūshād, Māsā, Jaryānā, and other Kasdānian leaders prohibited animal sacrifice. Instead, they made small animal statues for the idols[85]. According to Qūthāmā, these types of statuette were no

77. Fahd (ed.), *L'agriculture nabatéenne*, 1:755.

78. Fahd (ed.), *L'agriculture nabatéenne*, 1:729; Hämeen-Anttila, *Last Pagans of Iraq*, 178.

79. Hämeen-Anttila, *Last Pagans of Iraq*, 295.

80. Fahd (ed.), *L'agriculture nabatéenne*, 1:755.

81. Hämeen-Anttila, *Last Pagans of Iraq*, 296; for the Sethians, see 137. Hämeen-Anttila refers to the soul with the term «solar matter».

82. Hämeen-Anttila, *Last Pagans of Iraq*, 159. Ṭāmithrā was also credited with the ability to preserve corpses after death, Hämeen-Anttila, *Last Pagans of Iraq*, 285.

83. Hämeen-Anttila, *Last Pagans of Iraq*, 142.

84. Hämeen-Anttila, *Last Pagans of Iraq*, 296.

85. Fahd (ed.), *L'agriculture nabatéenne*, 2:1416; Hämeen-Anttila, *Last Pagans of Iraq*, 300.

longer made after the Kan'ānites came to rule the region, and people followed the religion of their kings. It appears that the Sethians did not worship Dawānāy, and Qūthāmā includes an example of a man from among the followers of Seth who turned away from Dawānāy's idol in his temple in Babylon[86].

The Sethians were further said to stay up for the night of light, and believed in the servant of Venus. During a night in the month of Nissan, Sethians slept with "three pieces of bread, four dates, seven raisins and a bag of salt under their pillows, because an old woman called the Servant of Venus comes at night and goes around visiting everyone, touching their stomachs and searching under their pillows"[87]. If this woman does not find these foods, and notices a person's stomach is empty, "she prays to Venus to make this person's life difficult in the next year"[88]. Qūthāmā claims "all people in the clime of Babel do this"[89]. He [Qūthāmā] called this a strange custom and openly questioned its sense, as he was surprised that Venus would have a servant, and that that servant would visit all the people in one night[90]. Ibn al-Nadīm reports this ritual as a Ḥarrānian custom[91]. The Sethians further believed in "an animal" which they called *jinn*, that exists in the sublunar world; some of these are demons, others they called *ghūl*, which are half woman and half donkey[92]. They also believed in the *anqa*, a creature that is a bird on the upper half and whose lower half is human.

Sethian polytheism contrasted with the monotheism of the sage Anūḥā, and especially Yanbūshād. Yanbūshād's commitment to monotheism stirred ongoing animosity between himself and the Sethians, a conflict that is highlighted throughout the work[93]. The Sethians callled him a mad monotheist (*majnūn muwaḥḥid*) because he denied the power of the astral gods and only upheld the influ-

86. Fahd (ed.), *L'agriculture nabatéenne*, 2:993.
87. Hämeen-Anttila, *Last Pagans of Iraq*, 234–35.
88. Hämeen-Anttila, *Last Pagans of Iraq*, 235.
89. Hämeen-Anttila, *Last Pagans of Iraq*, 235.
90. Fahd (ed.), *L'agriculture nabatéenne*, 1:541.
91. Hämeen-Anttila, *Last Pagans of Iraq*, 201.
92. Fahd (ed.), *L'agriculture nabatéenne*, 2:926; Hämeen-Anttila, *Last Pagans of Iraq*, 355, 356.
93. For example, he fears that his words may provoke the Sethians to seek his life (*ittibā' īshītha yastaḥillūna safk dammī li-qawlī hādhā*), Fahd (ed.), *L'agriculture nabatéenne*, 1:360. For other examples, see 1:562, 649, 729, 755; 2:1338.

ence of the Sun[94]. He was also called a delusional madman (*al-majnūn al-muwaswas*)[95], a heretic (*kāfir*), and an infidel (*jāḥid*). Qūthāmā liked him, although he was aware that the Sethians would resent him for his views[96]. Occasionally, Qūthāmā sided with the Sethians and against Yanbūshād. For instance, Yanbūshād believed in a first power in charge of everything (*quwwa awwaliyya qāhira li-l-kull)*. But elsewhere, with the Sethians, Qūthāmā asserted that all (sublunar) processes (*afʿāl*) are effected by the two lights, that is, the sun and the moon, who in some cases are assisted by the other planets[97]. Ibn Waḥshiyya saw both Qūthāmā and Yanbūshād as monotheists (*yu'mūna ilā siḥḥat al-tawḥīd wa-yanṣarūnahu*), but claims they were afraid to express their beliefs because of the people and kings of their time[98]. Although Qūthāmā occasionally seemed to confess his belief in the astral deities, he nonetheless said he liked Yanbūshād, although he was aware that the Sethians would resent him for that[99]. Elsewhere Qūthāmā said he was not from Yanbūshād's school (*madhhab*), upon which Ibn Waḥshiyya comments that in reality he was, but was afraid to admit it. Indeed, later he confessed that he belonged to the school of Anūḥā and Yanbūshād[100].

Another aspect of disagreement was the law of Seth. The Nabatean sages called the Sethians ignorant because they only studied the law of Seth, and what was worse, they said, was their lack of awareness of their own ignorance[101]. According to Qūthāmā, thinking that one is knowledgeable, but being ignorant is the worst kind of condition[102]. He addressed them, saying: "The people at the time of Dawānāy were more intelligent than you, O followers of Seth… They also took care to speak what is proper and true and they forbade the speaking of what is a lie and falsehood. But you are different"[103].

94. Fahd (ed.), *L'agriculture nabatéenne*, 1:216; Hämeen-Anttila, *Last Pagans of Iraq*, 142.
95. Fahd (ed.), *L'agriculture nabatéenne*, 1:649; Hämeen-Anttila, *Last Pagans of Iraq*, 131, who also thinks this refers to Qūthāmā.
96. Fahd (ed.), *L'agriculture nabatéenne*, 1:212.
97. Fahd (ed.), *L'agriculture nabatéenne*, 1:562.
98. Fahd (ed.), *L'agriculture nabatéenne*, 1:406.
99. Fahd (ed.), *L'agriculture nabatéenne*, 1:212.
100. Hämeen-Anttila, *Last Pagans of Iraq*, 308.
101. Fahd (ed.), *L'agriculture nabatéenne*, 2:1338.
102. Hämeen-Anttila, *Last Pagans of Iraq*, 295.
103. Hämeen-Anttila, *Last Pagans of Iraq*, 275.

Little information about the law of Seth can be derived from the work. In his laws Seth ordained farmers to rest during feasts, and landowners had the responsibility to inform them of this law[104]. Moreover, Seth installed several prohibitions on foods; for example, the meat of small animals such as birds was forbidden because it corrupts the flesh[105]. In comparison, Anūḥā, Adam, and Yanbūshād were known to have disliked eating pork[106]. In terms of marriage, Seth forbade marriage with liars[107].

The Sethians were sometimes identified with the magicians[108]. The Nabatean sages have ambiguous, often negative opinions about the magic (*siḥr*) of the magicians. Qūthāmā claimed he was afraid to give his opinion on magic due to the followers of Seth[109]. The Nabatean sages distanced themselves from negative magic and talismans[110]. Nonetheless Qūthāmā studied with the magician Barīsha, and included magical recipes that may benefit humans and planets. Some of the Sethian magical rituals were astrological in nature. For example, the Sethians believed that those who consumed fennel seeds every day when the Sun was in Aries or Cancer, would never become ill, and would reach old age with a healthy body[111]. They believed Seth brought fennel to Babylon from the region of the Sun.

Another strong point of contention was that of revelation and prophecy. The Sethians thought the Moon revealed knowledge to Adam and Seth[112], and they transmitted a *Kitāb asrār al-qamar* (Book of secrets of the moon). One sage claimed that Adam did not say that his book was revealed to him from God, and the Sethians were wrong to claim that Adam and Seth were the recipients of revelation[113]. Yet, Qūthāmā believed the Moon revealed (astronomical)

104. Fahd (ed.), *L'agriculture nabatéenne*, 1:203.
105. Fahd (ed.), *L'agriculture nabatéenne*, 2:1449.
106. Hämeen-Anttila, *Last Pagans of Iraq*, 343.
107. Fahd (ed.), *L'agriculture nabatéenne*, 1:162; Hämeen-Anttila, *Last Pagans of Iraq*, 175.
108. Fahd (ed.), *L'agriculture nabatéenne*, 1:322; Hämeen-Anttila, *Last Pagans of Iraq*, 188, 175.
109. Fahd (ed.), *L'agriculture nabatéenne*, 1:322.
110. Fahd (ed.), *L'agriculture nabatéenne*, 2:1394-95; Hämeen-Anttila, *Last Pagans of Iraq*, 299.
111. Fahd (ed.), *L'agriculture nabatéenne*, 2:850.
112. Fahd (ed.), *L'agriculture nabatéenne*, 2:1337, 1241.
113. Fahd (ed.), *L'agriculture nabatéenne*, 2:1241.

knowledge to Adam, and this was a foundation for further knowledge accumulation[114]. Yanbūshād appeared to be the main Chaldean sage to have denied Adam's prophethood. He saw Adam and Seth as having been created with wise natures[115], and he only acknowledged the prophethood of Dawānāy. The debate on prophecy appeared to cross sectarian lines. Elsewhere, Anūḥā claimed to have experienced revelation, but Ṭāmithrā denied this[116].

The debate concerned not only the recipients of revelation, but also its medium. The Sethians upheld the possibility of prophecy by means of direct speech from the gods: "Some of the followers of Seth say that the gods have spoken to some people using speech that was heard and understood by them"[117]. However, Qūthāmā denied that it was possible to receive revelation by way of direct speech in a waking state[118]. The Nabatean sages only acknowledge two legitimate forms of prophecy: inspiration while awake, or in dreams[119]. This may have been an addition by Ibn Waḥshiyya. He added a note under his own name that he discussed these ideas with contemporary philosophers (*falāsifa*) who seem to have been impressed[120].

Additionally, the Sethians believed in prophecy about future events. In response to the Sethians, who believed that the Moon informed Adam of future events, Yanbūshād argued that it was impossible for the Moon to have done so, because "the moon does not know the unseen, because it does not know the effects of the other planets"[121]. The planets, especially the Sun, do not know the causes of their actions and therefore cannot know the future, let alone predict it to humans.

114. Fahd (ed.), *L'agriculture nabatéenne*, 1:306, 356.
115. Hämeen-Anttila, *Last Pagans of Iraq*, 274.
116. Fahd (ed.), *L'agriculture nabatéenne*, 2:1241.
117. Hämeen-Anttila, *Last Pagans of Iraq*, 294.
118. Hämeen-Anttila, *Last Pagans of Iraq*, 294.
119. Fahd (ed.), *L'agriculture nabatéenne*, 2:1243.
120. Fahd (ed.), *L'agriculture nabatéenne*, 2:1243. See Griffel for an overview of ideas on prophecy among the philosophers (*falāsifa*). Frank Griffel, «Philosophy and Prophecy», in *The Routledge Companion to Islamic Philosophy*, ed. Luis Xavier and Richard Taylor (New York 2016), 385-98. Also see Janne Mattila, «Ṣābians, the School of al-Kindī, and the Brethren of Purity», in *Religious Identities in Antiquity and the Early Middle Ages: Walking Together & Parting Ways*, ed. Ilkka Lindstedt, Nina Nikki, and Riikka Tuori (Leiden 2021), 92.
121. Fahd (ed.), *L'agriculture nabatéenne*, 2:1240. This is in addition to the fact that he did not believe Adam received revelation at all. About this, see below.

Qūthāmā and Yanbūshād both upheld an Aristotelian view on matter as consisting of four elements[122]. Based on this, Yanbūshād believed that everything in the sublunar world was temporary. Bodies that consist of the four elements cannot last eternally (*yabqā al-duhr kullahu*). The Sethians, by contrast, believed that there are many eternal things in this world, which neither die or disappear[123]. Moreover, Ṭāmithrā denied that the four qualities could produce any action[124]. The Galenic principle of innate heat (*ḥarāra gharīziyya*), a force of life in living organisms, which Yanbūshād and Qūthāmā recognized, the Sethians also knew, and referred to as "solar matter" (*mādda shamsiyya*)[125].

Qūthāmā and Yanbūshād further alienated the Sethians by diminishing the role of the astral deities by denying voluntary causation. In particular, the Nabatean sages disagreed with the Sethians regarding the premeditated influence of the astral deities on the sublunar world. Qūthāmā believed, with Yanbūshād, that plants grow because the involuntary planetary rotation influences the mixtures of elements in the sublunar world. This was how all things that did not previously exist came into being[126]. Elsewhere the Nabatean sages denied the influence of Saturn and Jupiter, and pointed to the causal effect of the heat of the Sun and Moon, and the wind[127]. They occasionally emphasized the unique influence of the Sun as "the living one" (*al-ḥayy*), whom they call a voluntary, potent agent (*fāʿil mukhtār qādir*)[128]; this is something the Sethians denied. Yanbūshād, in line with his monotheist ideas, posited a cause (*muḥdith*) above all these causes[129].

These Aristotelian and other ideas are said to have been initially formulated by Yanbūshād, and Qūthāmā was hesitant to mention

122. The element fire, moreover, has its own sphere under the moon (*ʿālam al-nār al-tālī li-falak al-qamar ilaynā*), Fahd (ed.), *L'agriculture nabatéenne*, 2:1055, cf. Hämeen-Anttila, *Last Pagans of Iraq*, 122.

123. Fahd (ed.), *L'agriculture nabatéenne*, 1:649.

124. Hämeen-Anttila, *Last Pagans of Iraq*, 158.

125. Fahd (ed.), *L'agriculture nabatéenne*, 1:622.

126. Fahd (ed.), *L'agriculture nabatéenne*, 1:755–56.

127. Hämeen-Anttila, *Last Pagans of Iraq*, 157; Fahd (ed.), *L'agriculture nabatéenne*, 1:629, 755.

128. Fahd (ed.), *L'agriculture nabatéenne*, 2:874. On the Nabatean cosmology and the role of the Sun, see Hämeen-Anttila, *Last Pagans of Iraq*, 110–11.

129. Fahd (ed.), *L'agriculture nabatéenne*, 1:756.

them out of fear of the Sethians. The Sethians, as seen above, considered the effects of the planets as the sole cause of all growth and decay on earth. The involuntary movement of the planets seems to have been a controversial statement. According to Qūthāmā, planetary movement was random, not intended. Planetary "actions and effects occur according to chance (*alā ḥasab al-ittifāqāt*), not according to intention"[130]. Qūthāmā said: "I know that the followers of Seth wish to shed my blood for saying this about the gods, may the god of gods protect me from their evil"[131]. This is in line with what Ibn al-Nadīm wrote about the Ṣābians, whom he described as having believed in the voluntary movement of planets[132].

The Sethians distinguished themselves not only by their ideas, but also by their fashion. They wore long beards, but shaved their mustaches, plaited their hair in baths, and dyed it with henna. They wore blue and green turbans, as well as long clothes with fringes that dragged behind them while they walked[133]. In each corner of the cloth they made knots with four dots of saffron in each cloth[134]. The Sethians forbade the wearing of the *ṭaylasān* (*libs al-ṭayālisa*)[135].

The Nabateans in the *Nabatean agriculture* generally showed a concern with cleanliness and bathing[136]. The Nabatean sages upheld the view that bodies are "corpses full of stench and filth, because they are mines of filth"[137]. They despise madmen for their lack of bathing:

> being wise we cannot at the same time do to ourselves things which madmen (*majānīn*) do, becoming madmen ourselves, clothing ourselves in

130. Fahd (ed.), *L'agriculture nabatéenne*, 1:665, *fiʿluhā ḥādith anha ala ṭarīq al-arḍ lā ala ṭarīq al-qasḍ* («its effect derives from it in an accidental way, not intentionally»), 1:757.

131. Fahd (ed.), *L'agriculture nabatéenne*, 1:390.

132. Ibn al-Nadīm, *Fihrist*, trans. Dodge, 2:746–47.

133. Hämeen-Anttila, *Last Pagans of Iraq*, 296; Fahd (ed.), *L'agriculture nabatéenne*, 1:338.

134. This description reminds us of the Jewish ritual fringes known as *tzitzit*, as commanded in Num. 15:38; the custom may not have been exclusively Jewish.

135. Muslim writers believed the *ṭaylasān* had a Jewish origin. A *ḥadīth* stated that Jews brought 7000 *ṭaylasān* somewhere, see Judith Kindinger, «*Bidʿa* or *Sunna*: The *ṭaylasān* as a Contested Garment in the Mamlūk Period (Discussions between al-Suyūṭī and Others)», in *Al-Suyūṭī, a Polymath of the Mamlūk Period*, ed. Antonella Ghersetti (Leiden 2016), 74–75.

136. As noted by Hämeen-Anttila, *Last Pagans of Iraq*, 244.

137. Hämeen-Anttila, *Last Pagans of Iraq*, 243.

wool (*ṣūf*) like madmen do and letting our hair and nails grow long like the hair and nails of madmen, without entering a bath (*ḥammām*) or letting water, cold or warm, touch us or without cleansing ourselves from the dirt of our bodies[138].

The Sethians too are said to plait their hair while taking baths; however, these concerns do not seem strong enough to establish a connection with baptism.

While Qūthāmā followed both Adam and Seth, he was not a Sethian. The Nabatean sages themselves showed Sethian characteristics. Yanbūshād was a follower of Adam, while acknowledging that Seth had valuable works containing some of Adam's teachings (*madhāhib*). However, Yanbūshād did not consider the Sethians to be true followers of Seth. "You, the followers of Seth, attribute to Seth and his father things they did not possess and you are (actually) their enemies, not their true followers, know that"[139]. In the *Nabatean agriculture*, the figures of Adam, Seth, and Noah nonetheless are adjoined to Nabatean sages such as the ancient Kamāsh al-Nahri and Dawānāy.

The Nabateans esteemed Adam highly, especially as a teacher. They believed that he had lived after Dawānāy and added much useful knowledge. Thus, it said that Dawānāy had already taught Nabateans about talismans and other things before Adam, «but he had not expressed clearly any of his teachings in the way Adam did. Neither were the teachings of Dawānāy like those of Adam in clarity and blessing"[140]. In addition to naming "all things on earth", Adam taught people mathematics, botany, talismans, medicine, and other sciences, professions, the basis on which to advance the sciences, and because of this they called him "the Father of Mankind." Thus, people during his time used to call him "my father" or "O our father" in reverence, respect, and glorification and in gratitude for what he had given them, providing them with things that were beneficial both for the common people and the elite[141].

Anūḥā, or Noah, featured as a sage, doctor (*ṭabīb*), and "prophet of the Moon" from Syria who survived the flood that occurred in his

138. Hämeen-Anttila, *Last Pagans of Iraq*, 244.
139. Hämeen-Anttila, *Last Pagans of Iraq*, 278.
140. Hämeen-Anttila, *Last Pagans of Iraq*, 298.
141. Hämeen-Anttila, *Last Pagans of Iraq*, 297–98.

time[142]. After the Moon revealed to Noah that there is only one god, and that god is higher also than the Moon himself, Noah became a monotheist[143]. Anūḥā even wrote a letter to Ṭāmithrā asking him to leave the seven gods to "serve the One God of Gods", something which Ṭāmithrā refused to do[144]. This character of Anūḥā may be a combination of both Enos and Noah[145]. However, based on his characteristics, he seems more likely to be Noah. Enos, the first son of Seth, who features prominently in other Sethian texts, does not appear so much in the *Nabatean agriculture*, and the Sethians claim to be his descendants.

The characters of Adam and Seth are nonetheless presented as historically foreign to the Nabateans. The oldest stories known among Nabateans are those about Dawānāy, the first man to receive wisdom through revelation while sleeping. He was said to have drawn a thousand images of plants that were kept in his temple, of which only 190 remained in Qūthāmā's time[146]. He was said to have had a temple in the lands of al-Shiwānī(?) in the region of Sūrā[147], as well as in Babylon. Hämeen-Anttila carefully suggests a connection between Dawānāy, who was called "the lord of mankind", "merciful father", "Babylonian", and Adonai[148]. In any case, Dawānāy was presented as Nabatean while Adam and Seth were seen as foreign. Dawānāy's Chaldean contemporaries "did not mention at all the claims you (Sethians) make for Adam and Seth" regarding lunar revelation "and they did not know about them"[149]. This passage may be read as an indication that the ancient Nabateans, whenever they may have lived, were not considered to have known about Adam and Seth, and that these were introduced to the Nabateans at a later stage.

142. Cf. Hämeen-Anttila, *Last Pagans of Iraq*, 174. Hämeen-Anttila remarked that in the Jewish tradition Noah is also known for his medical works.
143. Hämeen-Anttila, *Last Pagans of Iraq*, 273.
144. Hämeen-Anttila, *Last Pagans of Iraq*, 326.
145. As suggested by Hämeen-Anttila, *Last Pagans of Iraq*, 48 n. 129, 79, 169.
146. Fahd (ed.), *L'agriculture nabatéenne*, 2:1127.
147. Fahd (ed.), *L'agriculture nabatéenne*, 2:1127.
148. Hämeen-Anttila, *Last Pagans of Iraq*, 172.
149. Hämeen-Anttila, *Last Pagans of Iraq*, 275.

On Seth and "Sethians"

The Nabatean Sethians, as well as the Nabateans themselves, exhibited an interest in Adam and Seth, characters who also featured centrally in many late antique sects and religions, and especially in texts often referred to as "gnostic". To explore a possible relation with these various traditions, we first compare the roles of the patriarchs. The biblical figure of Seth had a range of followers in late antiquity. He features in various Jewish and Christian gnostic texts, and the Samaritans called themselves Sons of Seth, and he was followed as Sethel in Manicheanism and Mandaeaism. Seth is often presented as a recipient of (astronomical knowledge), either from his father Adam or from a divine source, as well as an ancestor of all of mankind or of a specific race. Many of the earlier more extensive representations of Seth and his followers go back to early 100-300 CE Jewish and Christian works. It is especially around the Sethian works found in the Nag Hammadi papers that some scholars have spoken of "Sethianism" and "Sethians", but this is a controversial term that has not been clearly defined.

The Bible briefly mentions Seth as the third son of Adam and Eve after Cain murdered Abel. In Num. 24:17, reference is made to certain "Sons of Seth" or "Sheth." This appellation does not refer to all of humanity, but to particular enemies of the Israeli monarchy. These Sethians may be connected to the Mesopotamian Suteans who dwelled around Mount Sharshar, a location that is echoed in the mention of the land She'ir[150]. Amar Annus suggests that the story in Numbers may be an imitation of Mesopotamian traditions regarding the Suteans as enemies of civilization. In any case, these Suteans do not seem to be likely candidates for identification with the Nabatean Sethians, who firmly relate to the Jewish narrative in which Seth is the good son of Adam, moreover they also imagine Adam not as a sinner but as a wise recipient of lunar revelation.

Later Jewish pseudepigraphia have filled in the blanks of the brevity of the biblical information on Seth. The common trope of

150. A. Annus, «Sons of Seth and the South Wind», in *Mesopotamian Medicine and Magic: Studies in Honor of Markham J. Geller*, ed. S.V. Panayotov and L. Vacín (Leiden 2018), 12.

Seth as a "recipient and transmitter of divine revelation", as Klijn shows, goes back to Jewish narratives such as those found in the *Life of Adam and Eve*[151]. In various Jewish writings, Seth is presented as an ancestor, and as a possessor of knowledge. While Abel was murdered and left no offspring, Cain's offspring were believed to have died in the flood, leaving Seth as the ancestor of all subsequent human beings. Some writers depicted Cain and Abel as sons of a bad angel, leaving Seth as the only legitimate son of Adam. The Jewish historian Josephus (d. ca. 100 CE) presents Seth as a discoverer of astronomical knowledge. He reports that the sons of Seth lived righteously for seven generations before leaving the right path, at which time they engraved their astronomical and cosmological knowledge on two steles to survive fire and flood; these steles still survive in the land of "Seiris"[152]. In the Jewish apocryphal collection, the *Life of Adam and Eve*, composed between the third and fifth century CE but compromising material from the second century CE, Seth is also said to have received knowledge revealed to his father Adam.

The gnostic Nag Hammadi texts refer to "children of Seth" and "the seed of Seth." Some of these references show similarities with the Jewish portrayal of Seth as the forefather and recipient of knowledge. In the *Three Steles of Seth*, Seth is called "the father of the living and unshakable race"[153]. In another work, *The Apocalypse of Adam*, Seth is presented as a recipient of esoteric knowledge from Adam, which he passes on to his sons. This portrayal also occurs in the *Gospel of the Egyptians* and the *Second Treatise of the Great Seth*[154]. Finally, there is an early Syriac apocryphal text, *The Revelation of the Magi*, traditionally dated to the second to fourth century CE, which relates the magi to a lineage from Shir in the East "who have pre-

151. Cf. F. Wisse, «Stalking Those Elusive Sethians», in *The Rediscovery of Gnosticism: Proceedings of the International Conference on Gnosticism at Yale, New Haven*, 2 vols. (Leiden 1980), 571. A. F. J. Klijn, *Seth in Jewish, Christian and Gnostic Literature* (Leiden 1977), 48-60.

152. Josephus, *Jewish Antiquities*, trans. H. S. J. Thackeray, vol. 1 (London 1967), 1:33. J. D. Turner, «The Gnostic Seth», in *Biblical Figures Outside the Bible*, ed. M. E. Stone and T. A. Bergren (Harrisburg, PA 2003), 37. L. D. Graham, «Which Seth?», in *Pražské egyptologické studie* 27 (2021), 71.

153. Quoted in Turner, «The Gnostic Seth», 48.

154. Wisse, «Stalking Those Elusive Sethians», 571; and Klijn, *Seth in Jewish*, 48-60.

served primordial revelations from Adam and Seth in a remote mountain retreat"[155].

Christian anti-heretical writers, such as Irenaeus and Hippolytus of Rome, used the term Sethians in a derogatory way to refer to certain "gnostic" groups of people behind the Nag Hammadi writings and others that centered around Seth. Pseudo-Tertullian and Epiphanius (d. 403) describe a group of Sethians, descendants of Seth, who according to Epiphanius, at some point "were found everywhere", and "flourished for some time but most of them disappeared"[156]. These groups saw Seth as Christ. Turner recognized ancestors of these Sethian people in the Barbeloites and Sethites, whom he describes as "a group of "morally earnest biblical exegetes" who saw themselves as the "seed of Seth" and who touted alleged ancient records recounting revelation given to their ancestor and the history of their seed's enlightenment down through the ages"[157]. Epiphanius reports that a different sect, that of the Borborite gnostics had "many books… in the name of Seth"[158]. The information early Christian writers give is minimal. None of these groups call themselves Sethians, and scholars have wondered whether any ever did[159].

In this gnostic context, the Sethians were not a sect as such and scholars disagree on the meaning and usefulness of the term. Stroumsa, for instance, argues that "the overall presence of Seth in Gnostic mythology, we remain unable to detect the actual existence of a specific group of 'Sethians,' as the Church Fathers described them"[160]. Schenke upholds the existence of a tradition of Sethians related to these texts, which shares characteristics such as the self-identification as the seed of Seth, Seth as a heavenly savior, and the existence of a false god, Yaldabaoth, who tried to destroy the seed of

155. T. Pettipiece, «Manichaeism and the Revelation of the Magi: Syriac 'Christianities' in Late-Antique Mesopotamia», in *Hugoye: Journal of Syriac Studies* 24 (2021), 414.

156. Klijn, *Seth in Jewish*, 84.

157. Quoted in Williams, «Sethiansism», in *A Companion to Second-Century Christian 'Heretics'*, ed. A. Marjanen and P. Luomanen (Leiden 2005), 52; J. D. Turner, *Sethian Gnosticism and the Platonic Tradition* (Québec 2001), 255-304.

158. J. Reeves, *Heralds of That Good Realm: Syro-Mesopotamian Gnosis and Jewish Traditions* (Leiden 1996), 37.

159. Williams, «Sethiansism», 33. Cf. Wisse, «Stalking Those Elusive Sethians.»

160. G. A. G. Stroumsa, *Another Seed: Studies in Gnostic Mythology* (Leiden 1984), 172.

Seth[161]. However, others are skeptical of gnosticism as a theological entity, and Sethianism as part of that. Frederik Wisse supposes the hypothesis that the gnostic themes, rather than being made up a closed system were "but 'freefloating' theologumena and mythologumena which one could use as one saw fit[162]. However, as Williams argues, in the early Christian centuries there was, if not a sect, a Sethian tradition with people who placed importance on being descendants from Seth and sharing a certain core of myths surrounding his person[163]. Arguably, the term "Sethianism" may be used to broadly refer to the various traditions in the Nag Hammadi corpus, as well as the early church fathers, who shared a set of specific attitudes toward the figure of Seth, but did not constitute a sect in a more narrowly defined way.

This raises the question of a source for these "freefloating" tropes and their relation to the Nabatean Sethians. Klijn wonders whether it is possible that there was a pre-Christian sect that called itself followers of Seth. While Schenke indeed recognizes a pre-Christian group of Gnostic Sethians[164], others, such as Luttikhuizen, deny this[165]. Gedialahu Stroumsa thinks sects of people existed who called themselves followers of Seth[166]. He, and others such as Beltz, finds evidence for this in the Samaritan Dositheans. Beltz argues that the early Samaritan Dositheans were the first to develop "traditions about the special status of Seth. According to him, the Samaritans considered themselves to be sons of Seth already in pre-Christian times and were so regarded by the Jews"[167]. However, later scholarship has shown his arguments are weak[168]. According to Stanley Isser, Dositheus's followers in the first century CE viewed him as a

161. H. M. Schenke, «Das sethianische System nach Nag-Hammadi-Handschriften», in *Studia Coptica*, ed. P. Nagel (Berlin 1974), 165-73; H. M. Schenke, «The Phenomenon and Significance of Gnostic Sethianism», in *The Rediscovery of Gnosticism*, ed. B. Layton (Leiden 1981), 2:588-616.

162. Wisse, «Stalking Those Elusive Sethians», 575.

163. Williams, «Sethiansism», 33.

164. Schenke, «Das sethianische System», 169.

165. G. P. Luttikhuizen, «Sethianer?» in *Zeitschrift für Antikes Christentum* 13 (2009), 76-86.

166. Stroumsa, *Another Seed*, 11.

167. Walter Beltz, «Samaritanertum und Gnosis», in *Gnosis and Neues Testament*, ed. K.-W. Troger (Berlin 1973), 89-95.

168. Stroumsa, *Another Seed*, 12.

prophet like Moses, who was "unjustly accused or persecuted by tyranny", performed miracles and died in a cave; "but his body was never found, perhaps an indication that he had ascended to heaven", or never died[169]. However, whether these Dositheans called themselves Sethians, is not clearly proven[170].

After Gnosticism, we see the importance of Seth in various other texts. The Slavonic translation of the Byzantine chronicler John Malalas (ca. 491-578) reads:

> Seth had Wisdom from God, and by God's will he invented the names of the stars and of the five planets [lit. "wanderers"], so that men may know them correctly. The first star he called Kronos [= Saturn], the second Dii [= Jupiter], the third, Areya [= Mars], the fourth Aphrodit [= Venus], and the fifth Ermin [= Mercury]. It is said that all together there are seven, five stars and two [great] luminaries [i.e., Sun and Moon]. He is also the one who invented Hebrew script [= "Hebrew characters"] and wrote them [down]. As for the [two] great luminaries, these are named by God Himself. The ruler of the day He called the Sun and the ruler of the night is the Moon. This is what the wise Fortunus, the Roman chronographer wrote. This work I composed in Constantinople[171].

The notion that Seth received knowledge from Adam is also found in various Manichean texts[172]. Mani knew about an Apocalypse written by Seth, known as Sethel, the son of Adam. Seth is described as having been told the "great mysteries of greatness" by the great angels[173]. Thus, as a recipient of knowledge Seth plays a vaguely similar role here as he does in the *Nabatean agriculture*.

The Mandaean Seth, known as Shitil, is a completely different character from that in the *Nabatean agriculture*. He is elevated to the

169. Stanley Isser, «Dositheus, Jesus, and a Moses Aretalogy», in *Christianity, Judaism and Other Greco-Roman Cults, Studies for Morton Smith at Sixty*, ed. Jacob Neusner (Leiden 1975), 182; R. Pummer, «The Present State of Samaritan Studies: II, Gnosticisim», in *Journal of Semitic Studies* 22, no. 1 (1977), 35.

170. On the origins of Samaritanism see also M. Kartveit, «Theories of the Origin of the Samaritans – Then and Now», in *Religions* 10, no. 12 (2019), 1-14.

171. F. Badalanova Geller, «Astronomical Knowledge in the Slavonic Apocalypse of Enoch», in *Culture and Cognition: Essays in Honor of Peter Damerow*, ed. J. Renn and M. Schemmel (Berlin 2019), 114.

172. Tardieu, *Le manichéisme*, 20-22; J. Reeves, *Jewish Lore in Manichean Cosmogeny: Studies in the 'Book of Giants' Traditions* (Cincinnati 1992); Pettipiece, «Manichaeism».

173. Stroumsa, *Another Seed*, 146.

status of an *uthra* (a benevolent being that resides in the world of light), together with Hibil and Anush. Rather than Shitil, Hibil is viewed as a savior figure, while Shitil, himself the purest of all souls, is a teacher of the souls on their way to be baptized, who denies the importance of "sun, moon, and fire" as witnesses to baptism, and points them to the importance of the Jordan River and other elements. Their father Adam Pagria is seen as the microcosm. Unlike Adam and Seth in the *Nabatean agriculture*, the Mandaean Adam and Seth are not seen as human beings but as supernatural figures with specific roles[174].

Finally, the Qur'ān does not mention Seth, though he was known widely among classical Islamic scholars. In the classical Islamic period, written reports about Seth were found at the time of Ibn Sa'd (d. 230/845) onward. These rely on various Jewish, Christian, and gnostic sources. The Muslim scholars present Seth, the son of Adam, as the recipient of divine and astronomical knowledge, as the figure who passed it on, as an inventor of language, and as a father of mankind[175].

Identifying the Nabatean Sethians

The *Nabatean agriculture* incorporates some of the "Sethian" attitudes toward Adam and Seth as recipients of astronomical and divine knowledge, and Seth as the only important son of Adam, and as the father of a people. These attitudes are shared between both the Nabatean sages and the Nabatean Sethians, albeit the latter exhibit a stauncher commitment to Seth. Other gnostic features, however, such as the idea of Seth as savior, the mother Barbeloi, or the evil demiurge, do not feature in the *Nabatean agriculture*. One therefore needs to look elsewhere for the identify of the Sethians.

There are influences of monotheism among the Nabatean sages, even though the Sethians are more devoted to paganism. The Sethian attitudes and knowledge of the patriarchs may be tie back to a Christian or Jewish background. This monotheism does not show any of the characteristics of a Christian background. Little is known about

174. Drower, *The Secret Adam*, 34-38.
175. Gluck, *The Arabic Legend of Seth*; Cottrell, «Adam and Seth».

Christianity in Mesopotamia before the fourth century CE. According to legend, an alleged disciple of Jesus called Mārī brought Christianity to central and southern Iraq in the first century CE[176]. At the council of Nicaea in 325 CE, bishops attended from Edessa, Nisibis, and other Mesopotamian cities; and in 410, bishops from various towns in Mesene and Karkar attended a synod[177]. A Christian presence in southern Mesopotamia before the fourth century likely should not be underestimated. Nonetheless, the *Nabatean agriculture* does not reveal any knowledge of Christianity, and knowledge of the patriarchs probably derives from a Jewish context.

The Sethians Nabatean share more features with the fifth-century Kentaeans mentioned by Bar Konai. As the Kentaeans, the Sethians were known as people devoted to Saturn, and as sons of Seth. They worshiped the luminaries and five planets, and mourned the death of important figures represented by idols in their temples. The Sethians were not, however, described as carrying a cross and fasting intensively. So rather than being identical, they may have been contemporaries, or possibly their ancestors.

Despite the identification in the fourth/tenth century of Mandaeans as "sons of Seth", the Nabatean Sethians cannot be identified as Mandaeans. They do not match the Mandaeaism of the early fourth/tenth century. The rituals of the Mandaeans do not match any of the descriptions of the Sethians in the *Nabatean agriculture*. They do not show signs of baptism beyond a vague non-ritualistic concern with cleanliness. Numerous other Mandaean ideas are absent. The Adam and Seth figures as *uthra*s do not feature in the *Nabatean agriculture*, nor, for instance, do the Sethians seem to have known about John the Baptist.

The lack of Mandaean references in a location where they became so prevalent seems to indicate that the Sethians lived before the arrival or origin of the Mandaeans in this area. Traditionally, following Rudolf Macuch, scholars have supported a Palestinian Jewish origin of Mandaeaism in one form or another, with various early dates

176. M. Streck, «Maisān», in *EI*[1], ed. M. Th. Houtsma, T. W. Arnold, R. Basset, R. Hartmann; consulted 19 February 2024: <http://dx.doi.org.ezproxy.cul.columbia.edu/10.1163/2214-871X_ei1_SIM_4465>; Richard Raabe, *Geschichte des Dominus Mari* (PhD diss., Leipzig 1893), 57-58.

177. D. G. K. Taylor, «The Coming of Christianity to Mesopotamia», in *The Syriac World*, ed. D. King (London 2018), 80.

between the first and third centuries CE, of migration to Iraq[178]. Kurt Rudolph posited the presence of Mandaeans in Iraq in the third century[179]. Alternatives have been suggested which take into account the possibility of a Mesopotamian origin. Yamauchi supports the idea of a possibly small western gnostic pre-Christian proto-Mandaean group who possessed vague knowledge of the Old Testament and who later merged with a proto-Mandaean group in southern Mesopotamia[180]. Lupieri sees the Mandaeans as an indigenous southern Mesopotamian group with no "direct physical contact" with Palestine but influenced by Christian apocryphal stories[181]. Van Bladel convincingly argues for a fifth-century origin in Iraq where they developed out of a Palestinian group of Nasoraeans[182]. Theories that posit an earlier presence of Mandaeans in Mesopotamia conflict with the existence of a Sethian group of pagans at this place and time who display no Mandaean features. The complete lack of any reference to Mandaeaism in its later form, in a place where Mandaeaism would be so widespread, arguably places the Sethians prior to the fifth century CE.

The Sethians lived, moreover, in a time of abundant idol worship. Even though such worship continued into Ibn Waḥshiyya's time, the various temples and their cults place it before the decline of temple worship in later Sassanid centuries. From the later third century some evidence exists against temple worship. In inscriptions in Fars dating to 280-90 CE, the Zoroastrian priest Kerdīr boasts about the striking of idols[183], however it is uncertain if and how much influence this had in southern Mesopotamia. Subsequently, the Persian

178. R. Macuch, «Anfänge der Mandäer», in *Die Araber in der alten Welt*, ed. F. Altheim and R. Stiehl (Berlin 1965), 2:76-190. Drower, *The Secret Adam*; J. J. Buckley, *The Mandaeans: Ancient Texts and Modern People* (Oxford 2002); Gunduz, *The Knowledge of Life*; K. Rudolph, *Die Mandäer i: Das Mandäerproblem* (Göttingen 1960).

179. Rudolph, *Die Mandäer*, 254.

180. E. M. Yamauchi, *Pre-Christian Gnosticism: A Survey of the Proposed Evidences* (Grand Rapids, MI 1983), 140-42.

181. E. F. Lupieri, «Mandaeans», in *EIr*, online: https://referenceworks.brill-lonline.com/entries/encyclopaedia-iranica-online/mandaeans-COM_392 (accessed 16 March 2024).

182. Viggo Schou-Pedersen, *Bidrag til en Analyse af de Mandæiske Skrifter, med Henblik paa Bestemmelsen af Mandæernes Forhold til Jødedom* (Copenhagen 1940).

183. Van Bladel, *From Sasanian Mandaeans*, 108.

king Peroz (r. 457–84) issued "an edict against idols and their priests, 'so that only the religion of the magi remain'"[184].

Moreover, Qūthāmā claims he "heard" that worship of Jupiter in his temple was ongoing at Sūrā during his time. Sūrā became a largely Jewish town after Abba Arika (d. ca. 247), who came to Babylon in 219 CE, and founded an academy somewhere between 219 and 247. While on his arrival Abba Arika did not find Jewish life in Sūrā, presumably at some point in the subsequent centuries the active worship of Jupiter ceased and the town became increasingly Jewish. These indications tentatively place the Nabatean Sethians in the first to third century CE in either the Parthian or early Sassanid period, whereas similarity with the Kentaeans pushes them to the fourth or fifth century. This is a period of sectarian change that aligns with the descriptions in the *Nabatean agriculture*. The latest Syriac editor (that is, the person responsible for the hypothetical final Aramaic version of the text that Ibn Waḥshiyya translated) who gathered and edited the Greek and other material at least after the fifth century, could not have been from this period, but the dating of the Sethians indicates that a layer of the text antedates the fifth century.

Questions of Origin of Sethians in Southern Mesopotamia

The Sethians in the *Nabatean agriculture* are presented as foreign to the Nabateans. They share ancestry with the Chaldeans, but are linked to the Kanʿānites who came to Babylonia from the "edges of Syria". Knowledge of Adam and Seth is presented as extrinsic, too. At the time of Dawānāy, older generations did not know Adam and Seth. This may be partly due to the idea that Dawānāy lived before Adam, but it also hints at the foreignness of these patriarchs. Adam and Seth are no doubt extrinsic to Babylonian paganism. This raises questions regarding the origin of Sethian influence in southern Mesopotamia. I offer two suggestions. First, there were plenty Jewish elements in Mesopotamia that make an outside influence unnecessary to account for the Jewish characteristics of the Nabatean Sethians. According to al-Bīrūnī, the Ṣābians of the Iraqi marshes devel-

184. Van Bladel, *From Sasanian Mandaeans*, 110.

oped from Babylonean Judaism with an influence from Zoroastrianism. Al-Bīrūnī identified these "real" Ṣābians as follows:

> It is said that the Ḥarrānians are not the real Ṣābians, nay they are called *ḥanīfs* and idol worshippers in the (holy) books. The Ṣābians are those of the Jewish tribes who remained in Babylonia when the others returned to Jerusalem during the days of Cyrus and Artaxerxes. Those [who stayed behind] inclined towards the laws of the Magians and had a liking towards the religion of Nebuchadnezzar. Thus, they adopted a doctrine mixing Magism with Judaism like the Samaritans did in Syria. Most of them live in Wāsiṭ and the countryside of Iraq near Jaʿfar and al-Jāmida and the twin rivers of al-Ṣila. They trace their origin back to Enos the son of Seth and they disagree with the Ḥarrānians and criticize their doctrines. They agree with them only in a few things; they even turn their face in prayer towards the North Pole whereas the Ḥarrānians turn towards the South[185].

Scholars have understood these Ṣābians as referring to the Mandaeans. Paz reads this as an "extraordinary fictional account" which nonetheless indicates a "tradition that viewed the Mandaeans as descendants of the Jews who lived in Mesene"[186]. Van Bladel interprets al-Bīrūnī's second Ṣābians as Kentaeans, since they revere fire and al-Bīrūnī mentions a Zoroastrian influence. Al-Bīrūnī might also be describing one of the non-Mandaean Ṣābian groups in the Sawād.

It is not necessarily fiction to suppose a Jewish background to the influence of Sethianism, and relate this background to the exile. A full survey of the religious landscape of southern Mesopatiama in Parthian times does not yet exist. However, the Jewish presence in southern Mestopotamia since the exile is not disputed[187]. On this part Paz agrees with al-Bīrūnī's account, «many of the exiles from Judea settled in southern Babylonia, in the region that would later

185. Al-Bīrūnī, *al-Āthar al-bāqiya ʿan-il-qurūn al-khāliya*, ed. Eduard Sachau (Leipzig 1878; repr. 1923), 206. Translation adapted from Hämeen-Anttila, *Last Pagans of Iraq*, 48; and Edward Sachau, *The Chronology of Ancient Nations* (London 1879), 188.

186. Y. Paz, «'Meishan Is Dead': On the Historical Contexts of the Bavli's Representations of the Jews in Southern Babylonia», in *The Aggadah of the Bavli and its Cultural World*, ed. G. Herman and J. L. Rubinstein (Providence 2018), 66.

187. Samuel N. Lieu, *Manichaeism in Mesopotamia and the Roman East* (Leiden 2015), 8; Laurie E. Pearce and Cornelia Wunsch, *Documents of Judean Exiles and West Semites in Babylonia in the Collection of David Sofer* (Bethesda, MD 2014); Paz, «'Meishan Is Dead'».

become Mesene"[188]. Moreover, Paz demonstrates the existence of several sects in this region with "distinctive Jewish elements" that interacted with local Jews[189]. It is very likely considering the pagan background in this area, that some of these Jews developed pagan tendencies, or that local pagans developed Jewish tendencies. Arguably, glimpses of the latter can be seen in the *Nabatean agriculture*.

However, the Sethian influence could also have been from outside Mesopotamia, for which some inspiration may be taken from the proposed ancestor of Mandaeaism. Van Bladel argues that Mandaeaism in Iraq grew out of earlier Palestinian Judeo-Christian ancestors called Nasoraeans, as proposed by Viggo Schou-Pedersen in 1940[190]. Paz, with van Bladel, views the Jewish elements of Mandaeaism as relating to the Nasoraeans. These Nasoraeans were a Judeo-Christian sect who believed themselves to be descended from Sethel, Hibel, and Anosh[191]. The persecutions of the priest Kerdir also included a group of Nasoraeans (*naṣorāyē*), together with *kristiyānē* in approximately 275 CE. Several scholars have identified these with the Mandaeans[192]. Mandaeans themselves were called *nāṣorāyi* after the religious elite who knew the *naṣeruta* or core doctrines of the Mandaean religion[193]. Van Bladel and Paz, however, believe the inscription may refer to the Jewish Christian sect named by Epiphanius[194]. This places the Nasoraeans in the Sassanid Empire in the third century CE.

We need to consider who these Nasoraeans were more closely before considering a link to the Nabatean Sethians. Epiphanius spoke about two groups of Nasoraeans. In addition to a Jewish Christian group he also speaks of a separate pre-Christian group of Nasoraeans who acknowledged the patriarchs, including Adam and Seth, but did not uphold the Torah and Jewish law. Such a group bringing knowledge of patriarchs, without Jewish law or Christian influence, to Babylonian paganism would be a probable source for

188. Paz, «'Meishan Is Dead'», 84; Pearce and Wunsch, *Documents of Judean Exiles*.

189. Paz, «'Meishan Is Dead'», 55.

190. Schou-Pedersen, *Bidrag*.

191. Van Bladel, *From Sassanian Mandaeans*, 94.

192. Yamauchi, *Pre-Christian Gnosticism*, 125-26.

193. C. G. Häberl and J. F. McGrath (eds.), *The Mandaean Book of John* (Berlin and Boston 2019), ix.

194. Van Bladel, *From Sasanian Mandaeans*, 92; Paz, «'Meishan Is Dead'», 63.

pagan Sethianism. The Nasoraeans who influenced the Sethians are unlikely to have been Christian. Moreover, these Jewish Nasoraeans did not eat meat, and they did not offer sacrifices[195], which aligns with some of Seth's food prohibitions as well as the prohibitions against animal sacrifice. Epiphanius writes:

> Nasaraeans, meaning "rebels", who forbid the eating of any meat and do not partake of living things at all. They have the holy names of patriarchs which are in the Pentateuch, up through Moses and Joshua the son of Nun, and they believe in them – I mean Abraham, Isaac, Jacob, and the earliest ones, and Moses himself, and Aaron, and Joshua. But they hold that the scriptures of the Pentateuch are not Moses' scriptures, and maintain that they have others besides these[196].

However, according to Epiphanius, these Nasoraeans are Jewish, believe in "circumcision, observe the Sabbath and the same feasts, but they do not admit fate and astronomy"[197]. The topic of fate and astronomy is a contested point between the Nabateans and Nabatean Sethians, since the latter believe that the planets can have foreknowledge of future events, but the Nabatean sages deny this is possible. Considering the emphasis on the foreign nature of the Sethians, an influence from a Jewish West Semitic group on Babylonian paganism seems likely to account for the Nabatean Sethians. In this sense, Renan was right to relate the Sethians to this earlier time period. Whether there were two groups of Nasoraeans, of which one influenced the Mandaeans, and the other the Sethians, remains to be ascertained.

From the Nabatean Sethians to the Fourth-/Tenth-Century Ṣābians

Renan considered the Mandaeans as true descendants of the Nabateans[198]. However, the idea that Mandaeaism grew from Babylonian paganism has been discarded in scholarship[199]. It does not

195. Williams (trans.), *The Panarion*, Book 1, 46-48.

196. Williams (trans.), *The Panarion*, Book 1, 12. See also A. Kampmeier, «The Pre-Christian Nasareans», in *Open Court* 2 (1913), 85-86.

197. Williams (trans.), *The Panarion*, Book 1, 46.

198. Renan, «Mémoire», 58.

199. Van Bladel, *From Sasanian Mandaeans*, 98-99; Rudolph, *Die Mandäer*, 195-222.

seem likely that the Mandaeans had much to do with the Nabatean Sethians or the more monotheist Nabatean sages. The patriarchs Adam and Seth played entirely different roles; they did not know about John the Baptist; the planets of paganism find no echo in Mandaeism (except to be rejected); and besides a general concern with cleanliness, the Sethians did not practice baptism. It is hard to find anything the Mandaeans would have taken from the Sethians, apart from a shared name in the fourth-/tenth-century Arabic sources. It is more likely that the Sethians, and their Nabateans adversaries, were ancestors of the non-Mandaean Ṣābians of the southern and central Iraqi countryside mentioned in Arabic sources. "Sons of Seth" in the fourth-/tenth-century and onward appears to have been a common denominator for a variety of separate Ṣābians groups.

Nonetheless, the Sethians would be illustrative of the pre-fifth-century Mesopotamian situation where Mandaeaism later took its form. Van Bladel already mentioned the *Nabatean agriculture* as an exceptional source about paganism in Sasanid Iraq, sources of which are otherwise rare[200]. The Nabatean Sethians possibly lived contemporaneously with the ancestor of the Mandaeans, the Nasoraeans, and inspired the Kentaeans, a contiguous group. Van Bladel argues that "Kentaeans and the Mandaeans claimed as teachers the earliest biblical patriarchs, such as Seth and Enos, who were scarcely characterized in biblical texts and therefore provided slates for new myths"[201]. However, it does not seem that Seth and Enos' slates were that blank anymore at the time of the fifth-century articulation of Kentaeanism and Mandaeaism. Earlier "Sethian" texts, as well as the Sethian pagan traditions such as those described in the *Nabatean agriculture* already provided ample inspiration for these latter groups to adopt these patriarchs in non-biblical ways.

Elements of the account of the pagan Sethians of the *Nabatean agriculture* may be fictional and/or manipulated by several Syriac or Arabic editors. Nonetheless, the work provides a significantly more detailed account on the pagan Sethians than any other contemporary Arabic source. The Sethians appear as idol-worshiping devotees of the astral deities, following ancient Babylonian rituals, who nonetheless abandoned animal sacrifice, distinguished themselves by their

200. Van Bladel, *From Sasanian Mandaeans*, 102.
201. Van Bladel, *From Sasanian Mandaeans*, 114.

dress, and religiously followed the wise sages Adam and Seth, recipients of lunar revelation. They are relevant informants who provide glimpses of the spread of the elusive "gnostic" Sethian attitudes in Babylonian pagan environments, and some insight into the religious history of Sassanid, and possibly Parthian, southern Mesopotamia.

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ABSTRACT

Elaine van Dalen, *Who are the Sethians in the* Nabatean *Agriculture?*

This article explores the character of the Sethians as they appear in the fourth-/tenth-century Arabic *Filāḥa al-Nabaṭiyya* (*Nabatean agriculture*). In the *Filāḥa al-Nabaṭiyya*, the Sethians (Banī Aššīṯā) emerge as the adversaries of the main, largely fictionalized, Nabatean narrators of the work. Much like the work's provenance, the identity of the Sethians has remained shrouded in mystery and the subject of much scholarly debate. This article analyzes the descriptions of this group in the text, and compares their characteristics to other late antique and early Islamic sects who similarly revered Seth, as well as geographically associated groups such as the Ṣābians in southern Iraq. The article argues that the Sethians discussed in the *Nabatean agriculture* could allude to a historical ancestor of the non-Mandaean Ṣābians who continued to live in this region in the classical Islamic period. The Nabatean Sethians provide further insight, even if they prove fictional, into early Islamic ideas about pagan sects in southern Iraq.

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Part III

AROUND THE CORPUS OF THE IKHWĀN AL-SAFĀ'

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FIHRIST OF THE *RASĀʾIL IKHWĀN AL-ṢAFĀʾ*: TEXTUAL VARIANTS AND THEIR RELATION TO *AL-RISĀLA AL-JĀMIʿA*

In the Beirut edition and most manuscripts, the fifty-one or fifty-two epistles of the *Rasāʾil Ikhwān al-Ṣafāʾ* (*Epistles of the Brethren of Purity*) are preceded by an introductory section, the *Fihrist*. It consists of two main parts: (1) a table of contents that summarizes the contents and goal (*gharaḍ*) of each epistle and (2) a more general final section. The main part supposedly reveals what the authors perceived to be the core doctrine conveyed by each epistle; the final section provides an introduction for the work as a whole. There is no critical edition for the text of the *Fihrist*, nor has it been studied much. There are at least three reasons the *Fihrist* should receive scholarly attention. First, given the ongoing debate concerning the authors' doctrinal affiliation, the *Fihrist* is of potential interest for those who want to assess the objectives of the *Rasāʾil*. Thus, scholars have employed it in arguments that concern the whole work and/or its authors[1]. For these arguments to be valid, the precise relation of the *Fihrist* to the rest of the work should first be determined.

Second, the *Fihrist* relates to questions concerning the genesis of the *Rasāʾil*. The new editions by Oxford University Press and the Institute of Ismaili Studies show that the manuscripts provide very different, in some cases even textually independent, variants for several epistles. This supports the hypothesis that the final form of the *Rasāʾil* emerged gradually and underwent a lengthy period of redaction. By contrast, the *Fihrist* gives the impression of a carefully conceived plan

1. For example, the term «people of justice» (*ahl al-ʿadl*) occurs three times in the *Fihrist* as an attribute for the Brethren of Purity; see *Rasāʾil Ikhwān al-Ṣafāʾ*, ed. B. al-Bustānī (Beirut 1957), 1:21, 43, 47. This has been used to support the Muʿtazilī orientation of the authors. None of these instances is present in the short variant, nor is the appellation employed elsewhere in the *Rasāʾil*.

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that the authors followed in composing the epistles. Closer scrutiny of the *Fihrist* shows that its text, like the epistles, is unstable. The eighteen manuscripts (sixteen of which contain the *Fihrist*) used give three variants for both parts of the *Fihrist*. This makes the problem of the *Fihrist*'s relation with the *Rasāʾil* more complicated. It is possible that an earlier variant of the *Fihrist* formed part of the original work but a later variant postdates the work. Distinct *Fihrist* variants might also correspond to different points in the redaction process[2]. It is also possible that the *Fihrist* as a whole was added at some point after the epistles were completed. In that case, instead of the authors' plan for redaction, it may represent the interpretation of some later author or authors on the work's contents.

The third reason to study this text is the most surprising: the *Fihrist* is of importance for *al-Risāla al-jāmiʿa* (*Comprehensive Epistle*), the esoteric epistle-by-epistle summary of the *Rasāʾil*. Traditionally believed to be composed by the same authors as the *Rasāʾil*, now it seems likely to be a later work by a different author. Lengthy sections of the *Jāmiʿa* depend textually on a specific variant of the *Fihrist*. This is clearly relevant in relation to the questions concerning the *Jāmiʿa*. If the variant of the *Fihrist* on which the *Jāmiʿa* draws can be shown to postdate the *Rasāʾil*, then this is almost certainly the case for the *Jāmiʿa* also.

The aim of this article is to establish the textual nature of the *Fihrist*, and thus provide a foundation for its further study. The article consists of four sections. In the first section, I address some general questions concerning the *Fihrist*'s position in relation to the *Rasāʾil*. In the second, I establish the manuscript variants and their textual relation with regard to the epistle summaries, and, in the third section, with regard to the final section. In the fourth, I show the way in which the *Jāmiʿa* depends on the *Fihrist*. The scope of this article is philological, and its aim is thus fairly narrow; that is, establishing the *Fihrist* variants, their textual relations, and their relations to the *Jāmiʿa*. In the conclusions, I nevertheless make some preliminary ob-

2. W. Madelung, «Maslama al-Qurṭubī's Contribution to the Shaping of the Encyclopedia of the Ikhwān al-Ṣafāʾ», in *Labor Limae: Atti in onore di Carmela Baffioni*, ed. A. Straface et al. (Naples 2014), 1:403-17, thus attributes a short variant of the *Fihrist* to Abū Sulaymān al-Maqdisī and a long variant to Maslama al-Qurṭubī. In Madelung's redaction chronology, these correspond to a middle and late version of the *Rasāʾil*.

servations about the consequences that these findings have for larger questions concerning the Ikhwānian corpus.

Fihrist in the *Rasā'il*

Before proceeding to the textual variants, there are some general questions that concern the *Fihrist* as a whole. The first question regards its prevalence in manuscripts. My survey of eighteen manuscripts[3], along with the Beirut edition (hereafter BE) of an unknown manuscript source[4], clarifies that the BE and sixteen manuscripts contain the *Fihrist* at the beginning[5], while two manu-

3. I consulted a digital copy of each manuscript. Of the eighteen manuscripts, nine have been employed in the new editions by Oxford University Press and the Institute of Ismaili Studies while nine have not. I do not claim that the sample is entirely representative of the more than one hundred existing manuscripts. It does include, however, many of the most ancient manuscripts, including MS Atıf Efendi 1681, which most editors of the Oxford edition have used as their base manuscript. The complexity of the manuscript tradition has made it impossible for the editors of the OUP/IIS to establish a stemma codicum for the text, and the classification of manuscripts to groups thus remains unsystematic. For the manuscript tradition in general, see N. El-Bizri, «Prologue», in *Epistles of the Brethren of Purity: The Ikhwān al-Ṣafā' and Their Rasā'il: An Introduction*, ed. N. El-Bizri (Oxford 2008), 20-23; O. Alí-de-Unzaga, «The Missing Link: MS 1040: An Important Copy of the *Rasā'il Ikhwān al-Ṣafā'* in the Collection of the Institute of Ismaili Studies», in *Texts, Scribes and Transmission: Manuscript Cultures of the Ismaili Communities and Beyond*, ed. W. A. Momin (London 2022), 81-136. For the relations between the manuscripts employed in the OUP/IIS editions, see the observations made by each editor in the technical introductions.

4. As shown by Alí-de-Unzaga, «The Missing Link», rather than an independent edition, the widely used Beirut edition is a reformatted reprint published in 1957, from a Cairo reprint of 1928, of the Bombay edition of 1887-1889. Alí-de-Unzaga demonstrates that MS 1040 of the Institute of Ismaili Studies has a close affinity to the Bombay edition, and that the manuscript employed by its editor is also likely to be of Ismā'īlī provenance.

5. These manuscripts are Bibliothèque nationale de France MSS 2303 (dated 1020/1611) [ر], 2304 (1065/1654) [ز], 2305 (1153/1740) [A], 6000 (undated?) [B], 6.647-6.648 (675/1275) [د]; MS Atıf Efendi 1681 (578/1182) [ع]; MSS Esad Efendi 3637 (ca. seventh/thirteenth century) [ن], 3638 (686/1287) [أ]; MS Feyzullah Efendi 2130 (704/1304) [ف]; MSS Köprülü 870 (ca. 857-86/1453-81) [ك], 871 (820/1417) [ل]; MS Yeni Camı 1199 (887/1482) [C]; MS Damat Ibrahim 808 (undated) [D]; MS Carullah 982 (undated) [E]; MSS Raghıp Pasha 839 (undated) [F], 840 (undated) [G]. For each manuscript, the letter in brackets indicates the symbol by which I subsequently refer to it. The Arabic letters correspond to those used in the OUP/IIS editions. Latin letters are used for the manuscripts not employed in those editions, and BE refers to the Beirut edition.

scripts do not[6]. The manuscript evidence thus supports the idea that the *Fihrist* was an integral part of the work, especially since the two variant manuscripts are not among the earliest[7]. The existence of such manuscripts, nevertheless, indicates that there was some variation with regard to the inclusion of the *Fihrist*. Moreover, the earliest manuscript, Atıf Efendi 1681 (dated 578/1182), postdates the redaction by at least two centuries. Thus, it is entirely possible that the *Fihrist* was introduced at some point between the original composition and the first surviving manuscript.

A second question concerns the references the *Rasā'il* makes to the *Fihrist*. There are two such references:

اعلم أيها الأخ أنا قد فرغنا من رسالة الحدود والرسوم التي هي آخر رسائل النفسانيات العقليات حسب ما وعدنا في فهرست صدر كتابنا هذا، فنريد الآن أن نذكر في هذا القسم الرابع الكلام في الإلهيات، وهو الغرض الأقصى والغاية القصوى.

Know, O brother, that we have finished with the epistle on definitions and descriptions, which is the last of the psychical-intelligible epistles, as we promised in the *Fihrist* at the beginning of this book of ours. Now we want to explain in this fourth part the discussion on theology, which is the ultimate goal and utmost objective[8].

وكما لا ينبغي أن نبذل العلم لمن ليس هو من أهله ولا يعرف فضله، وهكذا لا يجوز ولا يحل أن يمنع منه من هو مسترشد طالب له، ولا يبخل به على مستحق له. **فينبغي لمن حصلت له هذه الرسائل**[9] من إخواننا الكرام **أن يدفع منها** إلى كل من يستحق **ما يقرب من فهمه** وما يعلم أنه **يصلح له** ويليق بمرتبته **أولا فأولا على الترتيب الذي رتبناه في** رساته **الفهرست**.

Just as we must not squander knowledge to those to whom it does not belong and who do not know its worth, in the same way it is not allowed or licit to deny it to the one who seeks guidance and knowledge, nor be stingy with it with someone who deserves it. **The one who has come into possession of these epistles** among our noble brethren **should present from them** to every deserving one **what is close to his understanding**,

6. These are MS Amcazade Hüseyn Pasha 452 (1090/1680) [H]; and Princeton University Library, Garrett Collection MS 4263 (956/1549) [I].

7. This aligns with the results in Alí-de-Unzaga, «The Missing Link», 92. The vast majority of the manuscripts surveyed by the author contain the *Fihrist* at the beginning.

8. *Rasā'il Ikhwān al-Ṣafā'*, 3:401; the reference is to Epistle 42.

9. I opt for the plural form that corresponds to the *Fihrist* tex and is supported by the second manuscript employed in the edition.

and **what he knows to suit** and befit his grade, **gradually and in the succession in which we ordered them in the *Fihrist***[10].

Both references present the *Fihrist* as an integral part of the work in the sense that it established the general plan that the authors then followed. The first reference occurs in the transitional passage at the beginning of Epistle 42, which is present in the BE but is omitted in most manuscripts. The second reference appears at the beginning of Epistle 52a, the short variant of the epistle on magic, which is of uncertain authenticity. Moreover, the passage in Epistle 52a is in fact a paraphrase of the final section of the *Fihrist*; the words in bold indicate sections that are taken verbatim from the *Fihrist*[11]. This means that Epistle 52a postdates the *Fihrist*. The fact that this is now the only testimony to the *Fihrist* in the *Rasā'il* is more likely to support the late date of Epistle 52a than the authenticity of the *Fihrist* as a part of the *Rasā'il*. That is, if the *Fihrist* provides guidelines that a student of the *Rasā'il* should follow, why does the only reference to it occur in the very last epistle? The absence of clearly authentic references then supports the claim that the *Fihrist* was composed after the epistles. Yet this does not necessarily mean that it is inauthentic, since it could have been the last part of the *Rasā'il* that the authors composed.

A third question concerns the consistency of the *Fihrist* of a given manuscript of the *Rasā'il* in relation to the actual configuration of epistles in that manuscript. Namely, the manuscripts show some variation with respect to the number, order, and configuration of epistles. The main variants are (1) Epistles 12 (*On Interpretation*) and 13 (*Prior Analytics*)[12], and (2) Epistles 49 (*Spiritual Beings*) and 50 (*Governance*)[13], constitute a single epistle; (3) Epistle 4 (*Geography*) is ei-

10. G. de Callataÿ and B. Halflants (ed. and trans.), *On Magic I: An Arabic Critical Edition and English Translation of Epistle 52a* (Oxford 2011), 7. This is my translation, made in order to conform to the corresponding translation of the *Fihrist* passage. The critical edition does not indicate that there are variants in which the reference to the *Fihrist* is omitted.

11. The variants of the corresponding text are cited in the third section of this article.

12. Epistles 12 and 13 are combined in all variants except the BE, ك, ل, C, and F. In ز Epistle 13 is separate but is numbered as «the fourth of the logical part», while Epistle 14 is numbered as the 13th epistle.

13. Epistles 49 and 50 form a single epistle in ز and ك.

ther the fifth or sixth epistle[14], (4) Epistle 6 (*Arithmetic and Geometric Proportions*) is either the second or fourth epistle[15], and (5) the order of Epistles 7 (*Theoretical Sciences*) and 8 (*Practical Sciences*) is reversed[16]. Due to (1) and (2), the total number of epistles is either fifty-one or fifty-two. If the *Fihrist* were to correspond to the order and configuration of epistles in each manuscript, it would mean that the *Fihrist* was, in each case, edited to correspond to the actual configuration of epistles.

This is not the case, however. Although the order and configuration of the epistles also varies in the *Fihrist*, this order is often not aligned with the actual composition of the epistles. The variant position of Epistle 4 contradicts the *Fihrist* in five cases, and that of Epistle 6 in four cases. The combination of Epistles 12 and 13 contradicts the *Fihrist* in six cases, and Epistles 49 and 50 contradict the *Fihrist* in two cases, and the reverse order of Epistles 7 and 8 contradicts the *Fihrist* in four cases. While the *Fihrist* more often corresponds to the standard order and the actual configuration follows a variant order, it is also sometimes the case that the *Fihrist* diverges from the standard order while the actual epistles do not. The conclusion would appear to be that even if the *Fihrist* text is not stable, it constitutes a separate unit from the actual epistles. That is, the textual transmission of the *Fihrist* and the epistles is largely different.

A fourth question concerns the references to the *Jāmiʿa*. In a previous article, I showed that most of the references to the *Jāmiʿa* in the *Rasāʾil* are later interpolations, and thus do not support the theory of a common authorship[17]. Four of the references, including the most elaborate ones, occur in the *Fihrist*. None of these are present in the earliest manuscript (ع), on which my earlier article was mainly based. A larger survey of manuscripts reveals a more complete picture. Among the total of sixteen manuscripts, four manuscripts contain a reference to the *Jāmiʿa* in the *Fihrist*. In two manuscripts, the referen-

14. *On Geography* is the fifth epistle in ر, ع, ن, B, F, and G, and is the sixth epistle in ف. In أ both *On Geography* and *On Music* are numbered as the fifth epistle, though in fact geography is the fourth epistle, but is numbered as the fifth epistle.

15. It is the second epistle in ل, B, and C, and the fourth epistle in أ and ف.

16. The position of Epistles 7 and 8 is reversed in ل, ن, B, C, G, and H.

17. J. Mattila, «The Authorship of *al-Risāla al-Ǧāmiʿa* Re-examined», in *Arabica* 68 (2021), 461-94.

ces occur after the final section, while in the other two they follow Epistle 52. None of the manuscripts, however, contains all four of the references that are present in the BE. Thus, the BE is not the only testimony that includes a reference to the *Jāmiʿa*, even if the manuscript evidence still supports the view that the references to the *Jāmiʿa* in the *Fihrist* were introduced later.

Table of Contents

The main part of the *Fihrist* provides a summary of each epistle following a fixed order of presentation: (1) the number of the epistle in one of the four sections (in most manuscripts), (2) a summary of its contents, and (3) a statement of the epistle's goal. In this main part of the *Fihrist*, the manuscripts convey three variants that are distinguished by progressively longer entries for each epistle. In the sample of seventeen testimonies (sixteen manuscripts and the BE) that contain a variant of the *Fihrist*, fifteen contain a short variant (*Fihrist a*), a single manuscript (A) includes an expanded variant (*Fihrist b*), and the BE has an even more elaborate variant (*Fihrist c*). In the following, I rely on MS ع for the text of *Fihrist a*, which I checked against fourteen manuscripts, and I rely on MS A and the BE for the other two variants.

The variants bear a very specific textual relation to each other. I illustrate this by means of two sample passages. The first is that of Epistle 3 (*On Astronomy*). The entry in *Fihrist* a is as follows:

الثالثة منها هي رسالة[18] في النجوم شبه المدخل في[19] تركيب الأفلاك وصفات البروج ومسير الكواكب. والغرض[20] منها هو تشويق النفوس الصعود إلى[21] عالم الأفلاك وأطباق السموات.[22]

The third of them is an epistle on the stars which is like an introduction to the composition of the spheres, attributes of the zodiac, and trajectory of the planets. The goal is to arouse desire in the souls to ascend to the world of the spheres and the layers of the heavens[23].

18. Addition in د, F: أسطرنوميا.
19. Addition in ف: معرفة.
20. Addition in B: المقصود.
21. Addition in ز, د, ن, ف, ل, D, F, G: [و] عالمها [نحو].
22. Addition in ف, D: السبع.
23. *Rasāʾil Ikhwān al-Ṣafāʾ*, 1:22; MS Atıf Efendi 1681, fol. 1b.

This text appears as relatively stable in the manuscripts. The more substantive variation is indicated in the footnotes. The same entry in *Fihrist b* and *c* is as follows:

لثالثة رسالة في النجوم شبه المدخل في **معرفة**[24] تركيب الأفلاك وصفة البروج وسير الكواكب **ومعرفة تأثيراتها في هذا العالم وكيفية انفعال**[25] **الأمهات والمواليد منها بالنشوء والبلى والكون والفساد.** والغرض منها هو تشويق النفوس **الصافية** للصعود إلى عالم الأفلاك وأطباق السماوات **[منازل الروحانيين والملائكة المقربين والملإ الأعلى والجواهر العلى والوصول إلى القدس والروح الأمين].**[26]

The third is an epistle on the stars which is like an introduction to the **knowledge of the** composition of the spheres, attributes of the zodiac, and trajectory of the planets, **and to the knowledge of their influences on this world, the manner in which the elements and generated beings are affected by them in origination and decay, generation and corruption**. The goal is to arouse desire in the **pure** souls to ascend to the world of the spheres and the layers of the heavens, **the degrees of the spiritual beings and closest angels, highest abode, and supernal substances, and the arrival at the sanctity and trusted spirit**[27].

The words in bold indicate the additions that the two expanded versions make to version *a*. The testimonies for *Fihrist b* and c contain the same text until the final phrase, which is included in the BE but not in MS A. Thus, *Fihrist b* represents an intermediate stage between *Fihrist a* and *c*, in the sense that it contains most, but not all, additions made to *Fihrist a* in *Fihrist c*. The method employed by the editor of the *Fihrist* is one of expansion. The editor of *Fihrist c* retains the precise words of *Fihrist b*, and similarly the editor of *Fihrist b* retains the words of *Fihrist a*, but makes shorter or longer additions to the text. That is, the three versions contain a shared core text that is gradually expanded.

As a result of this method of expansion, the *Fihrist* entries become quite different. In *Fihrist a*, the first section lists three categories of knowledge that the epistle aims to convey: (1) the spheres, (2) the zodiac, and (3) the planets. The longest variant adds two additional

24. The words in bold in this and subsequent citations indicate additions made to the previous variant in an expanded variant.

25. A: انفصال.

26. Omitted in A.

27. *Rasā'il Ikhwān al-Ṣafā'*, 1:22; MS Atıf Efendi 1681, fol. 1b.

categories: (4) astral influences on the sublunar world, and (5) the generation of sublunar bodies. In all variants, the second section relates the epistle's goal, or inner meaning, to arousing desire in the human soul to ascend to the supralunar world. In the longest variant, however, this is qualified by associating the ascent with proximity to spiritual beings or angels.

The second example is the entry on Epistle 17 (*On Generation and Corruption*), which is the third epistle of the physical part. *Fihrist a* gives the following entry:

الثالثة منها هي الرسالة في الكون والفساد. والغرض منها البيان عن ماهية الصورة المقوّمة لكل واحد من الأركان الأربعة التي هي النار والهواء والماء والأرض، وأنها هي الأمهات الكائنة منها[28] المعادن[29] والنبات والحيوان، وكيفية استحالة بعضها إلى بعض بدوران الأفلاك حولها ومطارح شعاعات الكواكب عليها، وأن الطبيعة الفاعلة لها هي قوة من قوى النفس الكلية الفلكية.

The third of them is the epistle on generation and corruption. Its goal is to explain the essence of the form that constitutes each of the four elements, which are fire, air, water, and earth, and that these are the elements from which minerals, plants, and animals are generated. And [to show] the manner in which they are transformed from one to another because of the revolving of spheres around them and the projection of the rays of the spheres at them, and that the nature is their agent and it is one of the faculties of the spherical universal soul[30].

The text of all the manuscripts agrees almost entirely with regard to the text. *Fihrist b* and *c* give the following entry for the same epistle:

الثالثة منها رسالة في الكون والفساد. والغرض منها هو البيان عن ماهية الصور المقومة لكل واحد من الأركان الأربعة، [**أعني الامهات**] التي هي النار والهواء والماء والأرض، وأنها هي الأمّهات [**الكلية**][31] الكائن منها المعدن والنبات والحيوان، وكيفية استحالة بعضها إلى بعض **باختلاف كيفياتها عليها** بدوران الأفلاك حولها ومطارح شعاعات الكواكب عليها، و[أن][32] الطبيعة الفاعلة لها [**المحركة لكل واحد منها إلى كمالها وغايتها**][33] هي قوة من قوى النفس الكلية الفلكية [**وملك من جملة الملائكة الموكلة بها وسائقة لها إلى تمام ما أعدّ لها من غايتها**].[34]

28. Addition in F: أعني.
29. Omitted in ل.
30. *Rasā'il Ikhwān al-Ṣafā'*, I:27; MS Atıf Efendi 1681, fol. 2b.
31. Omitted in A.
32. Omitted in A.
33. Omitted in A.
34. Omitted in A.

The third of them is an epistle on generation and corruption. Its goal is to explain the essence of the forms that constitute each of the four elements, **I mean the elements** that are fire, air, water, and earth, and that these are the universal elements from which minerals, plants, and animals are generated. And [to show] the manner in which they are transformed from one to another because of the **differences in their qualities**, the revolving of spheres around them, and the projection of the rays of the spheres at them. And [to show] that the nature is the agent in them **that moves each one of them towards their perfection and end**, and it is one of the faculties of the spherical universal soul, **and one of all the angels that is charged with them and lead them towards completing the end to which they are disposed**[35].

In this case, the two testimonies corresponding to *Fihrist b* and *c* share only the first addition to *Fihrist a*. Since that addition is not present in any of the manuscripts conveying *Fihrist a*, this confirms the impression that *Fihrist b* is an intermediate stage between *Fihrist a* and *Fihrist c*. In all variants, the first section consists only of the epistle's title. In contrast to the previous entry, the goal section is not confined to an inner meaning but conveys the contents of the Aristotelian treatise complemented by its Neoplatonic interpretation with regard to the function of nature as one the faculties of the universal soul. Only *Fihrist c* further relates nature and the universal soul to angels. As in the previous passage, the editing method is one of expansion. *Fihrist b* adds a single phrase to the text of *Fihrist a*, and *Fihrist c* adds various phrases to *Fihrist b*. The latter variants (*b* and *c*) retain the entirety of the text of *Fihrist a*.

The same relation prevails in the epistle entries for each of the fifty-one epistles. In each case, *Fihrist c* expands on the entry in *Fihrist a* with additions of varying length; the identical method of expansion is employed: *Fihrist c* always retains all or most of the exact words of the text in *Fihrist a*. Most manuscripts correspond to the most concise version of the *Fihrist*, while the two expanded versions are each represented by a single testimony. Thus, while fifteen manuscripts confirm the text of *Fihrist a*, for the two other variants, a complete survey of manuscripts might reveal an even more complex picture. The result clearly shows that the *Fihrist* was expanded gradually: *Fihrist b* adds to *Fihrist a*, and *Fihrist c* further adds to *Fihrist b*. This does not

35. *Rasāʾil Ikhwān al-Ṣafāʾ*, I:27; MS Atıf Efendi 1681, fol. 2b.

proceed in the oppposite direction in any of the epistle entries, and in every case the longer variant retains the exact wordings of the shorter variant. Therefore, *Fihrist c* depends textually on *Fihrist b*, and *Fihrist b* depends textually on *Fihrist a*. Moreover, each variant depends on the former variant in the precise sense that it retains all or most of its precise words, while it expands the contents by inserting words or phrases around the original text.

Final Section

The epistle entries of the *Rasā'il* are followed by a final section of a more general nature. This section does not focus so much on the *Rasā'il's* subject matter as it provides a kind of user's manual for how to employ the epistles. Here also, the manuscripts leave three variants, but these do not correspond to the three variants for the table of contents. Instead, (1) two manuscripts provide a very concise final section (variant 1), (2) most manuscripts give a more elaborate version (variant 2), and (3) the BE provides a much longer version (variant 3). The first variant of the final section is the following:

قال أبو سليمان: وينبغي لمن حصلت عنده هذه الرسائل لا يعرضها إلا على طالبي العلوم ومحبّي الحكمة. فإذا وجد من يسترشد طلبا للهداية والنجاة دفع إلى كل واحد ما يعرف من فهمه ويصلح له أولا فأولا على الترتيب المبيّن واحدا بعد واحد حتى إذا تمكنت الحكمة من نفسه. طلب عند ذلك الكل بحرص ورغبة وعمل بها على الولاء كما هي مرتبة في الفهرست، ويكون له بذلك الثواب الجزيل. والله يهدي من يشاء إلى صراط مستقيم، وما يعقلها إلا العالمون.

Abū Sulaymān said: The one who has come into possession of these epistles must only show them to the seekers of the sciences and lovers of wisdom. If he finds some who seek the right way and pursue guidance and salvation, he should present to each of them according to what he knows of his understanding and what befits him, and gradually and in proper order show him one [epistle] after another until he gains possession of the wisdom in himself. After all that, he will seek all [of them] with eagerness and desire, and follow them in the succession in which they are ordered in the *Fihrist*. He will receive an abundant reward for that. God guides whom He wills to the right path, but only those with knowledge understand it.

This is the only variant in which the epilogue is attributed to a specific person. Besides MS ع, it is conveyed in MS F after an entirely different variant of the *Fihrist* and after the first page of Epistle 1

(*Arithmetic*), and it is in different handwriting. The two manuscripts agree perfectly. The person cited – Abū Sulaymān [al-Maqdisī?] – might be one of the authors of the *Rasā'il* in Abū Ḥayyān al-Tawḥīdī's (d. 414/1023) account[36]. Though even if this were the case, it does not necessarily confirm al-Tawḥīdī's testimony, since the attribution may have been introduced by a later author of the *Fihrist*, or even by the copyist. In any case, the final section very concisely addresses the proper use of the *Epistles*. They should not be divulged freely but only given to those who seek knowledge and wisdom, and they should be studied in the precise order specified in the *Fihrist*.

Most manuscripts convey a longer version, spanning a little less than one manuscript page. The longer version contains essentially the same message but conveys it by means of a florid metaphor. The one in possession of the *Epistles* is compared to a wise, rich, beneficent (*jawwād*), and noble (*karīm*) man who has been granted a flourishing garden with all kinds of fruit. He urges people to enter the garden and eat all the fruit they wish, but they do not believe him and do not respond to his call. He then locks the garden's gates, and all those who pass them now desire its contents. The man allows some of them in and urges them to eat all that they desire. The story is meant to introduce the final section's core message:

و**هكذا** ينبغي لمن حصلت عنده هذه الرسائل[37] أن لا يعرضها إلا على طالبي[38] العلوم [**كيف ما كان**] [39] ومحبّي الحكم. فإذا وجد من يسترشد[40] دفع إلى كل واحد **منهم** [41] **ما يقرب** من فهمه [42] ويصلح له أولا فأولا على الترتيب **والنظام** [43] المبيّن واحدا بعد واحد **على الولاء** [44] حتى إذا تمكنت الحكمة من نفسه[45]. طلب عند ذلك الكل بحرص ورغبة **وإرادة** [46] وعمل بها على

36. See I. Poonawala, «Why We Need an Arabic Critical Edition with an Annotated English Translation of the *Rasā'il Ikhwān al-Ṣafā'*», in *Epistles of the Brethren of Purity: The Ikhwān al-Ṣafā' and Their Rasā'il: An Introduction*, ed. N. El-Bizri (Oxford 2008), 46.

37. Addition in ف: كلها.

38. Addition in A, ف: هذه.

39. Omitted in ز, A, أ, ف, ك, E, F.

40. Addition in A, ف, F: [والحكمة] من محبّي ذلك والرغبين في العلم.

41. Omitted in A, أ, ف, D, E, F.

42. Addition in ر, D: من محبي ذلك; B, د, G: من محبي ذاك والرغبين في العلوم والحكم دفع إلى كل واحد ما يقرب من فهمه.

43. Omitted in أ, E.

44. على الولاء: omitted in أ, E.

45. E: قبله.

46. Omitted in أ, E.

الولاء كما رتّبت في الفهرست. [فيكون[47] بذلك **طلبه للقربة به إلى الله تعالى [وما عنده من**[48] **جزيل** الثواب][49] **ليبارك الله** [50] **في العالم والمتعلم ويتأدب بقوله عليه** [51] **السلام: قوام الدنيا بأربع: عالم مستعمل علمه وجاهل لا يستنكف أن يتعلم وغني لا يبخل بمعروفه وفقير لا يبيع آخرته بدنياه]**.[52]

The one who has come into possession of these epistles must **also proceed this way** and only show them to the seekers of sciences and lovers of wisdom, **however they may be**. If he finds some who seek the right way he should present to each of them **what is close to** his understanding and what befits him, and gradually, in proper order **and arrangement**, show him one [epistle] after another in **succession** until he gains possession of the wisdom in himself. After all that, he will seek all [of them] with eagerness, desire, **and will**, and follow them in the succession in which they are ordered in the *Fihrist*. **Thereby he will pursue through it nearness to God the Exalted and His** abundant reward **so that God may bless the savant and student, and he may be educated by the Prophet's, peace be upon him, words: "The subsistence of this world depends on four [things]: the savant who employs his knowledge, [the] ignorant [one] who does not disdain study, [the] rich [one] who is not stingy with the good, and [the] poor [one] who does not trade the afterlife for this world".**

Again, the words in bold indicate the additions that variant 2 makes to variant 1; the plain text is shared by the two variants. Among the manuscripts, أ and E appear to represent an intermediary stage between the first and second variants, in that they contain the garden story at the beginning but, apart from the reference to Abū Sulaymān, follow the first variant after it. Again the same method of expansion is employed. The entire first variant of the final section is embedded in the second variant. However, the reference to Abū Sulaymān is removed and additions and omissions of different lengths are also made. Most of the text in the first variant is still retained, but it is now introduced by the allegorical garden story to which the "in-

47. Addition in ز, F: له.
48. Omitted in F: طلبه ... من.
49. A and ف omit the bracketed section, and give instead: A: للشفاء; ف: الثواب.
50. Omitted in ر.
51. Addition in ز, A: الصلاة و.
52. فيكون ... بدنياه: omitted in أ and E, which instead follow the ending of Fihrist a:
ويكون له بذلك من الله عز وجل الثواب الجزيل إن شاء الله.

tellectual gardens" of the *Epistles* are related. In both the case of the garden and the epistles, it is best to lock the gates to deny access to the undeserving. The additions in the passage cited notably include the prophetic citation at the end inserted to emphasize the value of knowledge. After the shared passage, the text of the second variant goes on to emphasize that the "society" (*jamāʿa*) of the Brethren of Purity follow these guidelines since their instruction pursues the otherworldly good and proximity to God.

The third variant of the final section spans almost four edited pages in the BE[53]. It starts with a considerably expanded version of the garden story, which is followed by the main message.

فهكذا ينبغي لمن حصلت عنده هذه الرسائل **والرسالة لا يضيّعها بوضعها في غير أهلها وبذلها لمن لم يرغب فيها ولا يظلمها بمنعها عن مستحقّها وصرفها عن مستوجبها** ولا يعرّفها إلا **لكل حرّ خيّر سديد مبصر للقصد مجلب للرشد من** طالبي العلم **ومؤثري الأدب** ومحبّي الحكم، **وليتحرّز في حفظها وإسرارها وإعلانها وإظهارها كلّ التحرّز ... فإنها جلاء وشفاء ونور وضياء، بل كالداء إن لم تكن دواء وكالفساد إن لم تكن صلاحا وكالهلاك إن لم تكن نجاة تداوي وقد تدوي وتميت وتحيي. فهي كالترياق الكبير الذي هو في نفسه وحده وتختلف الأحوال عنده، فيفعل الشيء وضده بحسب القوابل والمنفعلات عنه ... وأما الضياء، فإنه لا يصلح إلا لمن فتح عينه وصح نظره وقوي بصره، ويزيده الجلاء جلاء والنور قوة وضياء. فأما من لم يفتح عينه أو كان قريب العهد بالخروج من الظلام، فيضعف جدا عن مقابلة ضوء النهار ونور الشمس، بل يكسبه الضياء ظلمة البصر حتى ربما صار ضلالا وعمًى ...** دفعها **اليه رسالة رسالة** على الولاء **شبيه الغذاء والتربية والنماء وكالدواء للصحة والشفاء والكحل والجلاء لتقوية البصر والضياء** ما يقرب من فهمه **ويليق بمحله من علمه ويستصلحه لمثله قدر ما يغذيه ويربيه ويصحه ويشفيه، بل يبصّره ويهديه ويشدّه ويقوّيه** أولا فأولا على الترتيب المبيّن في الفهرست، حتى إذا ما تمكنت الحكمة من نفسه **وأنست به وتصوّرت عنده واستقرّ في خلده وقوي فيه وتحقق بفكره معانيه.** طلب عند ذلك الكل **بشدّة** حرص **وانشراح صدر وغاية** رغبة **وخلوص نيّة وقوّة عزيمة وفضل معرفة وزيادة يقين وصحة بصيرة، فحصّلها** وعمل بها، **واستحقّ بعد النظر فيهن والوقوف على جمل معانيهن النظر في الرسالة الجامعة...**

The one who has come into possession of these epistles **and the [*Comprehensive*] *Epistle*** must also proceed this way **and not squander them by giving them to people to whom they do not belong and granting them to those who do not desire them, nor do wrong to them by denying them from the entitled or averting them from those with merit. Of them** he must only inform those who are **free, good, pertinent, insightful [with regard to] its objectives, and those who [can] gain guidance among** the seekers of science, **those who choose refinement**, and lovers of wisdom, **and [he must] be extremely wary in**

53. *Rasāʾil Ikhwān al-Ṣafāʾ*, 1:43-47.

preserving their secrets and not making them public and manifest … For the *Epistles* are about clarity, healing, light, and brightness. Indeed, they are like medicine for disease, prosperity for decay, and salvation for perdition. They heal but may also make sick, they kill but may also revive. They are like the great theriac that is one and the same in itself but varies in its states, and causes both an effect and its contrary in accordance with that which receives it and is affected by it.… Brightness only benefits one whose eyes are open and [one who has] healthy and strong eyesight; then the clarity becomes clearer and the light stronger and brighter. The one whose eyes are not open, or who just exited the darkness, is extremely weak in accepting the light of the day and brightness of the sun. Indeed, the brightness may bring darkness to his eyesight, even sometimes misleading or blinding him… [These people should be] presented **one epistle after another** in succession, **as if it is nourishment, education, and growth, as medicine for health and healing, as kohl and clarity to enforce the eyesight and brightness, according to** what is close to his understanding, **appropriate to his position in knowledge, and suitable for someone like him with regard to nourishing, educating, curing, and healing him, and indeed enlightening, guiding, strengthening, and fortifying him** gradually in the proper order shown in the *Fihrist*. **This is** until he gains possession of the wisdom in himself, **knows it intimately, and conceives it in his mind so that it becomes firmly and permanently established in him and he gains the truth of its meanings**. After all that, he will seek all [of them] with **extreme** eagerness, **[with an] open heart, intense** desire, **pure intention, strong determination, abundant knowledge, utter certitude, and true insight. He will grasp the epistles** and follow them, **and after studying them and grasping all their meanings, he is entitled to study the *Comprehensive Epistle*.**

The additions to variant 2 are substantial; again I have indicated the additional text with words in bold. Due to the length of the passage, the citation only retains those parts of the third version that reflect its relation with the second variant. Besides additions, variant 3 also makes significant omissions to the corresponding passage in variant 2; notably, the prophetic tradition cited by the second variant is absent in variant 3. Despite this, the core message remains the same in variant 3: the *Epistles* should only be divulged to those who deserve them. In addition, there is a much greater emphasis on the theme of guarding the secrets of the *Epistles*, an emphasis that is not explicit-

ly present in either the first or the second variant. This message is further emphasized by the introduction of a plethora of new metaphors in this core passage. The function of the *Epistles* is now compared to light, medicine, nourishment, and the theriac, among other things. Thus, just as bright light only serves one with good eyesight, in the same way, the *Epistles* are only useful for the one properly prepared to understand them. The most surprising result, however, is that despite its greatly expanded form, epilogue 3 still retains most of the precise expressions in epilogue 1, even though they are now scattered over a much longer passage.

Besides expanding on the garden story and the core passage, variant 3 also introduces an entirely new section[54]. This is located before the final section, between the epistle entries on the fifty-second epistle and the *Jāmiʿa*. Its subject matter may be characterized as cosmological. Thus, its focus is on the hypostasis of the intellect and the progression of further degrees of existence from it by the intermediacy of the universal soul. The passage seems to have an Ismāʿīlī flavor, in particular in its employment of the terms "preceder" (*sābiq*) and "follower" (*tālī*) for the two primary hypostases.

As was the case for the list of epistles, the manuscripts thus provide three very different variants for the final section. However, the two sets of variants do not correspond to each other, which suggests that their textual transmission might be partly separate. Once again, the editor of each variant of the final section expands on the text of another variant. All three variants share the core passage concerning the proper employment of the *Epistles*. Variant 2 makes significant additions to variant 1 but the original text remains entirely recognizable. However, in variant 3 the additions are so substantial that it becomes a completely different text. For the final section, the editor, or editors, also introduces novel content. Thus, variant 2 adds the garden metaphor before the core passage; variant 3 introduces a number of additional metaphors in the core passage, as well as a cosmological section before the final section. Thus, while most of the precise expressions of the very concise variant 1 remain in variant 3, in character it is a completely different text.

54. *Rasāʾil Ikhwān al-Ṣafāʾ*, 1:41–42.

Al-Risāla al-Jāmiʿa

Perhaps the most surprising discovery is that large sections of the *Jāmiʿa* depend textually on the table of contents section of *Fihrist c*. Moreover, the relation between parts of the *Jāmiʿa* and *Fihrist c* is very similar to that prevailing between the *Fihrist* variants. I employ the two sample epistle entries of the second section to illustrate this relation. The section devoted to Epistle 3 in the *Jāmiʿa* consists of the following passage:

فصل في ذكر الرسالة الثالثة منها في النجوم [55]
ثم يتبعها الرسالة الثالثة **من الرسائل الرياضيات وهي** رسالة في النجوم شبه المدخل **[والمقدمات]**[56]**. وذكرنا فيها من علم النجوم ما جعلناه دلالة على ما أشرنا إليه وعوّلنا في القول عليه من الآيات المكتوبة والدلالات المنصوبة في الآفاق والأنفس والسماوات والأرض من** تركيب الأفلاك وصفة البروج وسير الكواكب ومعرفة تأثيراتها في هذا العالم وكيفية انفعال الأمهات والمواليد منها بالنشوء والبلى والكون والفساد.
فصل في بيان الغرض منها [57]
وكان الغرض **المقصود** منها هو تشويق النفوس **الزكية** الصافية [58] الطاهرة النيِّرة **المتضيئة بنور الحكمة ودلائل المعرفة** إلى الصعود إلى عالم الأفلاك وأطباق السماوات **والوصول إلى درجة [الكمال التي هي درجة]**[59] **الملائكة وليهون عليها [مفارقة الأمكنة الطبيعية واللذات الجسمانية والشهوات الدنيوية ويهون عليها]**[60] **الموت وتتمنّاه ويكون ريحانة لها ولا تخاف منه ولا تحزن على مفارقة مألوف الدنيا ونعيمها وملكها ولتعلم وتستيقن أن الذي تصل إليه وتقدم عليه أعظم جلالة لها وأكبر منزلة وأنها تعاين ما لا عين رأت ولا أذن سمعت ولا خطر على قلب بشر. وأنها ترقى إلى** منازل الروحانيين **وترافق** الملائكة المقربين والملأ الأعلى والجواهر العلى **وتلحق بمن تقدمها من الأنبياء والمرسلين والمؤمنين العارفين والشهداء والصالحين** والوصول إلى **ساحة** القدس والروح الأمين **ومجاورة رب العالمين في روح وريحان وجنة نعيم.**

Then it is followed by the third **epistle from the mathematical epistles [it] is** an epistle on the stars, and it is like an introduction **and pre-**

55. The title is omitted in six manuscripts that appear in Kacimi's edition of *al-Risāla al-jāmiʿa*. See M. Kacimi, (ed.), *Edición crítica árabe y estudio de la Risālat al-ŷāmiʿa ḏāt al-fawā'id al-nāfiʿa, tāŷ Rasā'il Ijwān al-Ṣafā'* (*finales del s. IV H./X e.C, principios del s. V H./XI e.C.*), vol. 2 (PhD, Universidad de Alicante, 2015).
56. Omitted in four manuscripts.
57. Title omitted in six manuscripts.
58. Omitted in four manuscripts.
59. Omitted in four manuscripts.
60. Omitted in Ghālib's edition, while the omitted section is given in one manuscript in the critical apparatus. See M. Ghālib (ed.), *al-Risāla al-jāmiʿa: Tāj Rasā'il Ikhwān al-Ṣafā' wa-khullān al-wafā'* (Beirut 1974).

amble. In it we stated about astronomy that which we made into a token of that which we pointed to and intended in the discourse on written signs and appointed tokens of horizons and souls, and heaven and earth, among the composition of the spheres, attributes of the zodiac, and trajectory of the planets, and on the knowledge of their influences on this world, and the manner in which the elements and generated beings are affected by them in origination and decay, in generation and corruption.

The **intended** goal was to arouse desire in the **untainted**, pure, **clean, and luminous** souls **illuminated by the light of wisdom and tokens of knowledge** to ascend to the world of the spheres and the layers of the heavens, **and arrival at the stage of perfection which is the degree of the angels that are separated from physical place, corporeal pleasures, and worldly desires. Then they despise death and desire it, for it is blissful for them and they do not fear it, nor are they saddened to leave their accustomed world and its delights and possessions. For they come to know and become certain that the place to which they will arrive and come is greater in sublimity and higher in degree, and that they will witness what no eye has seen, no ear has heard, and has not occurred to human heart. They will rise to** the degrees of the spiritual beings and **accompany** the closest angels, highest abode, and supernal substances; **they will join the prophets, messengers, believers, knowers, witnesses, and virtuous who preceded them, and** arrive at the **sphere of** sanctity and trusted spirit, **and proximity of the Lord of the worlds in spirit, bliss, paradise, and felicity**[61].

The words in bold indicate the additions that the *Jāmiʿa* makes to the text of *Fihrist c* and the plain text is shared by the *Jāmiʿa* and *Fihrist c*. The additions are much more substantive than those that *Fihrist c* made to *Fihrist a*; thus, they radically change the tone of the passage. In both *Fihrist* variants, the content of Epistle 3 is identified as being essentially scientific in nature, even though the astronomical content is related to the inner meaning of inciting the soul's desire to ascend

61. *Al-Risāla al-jāmiʿa*, ed. Kacimi, 102-3; ed. Ghālib, 95-96. The Arabic text follows Kacimi's edition, based on fifteen manuscripts. I have indicated in footnotes omissions attested to by two or more manuscripts, based on the critical apparatus. I have checked the text against Ghālib's edition, which is based on two manuscripts and the previous edition by J. Ṣalībā (ed.), *al-Risāla al-jāmiʿa: Tāj Rasāʾil Ikhwān al-Ṣafāʾ wa-khullān al-wafāʾ* (Damascus 1949-51), and I have indicated the substantive variants in footnotes. For this passage, the editions agree almost completely, apart from a single omission in Ghālib's edition (which is, however, included in one of the manuscripts employed by Ghālib).

to the higher world. At the beginning of the passage, the additions in the *Jāmiʿa* make the astronomical content reveal signs of "horizons and souls", an expression frequently employed in the work. The additions of the latter part expand on the goal related to the soul's ascent such that it constitutes most of the passage, whereas in the formulation of *Fihrist a* it consists of a short sentence. As a result of the two stages of editing, the original description of Epistle 3 as an essentially technical treatise is completely transformed into an essentially esoteric treatise. Since the passage cited constitutes the entire section devoted to Epistle 3 in the *Jāmiʿa*, almost its entire technical content is gone from its representation in that work.

In Epistle 17, the section in the *Jāmiʿa* is equally concise:

فصل في ذكر الثالثة منها رسالة [62] في الكون والفساد
ومعرفة الأشخاص والاجساد والنشوء والبلي والبيان عن ماهية الصور المقوّمة[63] لكل واحد من الأركان الأربعة **التي هي** الأمّهات، وهي النار والهواء والأرض والماء، وأنها أمّهات **المواليد** الكائنة منها **جميع الموجودات من** المعادن والنبات والحيوان، وكيفية استحالة بعضها إلى بعض [باختلاف كيفياتها **وأعداد كمياتها وتباين أبنياتها وكيفية استحالة بعضها إلى بعض**][64] بدوران الأفلاك حولها ومطارح شعاعات الكواكب عليها والطبيعة المنفعلة **والقوة** المحركة لكل واحد منها إلى كمالها. **وأن الغرض المقصود منها هو الوقوف على أن المحرك لها والمنبعث منها هي** [65] قوة **جزئية** من قوى النفس الكلية الفلكية **بالإرادة اللإلهية والعناية الربانية**، [وأن ملكاً من جملة الملائكة موكل بها. **وأن الروٴساء الظاهرين في الأوقات بالآيات**] [66] **والمعجزات هي أشخاص صورانية متحدة بها أرواح نورانية مؤيدة بتأييدات إلهية منبعثة من النفس الكلية القدسية القابلة**[67] **لفيض العقل بلا واسطة. نزلت لخلاص النفوس الجزئية من عالم الفناء وتذكرهم محل البقاء، وتمحو عنهم آثار الخطيئة الكبرى وما حل بهم من المصيبة العظمى وتنقذهم من أسر الهيولى وتفكهم من قيود الطبيعة وتردهم إلى عالم السموات [والرجوع إلى]**[68] **دار الملكوت في عالم العقل. وأن آخر المذكرين وخاتم المنذرين هو النفس الزكية الذي يكون به افتتاح أول**[69] **دور الكشف وارتفاع دور الستر وظهور الحقائق. عند ذلك لا ينفع نفساً إيمانها لم تكن آمنت من قبل أو كسبت في إيمانها خيراً.**

A chapter that discusses the third of them, which is an epistle on generation and corruption **and knowledge of the individuals and bodies, origination and decay**, and an explanation of the essence of the forms

62. Omitted in seven manuscripts.
63. Omitted in two manuscripts.
64. Omitted in Ghālib's edition.
65. Omitted in nine manuscripts.
66. Omitted in two manuscripts.
67. Omitted in two manuscripts.
68. Omitted in two manuscripts.
69. Omitted in five manuscripts.

that constitute each of the four elements, **which are** the elements of fire, air, earth, and water. These are the elements **of generated beings** from which **all the existents of** minerals, plants, and animals are generated. And [it shows] the manner in which they are transformed from one to another because of the differences in their qualities, **various quantities, variation of progenies, and the manner in which they are transformed from one to another by** the revolving of spheres around them and projection of rays of the spheres at them. And [it shows] that the passive nature and moving power in each of them [is what] moves them toward their perfection. **Its intended goal is the knowledge of that which moves them and from which they are generated** is a **particular** faculty among the faculties of the spherical universal soul **by divine will and lordly providence**, and that [it is] one of all the angels that are charged with them. **For the leaders that come forth in different times with signs and miracles are individuations of forms united with and supported by luminous spirits and divine inspirations proceeding from the holy universal soul which receives the emanation of the intellect with no intermediary. The soul descends in order to release the particular souls from the world of annihilation, reminds them of the abode of eternity, eradicates from them the effects of the great error and the immense calamity that afflicted them, saves them from the captivity of matter, releases them from the chains of nature, and reverts them to the world of the heavens and the abode of divine kingdom in the world of the intellect. For the final reminder and the seal of the admonishers is the pure soul through which the first cycle of disclosure is opened, the cycle of concealment is lifted, and the truths become manifest. At that time, no soul is benefitted by its belief if it did not believe before or acquire good things by its belief**[70].

In comparison to the previous passage, this passage contains more explicit changes from *Fihrist c* to the *Jāmiʿa*. In particular, the final words of *Fihrist c* are omitted altogether, and the beginning of the section on the goal is moved to a later position in the passage. Otherwise the method of editing is one that retains the exact wording of the original text but expands on it by adding words or expressions between the words of the original text. The extensive additions in the *Jāmiʿa* again completely transform the tone of the original passage. In *Fihrist a*, the description of the contents of Epistle 17 corresponds more or less to Aristotle's *On Generation and Corruption*,

70. *Al-Risāla al-jāmiʿa*, ed. Kacimi, 171-72; ed. Ghālib, 147-48.

with the added Neoplatonic element of the agency of the universal soul. *Fihrist c* relates the universal soul to angels, and thus makes the passage a little more religious in character. In the *Jāmiʿa*, the original context of Aristotelian physics is transformed into a detail of its larger esoteric meaning. This involves various new inner meanings ascribed to the epistle that are also omnipresent in the *Jāmiʿa*. These are the release of particular souls from the material world; the "great error" of Adam that resulted in the particular souls' descent; the souls' imprisonment in nature; and the prophetic cycles of manifestation and occultation. The passage cited again constitutes the entirety of the section devoted to Epistle 17 in the *Jāmiʿa*. Thus, the *Jāmiʿa* provides no further explanation of exactly how all of these themes relate to the original epistle.

The beginnings of all fifty-two epistle sections in the *Jāmiʿa* relate to *Fihrist c* in this way. That is, in each case the *Jāmiʿa* retains the original wordings of *Fihrist c* but expands on them by adding words and passages around the original text. For many epistles, the section in the *Jāmiʿa* consists exclusively of an expanded *Fihrist* entry. In other cases, the *Fihrist* section constitutes an introduction to a more independent development of the themes of that particular epistle. Ultimately, the result is that a very large part of the *Jāmiʿa*, including entire entries for many epistles, depends textually on *Fihrist c*. The obvious conclusion is that the author of the *Jāmiʿa* employed the *Fihrist*, and more specifically the precise variant conveyed by the BE, as his main source text in composing the treatise.

Conclusions

Despite its initially innocuous position as the table of contents of the *Epistles*, the investigation of the *Fihrist* reveals its unexpectedly large significance. Some conclusions are entirely philological, while others relate to larger questions concerning the formation of the Ikhwānian corpus. Beginning with the philological issues, the textual nature of the *Fihrist* as it appears in the manuscripts is surprisingly complex. For its main part of the table of contents, the manuscripts provide three main variants of *Fihrist a*, *b*, and *c*. For the final section, there are also three variants but these do not correspond to the former in their distribution in manuscripts. The existence of very dif-

ferent variants is not necessarily surprising since the new editions by Oxford University Press and the Institute of Ismaili Studies show that this is also the case for many of the epistles. The method of editing in which each variant expands on the text of another variant appears to be different from that employed in other epistles. Thus, *Fihrist b* expands on the text of *Fihrist a*, and *Fihrist c* expands on that of *Fihrist b*. In each case, the editor employs a specific method in which he retains all or most of the exact wordings of the text and inserts words and phrases between them. This is also true of the three variants of the final section, where the concise first variant is gradually expanded to the very elaborate third variant. Even the third variant, however, includes most of the exact wordings of the first variant. Beyond the core passage, however, each variant also introduces novel textual blocks to the final section.

This textual relation between the variants is of obvious consequence for their relative dating. Since *Fihrist c* depends on *Fihrist b*, the former must be later than the latter, and similarly *Fihrist b* must be later than *Fihrist a*. This is also true of the three variants of the final section: the third variant postdates the second, and the second the first. This should also be of interest for the classification of manuscripts. Insofar as the *Fihrist* is textually separate from the actual epistles, it is not necessarily the case that an older version of the *Fihrist* corresponds to an older version of the epistles. But the results seem to correspond to expectations. The fact that MS ع is the earliest manuscript of the *Rasāʾil* we have does not, of course, mean that it conveys the most original text. Yet, this is supported by the fact that it conveys *Fihrist a*, and, along with only one other surveyed manuscript, also contains the first variant of the final section. Similarly, for the BE, it is the sole testimony for *Fihrist c*, as well as the third variant of the final section.

The question of whether the *Fihrist* forms a part of the original composition of the *Rasāʾil* is more complex. The fact that most manuscripts, even the earliest ones, include the *Fihrist* means that it was an integral part of the work for as long as we have manuscript evidence. Since the *Jāmiʿa* depends textually on *Fihrist c*, even the latest *Fihrist* variant cannot be later than the oldest known manuscript of the *Jāmiʿa*, dated at 596/1200. Similarly, *Fihrist a* cannot be later than the oldest manuscript that conveys it, that is, the one dated 578/1182. Nevertheless, it seems entirely possible that the *Fihrist* was introdu-

ced in the work during the centuries after its original composition. The absence of references to the *Fihrist* in the *Rasāʾil* suggests that it was probably composed after all of the epistles, apart from the possibly spurious Epistle 52a.

A larger question concerns the method of editing. I am not aware of other examples, at least in the *Rasāʾil*, in which the editor employs this specific method. The editor's choice to retain the original words exactly, but to expand on the text with additional words and phrases around the original text is somewhat bizarre. In the variants of the final section and the *Jāmiʿa* in particular, the precise wordings of the previous variant are retained and the method of expansion is used even when the resulting text becomes completely different from the original. Why would the author not simply edit the original text entirely to better correspond to his understanding of its meanings? Perhaps each expansion is the result of marginal notes in the manuscript, which the copyist incorporated into the main text[71]. A more far-fetched explanation may be that the editor considered the original text sacred in some sense, such as by attributing it to a Shīʿī imam. Indeed, the manuscript tradition attributed Ikhwānian texts to the imams.

A second larger question concerns the *Jāmiʿa*. I have established that large parts of the *Jāmiʿa*, including the entirety of the entry for some epistles, depend textually on *Fihrist c*. What does this mean for the relationship between the *Jāmiʿa* and the *Rasāʾil*? Clearly, the *Jāmiʿa* must postdate *Fihrist c*. Since *Fihrist c* further postdates *Fihrist a*, and even *Fihrist a* possibly postdates the *Rasāʾil*, this further supports the view that the *Jāmiʿa* is a later addition to the corpus. As to why this relation exists between the *Jāmiʿa* and *Fihrist*, the first answer is that they were authored by the same person. This does not seem likely, however, since the *Jāmiʿa* gives very different meanings to the epistles from those of *Fihrist c*. The second answer is that the author of the *Jāmiʿa* simply employed *Fihrist c* as the base text for composing his treatise. For each epistle, he expanded on the *Fihrist* text by adding elements that conveyed his esoteric understanding of its subject matter. For many epistles, he was satisfied with the result, and thus the epistle entry in the *Jāmiʿa* consists only of the expanded *Fihrist*. This is the case for most of the scientific epistles, which the author of

71. I thank Godefroid de Callataÿ for this suggestion.

the *Jāmiʿa* clearly does not view to be of central importance. In the case of those epistles that the author perceived to be more central, however, he followed the expanded *Fihrist* by an independent discussion of the subject. As a final note, the *Jāmiʿa* employs specifically the variant of the *Fihrist* for which the only testimony so far is the BE. The manuscript source of this testimony, which is likely of Ismāʿīlī provenance, supports the claim that the genesis of the *Jāmiʿa* took place in an Ismāʿīlī context.

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Abstract

Janne Mattila, Fihrist *of the* Rasāʾil Ikhwān al-Ṣafāʾ: *Textual Variants and Their Relation to* al-Risāla al-Jāmiʿa

The aim of this article is, first, to investigate the textual nature of the *Fihrist* that precedes the epistles of the *Rasāʾil Ikhwān al-Ṣafāʾ*, and thereby its relation to the rest of the work. Second, the article addresses the relation of *al-Risāla al-jāmiʿa* to the *Fihrist*. The *Fihrist* consists of two main parts: (1) a table of contents that summarizes each of the epistles and (2) a final section. The four sections of this article address (1) the *Fihrist's* position in the *Rasāʾil* in general; (2) the manuscript variants of the epistle summaries; (3) the final section of the *Fihrist*; and (4) the relation between the *Jāmiʿa* and the *Fihrist*. Although most manuscripts contain the *Fihrist*, the absence of genuine references from the *Rasāʾil* to the *Fihrist* indicate that it was either composed as the final part of the *Rasāʾil* or postdates the *Rasāʾil*. The manuscripts contain three main variants for both the table of contents section and the final section of the *Fihrist*. Their distribution in manuscripts is different, which suggests that the transmission of the two sections was separate. In the case of both sections, the editors employ a method of expansion: the text of the previous variant is retained while new text is inserted between words and phrases. For the final section, later variants also add novel blocks of content, in particular an allegorical garden story. The relation of the *Jāmiʿa* to the *Fihrist* is similar: the beginning of each epistle entry in the *Jāmiʿa* expands on the third variant of the *Fihrist*. For many epistles, this constitutes the complete entry in the *Jāmiʿa*; for others, the *Fihrist* section is followed by an independent commentary. In consequence, large sections of the *Jāmiʿa* depend textually on the the *Fihrist*. This supports the view that the *Jāmiʿa* postdates the *Rasāʾil*.

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THE ANDALUSĪ RECEPTION OF ONTOLOGICAL OPTIONS AND COSMOLOGICAL DESCRIPTIONS IN THE IKHWĀN AL-ṢAFĀʾ AND *AL-RISĀLA AL-JĀMIʿA*: A CASE STUDY

This article stems from an interesting article by Rémy Cordonnier that deals with the possible influences of the encyclopedia of the Ikhwān al-Ṣafāʾ on Andalusī authors from the fourth/tenth century to the eighth/fourteenth century[1].

I have examined some of the authors and works mentioned by Cordonnier: Ibn Gabirol (or Avicebron, ca. 1021-1070)[2] and his works *Fons vitae* and *The Royal Crown*; the *Hidāya ilā farāʾiḍ al-qulūb* (Introduction to the duties of the hearts) by Ibn Paqūda[3] (1040-1100), and *Kitāb al-ḥadāʾiq* (Book of circles) by al-Baṭalyawsī[4] (1052-1127). These authors evoke various themes of the Ikhwān, the first of which is the well-known comparison of the one God with the number one.

Cordonnier mentions al-Baṭalyawsī in his article only once, in the section devoted to translators from Arabic into Hebrew. He affirms: "Moïse Ibn Tibbon traduisit notamment le *Sefer ha-ʾagullot ha-reʾyoniyyot* (*Livre des cercles imaginaires*) d'Ibn al-Sid [*sic*] al-Baṭalyawsī (d. 1127), qui s'avère être une sorte de compendium de la doctrine des Ikhwān al-Ṣafāʾ"[5].

1. R. Cordonnier, «Influences directes et indirectes de l'encyclopédie des Ikhwān al-Ṣafāʾ dans l'Occident chrétien», *Le Muséon* 125 (2012), 421-66.

2. G. Vajda gives 1058 CE as the date of death, «but this date is not absolutely certain». See Vajda, «Ibn Gabirol», in *EI²*, 3:770.

3. He was approximately contemporary with Ibn Gabirol. Cordonnier gives the dates 1040-1100; no dates are given in I. B. Kaufmann Kohler, «Bahya ben Joseph ibn Paḳuda (also known as Beḥay and Baḥie)», *Jewish Encyclopedia* 5:447-54, online: https://www.jewishencyclopedia.com/articles/2368-bahya-ben-joseph-ibn-pakuda (accessed 23 Sept. 2023).

4. E. Lévi-Provençal, «al-Baṭalyawsī, Abū Muḥammad ʿAbd Allāh b. Muḥammad Ibn al-Sīd», in *EI²*, 1:1092.

5. Cordonnier, «Influences», 446.

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There is no doubt that the themes dealt with in the *Kitāb al-ḥadāʾiq* (Book of circles)[6] often echo those of the encyclopedia of the Ikhwān. A forthcoming article by Godefroid de Callataÿ provides a broad survey of the influence of the Ikhwān al-Ṣafāʾ on al-Baṭalyawsī's *Kitāb al-dawāʾir*[7] through comparisons that confirm that

> the *Rasāʾil* and the *Kitāb al-dawāʾir* share a common approach on a large number of essential points of doctrine, among which [are included] the mathematical explanation of the causality of things and their relationship to God, the continuity in this chain of beings, the ontological descent and epistemological ascent of the soul and the ladder motif that go with it, the properties and unmatched perfection of the circles, the microcosm/macrocosm analogy, the passage from potentiality to actuality and the human soul's faculty to reach the angelic status by knowing its own substance, or the notion that the death of the body is the life of the soul.

De Callataÿ adds, however, that

> slavish borrowing from the Brethren's corpus remains very exceptional, if not nonexistent. If… some specific tenets (such as the five kinds of souls) and a few common expressions (such as the abridgement of the Preserved Tablet) rather suggest a quite literal adoption of the text in a few cases, it appears that in most cases the original ideas have undergone a substantial reworking.

Here I present a text belonging to the *Kitāb al-ḥadāʾiq* (Book of circles), one that echoes, with some precision, on the lexical and the semantic points of view two passages from the encyclopedia of the Ikhwān al-Ṣafāʾ and their treatment in *al-Risāla al-jāmiʿa* (the "Crown of the epistles") which is understood as an explication of their esoteric meaning.

6. With regard to the title of the work, see Ebstein's clarification: «*Kitāb al-dawāʾir al-wahmiyya* (The Book of Imaginary Circles), known as *Kitāb al-ḥadāʾiq*, The Book of the Gardens)». M. Ebstein, *Mysticism and Philosophy in al-Andalus. Ibn Masarra, Ibn al-ʿArabī and the Ismāʿīlī Tradition* (Leiden 2014), 236.

7. Cf. G. de Callataÿ, «Reconsidering the Influence of the Rasāʾil Ikhwān al-Ṣafāʾ on Ibn al-Sīd al-Baṭalyawsī's Kitāb al-dawāʾir», in *Religious and Intellectual Diversity in the Islamicate World and Beyond*, ed. S. Schmidtke and O. Michaelis (Leiden forthcoming). I am very grateful to my friend Godefroid de Callataÿ for kindly letting me read his article in typescript, during our stay in Princeton.

The passage that concerns us is in chapter 6, where the thesis that "God knows only Himself" is discussed. This is a false assertion that is intended to deny that God knows "other than Himself," that is, His creatures[8].

In the preamble, al-Baṭalyawsī mentions two well-known positions that seek to deny this thesis that God knows other than Himself. The first, according to which God knows only universals, is said to result from error and ignorance, and from a misunderstanding of the theses of the "ancient philosophers" (*al-falāsifa al-mutaqaddimīn*). The second, according to which God knows by means of universal knowledge both universals and particulars, is considered to be closest to the truth, even if it is susceptible to argument (*aqrab aqwālihim ilā l-ḥaqq wa-in kāna fīhi mawḍiʿ li l-taʿaqqub*)[9]. The second doctrine could be that maintained by Ibn Sīnā[10], but I have difficulty in establishing how al-Baṭalyawsī may have come to know it because the sources of this position as given by Iysa A. Bello (the *Kitāb al-najāt* and the

8. The passage is not considered in the general overview recently provided by J. M. Cobos Bueno and J. R. Vallejo Villalobos, «Presencia de la obra *Rasāʾil Ikhwān aṣ-ṣafā wa-khullān al-wafā* (*Enciclopedia o Epístolas de los Hermanos de la Pureza*) en la obra filosófica de Ibn al-Sīd al-Baṭalyawsī», in *El legado de la España de las tres culturas (XVIII Jornadas de Historia en Llerena, Llerena, 3 y 4 de noviembre de 2017)*, ed. F. Lorenzana de la Puente and F. J. Mateos Ascacíbar (Llerena 2017), 109-18.

9. I quote al-Baṭalyawsī from M. Jevolella (ed. and trans.), *Ibn as-Sīd, Il Libro dei Cerchi* (*Kitāb al-ḥadāʾiq*), *Testo arabo, traduzione italiana, introduzione e note di M. Jevolella* (Milan 1984), 130. The book reports the Arabic text as M. Asín Palacios established it, «Ibn as-Sīd de Badajoz y su 'Libro de los cercos' ('Kitāb al-Ḥadāʾiq')», in *al-Andalus* 5.1 (1940): 45-154. The text is found in MS 2303 of the Königliche Bibliothek, Berlin, fols. 167b-194a. For a description of the manuscript, see W. Ahlwardt, *Verzeichniss der Arabischen Handschriften* [*der Köeniglichen Bibliothek zu Berlin*], vol. 2 (Berlin 1889), 528. The passage that we are concerned with is found at fols. 188b-189a. My translations are somewhat different from Jevolella's, 76-77 (Text 1) and 77 (Text 4). Massimo Jevolella translates the words I quote here as «sebbene in parte si presti ad osservazioni critiche», but here the term *taʿaqqub*–usually rendered in English with «pursuit» is ambiguous, because «pursuit» can also mean «investigation». I am grateful to Godefroid de Callataÿ for providing me with the new edition of al-Baṭalyawsī's work by Ayala Eliyahu, *Ibn al-Sīd al-Baṭalyawsī and His Place in Medieval Muslim and Jewish Thought, Including an Edition and Translation of the Kitāb al-dawāʾir al-wahmiyya known as Kitāb al-ḥadāʾiq* [in Hebrew], 2 vols. (PhD diss., Hebrew University of Jerusalem 2010).

10. Cf. I. A. Bello, *The Medieval Islamic Controversy between Philosophy and Orthodoxy: Ijmāʿ and Taʾwīl in the Conflict between al-Ghazālī and Ibn Rushd* (Leiden 1989), 111-12.

metaphysical part of the *Ishārāt*) were not known to the Latin world. Moreover, the work by al-Ghazālī that might be relevant to this issue, *Maqāṣid al-falāsifa*, was only translated into Latin by Domingo Gundisalvi (ca. 1110-1181).

Our passage is related to the first of the four meanings of the thesis that "God knows nothing but Himself". This is the division of being into "absolute" (*muṭlaq*) and "relative" (*muḍāf*). Absolute being is that which does not require anything else to bring it into existence; in other words, that which is not the effect of a previous cause. Relative being is that which requires something else to bring it into existence, which is its cause. Absolute being is proper to the Creator, who exists without any cause. Relative being exists as far as it is derived from the existence of God. Hence if the existence of God were to be annulled, nothing would exist.

From this point of view the comparison of God with the number one is implicit. In the context under examination the text continues:

Text 1[11]

لأجل هذا شبهوا وجود الأشياء عنه كوجود[12] نور الشمس عن الشمس لأن الشمس إذا ذهبت ذهب نورها، ولم يريدوا بهذا الكلام تشبيها بالشمس على الحقيقة لأن البارىء [...] عز[13] أن يكون له نظير، وإنما أرادوا بهذا المثل افتقار الموجودات إلى وجوده على جهة التقريب من الأفهام كما قالوا أيضا أن[14] وجود الموجودات عنه كوجود الكلام من المتكلم لا كوجود الدار من البناء لأن الدار يمكن أن يوجد[15] مع عدم البناء ولا يمكن أن يوجد شيء إلا بوجود البارىء [...]

Because of this they compared the existence of things from Him to the existence of the light of the sun from the sun, because when the sun disappears, its light disappears. In saying this, they did not wish [to establish] a likeness to the sun in the true sense, since the Creator… is beyond [any] comparison. They only wanted [to indicate] with this image the need of the existing beings for His existence in a way that is close to the [understanding of] human minds, as they also said that the existence of the existing beings from Him [is] like the existence of the word from the speaker, not like the existence of the house from the builder, since the house can exist when the builder ceases, but nothing can exist except with the existence of the Creator….

11. The text corresponds to Eliyahu's edition [henceforth, E], 72 line 10 to 73 line 2 of the Arabic text.
12. E: بوجود.
13. E: جل عن.
14. E: إن.
15. E: توجد.

Al-Baṭalyawsī departs from the "existence" (*wujūd*) of things and immediately introduces the comparison with the existence of the light (*nūr*) of the sun that derives from it and that fades (*dhahaba*) when the sun disappears (*dhahabat*). Of course, God is beyond comparison. He is incomprehensible and ineffable, but the reference to this "light" is only a means that is comprehensible to human minds of indicating the necessity (*iftiqār*) of God for things to exist: things are not self-sufficient with respect to God. The existence of existing beings (*wujūd al-mawjūdāt*) is subsequently compared with the existence of a word uttered by a speaker (*wujūd al-kalām min al-mutakallim*) but not to the existence of a house made by a builder (*wujūd al-dār min al-bannā'*). Indeed, a house may exist even if the builder does not. But nothing could be if the Creator did not exist.

These lines likely echo two passages from the Ikhwān al-Ṣafā' that are remarkably similar to each other; these are found in Epistle 39 *Fī Māhiyyat al-ḥarakāt* (On the quiddity of motion) and Epistle 40 *Fī l-ʿilla wa-l-maʿlūl* (On cause and effect)[16].

In Epistle 39 we read:

> Text 2: Know that the existence of the world from the Creator… is not like the existence of a house due to a builder or like the existence of a book due to a writer, fixed in itself, independent in its essence, which can dispense with the writer after he has finished writing, and with the builder after he has finished building the house, but [it is] like the existence of speech that is due to a speaker, so that were he to fall silent, the existence of the speech would come to an end. So, speech [is] what is existent as long as the speaker speaks, and when he falls silent, it has no existence. Or [it is] like the existence in the air of the light from a torch: as long as the torch remains, the light continues to exist. Or [it is] like the existence of the luminosity of the sun in the air: if the sun disappears, the existence of the luminosity in the air comes to an end. Or [it is] like the existence of the heat that is stoked up in a fire, which spreads from the mass of the fire: if it is extinguished, its luminosity and its heat come to an end. Or [it is] like the existence of number from the [unit] one that precedes [the number] two, as we have explained in the Epistle 'On Arithmetic'[17].

16. I reproduce here, with some slight modifications, the translations I provided in C. Baffioni and I. Poonawala (ed. and trans.), *Epistles of the Brethren of Purity: Sciences of the Soul and Intellect, Part III: An Arabic Critical Edition and English Translation of Epistles 39-41* (New York 2017).

17. Cf. Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 45 line 7 to 46 line 7 (Arabic text); 163 (English trans.). For Buṭrus al-

This passage also refers to the existence of the world from the Creator (*wujūd al-ʿālam ʿan al-Bāriʾ*); immediately afterward, we find a denial that this resembles the existence of a house from a builder or that of a book (*kitāb*, only later replaced by the more frequent *kitāba*, "writing") from a scribe. The house and the book, in fact, have their own stability, their own independence, and they can exist without the scribe and the builder – or rather, without their acts, through which they have been given existence. The term *mustaghnī* ("independent") contrasts semantically with al-Baṭalyawsī's *iftiqār* because the radicals gh-n-y and f-q-r express the ideas of "wealth" and "poverty" respectively.

The existence of the world is rather likened to that of the speech of a speaker: if the speaker is silent (*sakata*), then the speech vanishes (*baṭala*). Other comparisons emerge with the light of a torch (*nūr al-sirāj*), the light of the sun (*ḍūʾ al-shams*) that fades (*baṭala*) when the sun sets (*ghāba*), the heat of fire and the existence of numbers derived from unity, where the reference is usually to Epistle 1 "On Arithmetic".

And Epistle 40 states:

Text 3: The majority of people think and imagine that the existence of the world due to the Creator… is like the existence of a house built by a builder, independent in itself, no longer in need of the builder after he has finished building it; but the issue is not as they have thought and imagined, because the building of a house is a composition and an aggregate of things [already] existing of themselves, autonomously subsisting, such as earth, water, stones, dried brick, gypsum, baked brick, wood, and the like, whereas origination and invention are neither a composition nor an aggregate, but an innovation and a bringing into existence from nothing. This can be compared to the speech of a speaker and to the writing of a scribe, indeed one of these two is similar to origination – namely, speech – and the other is similar to composition – namely, writing, and because of this it happens that if the speaker falls silent, the existence of the speech ceases, whereas when the writer stops, what has been written does not cease [to be]. Therefore the existence of the world due to the Creator… is like the existence of speech from a speaker: when he stops speaking, the existence of the speech ceases. An indication of the veracity of what we have said, and of the truth of what

Bustānī's edition, see *Rasāʾil Ikhwān al-Ṣafāʾ wa-khullān al-wafāʾ*, 4 vols. (Beirut 1957), 3:337, lines 9-18.

we have described is God's saying..., *It is Allah who sustains the heavens and the earth, lest they cease* (*to function*)*: and if they should fail, there is none... can sustain them*..., and His saying, may He be glorified and honoured,... *every day in* (*new*) *splendour doth He* (*shine*)![18], and no concern distracts Him from any other[19].

Here we find the repetition that the existence of the world with respect to the Creator (*wujūd al-ʿālam min al-Bāriʾ*) is not like that of a house with respect to its builder. The new reason adduced is that the construction of a house is a "composition" (*tarkīb*) and an "aggregate" (*taʾlīf*) of things already self-existing. God, on the other hand – and this time the statement is unequivocal – creates the world through an "origination" (*ibdāʿ*) and an "invention" (*ikhtirāʿ*). These are neither a composition nor an aggregate, but an "innovation" (*iḥdāth*) and a "bringing into existence from nothing" (*ikhrāj min al-ʿadam ilā l-wujūd*). The comparison with speech and writing returns anew. The former is an origination (*ibdāʿ*), while writing is a composition. The terms used to indicate the lack of agents are still *sakata* and *baṭala*, to which *amsaka* is added. Epistle 40 ends with two partial Qurʾānic quotations from 35:41 and 55:29. These testify to the continuous connection between God and His creation.

These two passages variously parallel the existence of the world from the Creator (*wujūd al-ʿālam ʿan al-Bāriʾ*) to the speech of a speaker, which exists only as far as the speaker speaks. Whereas the existence of the world does not resemble the writing of a scribe nor a house, which can subsist independently from the scribe or the builder because they result from the composition and aggregation of pre-existing elements, the world is an "origination" (*ibdāʿ*) and an "invention" (*ikhtirāʿ*) – that is, an "innovation" (*iḥdāth*) and a "bringing into existence from nothing" (*ikhrāj min al-ʿadam ilā l-wujūd*).

It is evident that al-Baṭalyawsī and the Ikhwān share some characteristics – the Ikhwān's texts are richer – and that only the terminology is somewhat different. These similarities enable us to see

18. Translations by Abdullah Yusuf Ali, here and later (online https://quranyusufali.com). The second verse quoted can be interpreted, literally, as «Every day He is in a new concern».

19. Cf. Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 81 line 8 to 83 line 2 (Arabic text); 189-90 (English translation); al-Bustānī, *Rasāʾil Ikhwān al-Ṣafāʾ*, 3:350 line 19 to 351 line 9.

the Ikhwān al-Ṣafāʾ as the occult subjects of the position referred to by al-Baṭalyawsī in Text 1 by means of a series of verbs in the third person plural.

But al-Baṭalyawsī's discourse continues:

Text 4[20]:
فلما كان البارئ [...] هو الموجود الصحيح الوجود[21] كان وجود غيره لاحقا بوجوده وتابعا له ولم يكن في الوجود إلا هو ومصنوعاته صار الموجود من هذه الجهة كأنه موجود واحد والمعلوم كأنه معلوم واحد وصار إذا علم نفسه فقد علم كل وجود[22] تابع لوجوده.[23]

Since the Creator… is that which exists in the true sense, the existence of other-than-Him is linked to His existence and [is] consequential to it, and there is nothing in existence but Him and His artifacts. From this standpoint, the existent will be as one existent, and the knowable as one knowable. Then, the knowledge of Himself [will be] the knowledge of every existent consequential to His existence.

God's existence is the true (*ṣaḥīḥ*) existence because, as a consequence of the previous distinction between "absolute" and "relative" being, it is the only one that is uncaused; every other existing being, as far as it is caused, is linked (*lāḥiq*) to God and consequential (*tābiʿ*) to Him[24].

Al-Baṭalyawsī adds that, from such premises one can speak of a kind of "unity" between God and His artifacts (*maṣnūʿāt*), and certainly in this case *wujūd* indicates not only "existence" but "being" as well. A further consequence will be that God and creatures can also be considered a single "knowable". Therefore, by knowing Himself God also knows every other creature. Thus, the Qur'ānic premises emphasized in the Ikhwān's quotations are safe.

Al-Baṭalyawsī's comparison, though it strongly agrees with the Ikhwān's texts, shifts from ontology to gnoseology[25]. Hence it

20. The text corresponds to E, 73 lines 3-6 of the Arabic text.
21. E adds: و.
22. Instead of وجود, E has: ما وجوده.
23. Cf. Jevolella (ed. and trans.), *Ibn as-Sīd*, 130.
24. Cf. for this Jevolella (ed. and trans.), *Ibn as-Sīd*, 39.
25. See Jevolella (ed. and trans.), *Ibn as-Sīd*, 29, 41, and 45. Gnoseology is closely related to ontology in al-Fārābī's explanation of emanatism (in al-Fārābī, it is precisely by knowing Himself that God «emanates» the first Intellect), and the assimilation of ontology and gnoseology is found, at least in part, in the Ikhwān al-Ṣafāʾ (see, e.g., later, 294-95).

seems legitimate to investigate what concept of *ibdāʿ* is reflected in these passages and especially, given the unmistakable model of al-Baṭalyawsī, in the passages of the Ikhwān al-Ṣafāʾ.

Epistle 40 concludes the argument with the Qurʾānic quotations, but Epistle 39 continues:

Text 5: And know that the speech of a speaker is not a part of him, but an act he accomplishes and a deed he makes manifest where there was no act before. The same rule applies to the light from the mass of the sun, which is visible in the air: it is not a part of [the sun], but is free flowing from it and [is] a surplus of emanation. The same rule applies to the heat [that] spreads from and around [a fire]: it is not a part of its essence, but a surplus it confers, the emanation of a goodness that it emanates, and an act it accomplishes where there was no act before, just as the speaker makes [his] speech manifest where before he had not been speaking, and the speech is not a part of the speaker, but an act he accomplishes and a work he makes manifest. How the existence of the world [is] due to the Creator… has already been explained in what we have said in these examples mentioned above. Neither was it decreed, nor should you think, that the existence of the world due to the Creator… is a disposition without any choice by Him, just as the existence of sunlight in the air [is] a disposition without any choice by it [i.e., the sun], and it was not decreed that its light and effusion be hindered, because it [i.e., the sun] is disposed to that to which the Lord of the worlds disposed it, glorified be His mention. As for the Creator,… He is One who freely chooses His act: when He wishes, He acts, and when He wishes, He refrains from acting, like a speaker who has power over [his] speech: when he wishes, he speaks, and when he wishes, he is silent. The same rule applies to the [way in which] the Creator… brought the world into existence and invented it: when He wished, He emanated His goodness, His overflow, His blessings and His favour, and made His mercy and wisdom manifest; if He wished, He refrained from [some] act by abandoning [it]; and if He wished, He refrained from repeating the labour of his act, because He has power over action and over the abandoning of an action through choice, as was mentioned in His book through the tongue of His prophet, and He said, *It is Allah who sustains the heavens and the earth, lest they cease* (*to function*)*: and if they should fail, there is none – not one – can sustain them thereafter*, and He said,… *every day in* (*new*) *splendour doth He* (*shine*)!, and no concern distracts Him from any other[26].

26. Cf. Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 46 line 7 to 49 line 5 (Arabic text); 163-65 (English translation); al-Bustānī, *Rasāʾil Ikhwān al-Ṣafāʾ*, 3:337 line 19 to 338 line 16.

Text 5 explains that speech is not a "part" but an "act" of the speaker who originated it from nothing. This discussion is clearly related to the consideration of the status of the divine attributes. But let us follow the text point by point.

In the same way, the Ikhwān say that the light of the sun is not a part of that body but an effusion (*inbijās*) and a surplus (*faḍl*) emanating from it. Similarly, the heat of a fire is an effused surplus, the emanation of a good (*jūd*) and an act established after it had not been [there] (*baʿd an lam yakun*): just as the speech of a speaker, mentioned earlier, is not a part of him but his act and work.

While neither the speaker's act nor the outpouring and surplus of light and heat are "parts" of the subjects from which they proceed, a clear distinction is made between the speaker's act and the outpouring and surplus of light and heat. The latter images are similar to those used by Neoplatonists to explain emanation, which is itself a way of explaining the origin of the world, as was the word of the speaker in the Ikhwān's passages.

But in these passages the concept of creation is far removed from the Neoplatonic concept. In line with what has just been said, we note that the existence of the world caused by the Creator (again: *wujūd al-ʿālam ʿan al-Bāriʾ*) is not a disposition (*ṭabʿ*) in which choice plays no role: this is unlike the light of the sun in that it was prepared by God to emit and hence the sun can neither desire not prevent such emissions.

The Creator freely chooses His own acts, as does a speaker who speaks if he wishes to and remains silent if he so wishes. If giving existence to the world is here a result of divine choice, contrary to numerous other places in their encyclopedia, the Ikhwān radically contrast a divine act of *ibdāʿ* with an emanative process that by its nature is inevitable and involuntary[27].

Immediately afterward, however, God's "bringing into existence" (*ījād*) and "inventing" (*ikhtirāʿ*) the world result precisely in an emanation of His goodness (*jūd*) and favor (*faḍl*), however voluntary: if God wished, He could cease to do so and could interrupt the emanation, thereby eliminating the world. At this point the passage concludes with almost the same Qurʾānic quotations found at the end of

27. This was one of the objections that al-Ghazālī made against the theory.

the passage in Epistle 40 above (only a few more words are quoted from Q 35:41)[28].

This passage once again makes explicit the inconsistencies of the Ikhwān's system, which even in its representation of the origin of the world wavers between Shīʿī, Ismāʿīlī, and even, at times, Sunnī positions[29]. This is not the time to return to the question of whether this and other ambiguities contained in the encyclopedia should be considered the result of a multi-authored and/or stratified work, or of a sort of *taqiyya* practiced by the Ikhwān in cases of "sensitive" issues.

Rather, note here – as I did in the introduction to my edition and annotated translation of Epistles 39 and 40 – that the passage in Epistle 39 introduces an important parallel: the existence of the world through the word, which ceases as soon as the speaker stops speaking, as opposed to the house when its construction is complete. The house is actually a composition of pre-existing components (earth, water, stones, dried brick, gypsum, baked brick, wood, and the like), whereas the word is a mere *flatus vocis*.

Though the text obviously deals with human speech, this comparison inevitably brings to mind the creative Word of God, in that God's "free action" mentioned in Epistle 39 is nothing but His imperative (*amr*), His saying *kun* ("be"). The Ikhwān make use of this image to support their idea of the creation of the world from nothing. It is not entirely clear whether the idea of *creatio ex nihilo* matches unequivocally the letter of the holy book, but the doctrine of the dependence of the world, moment by moment, on God certainly belongs to the Qur'ān.

From this standpoint, the parallel with the speaker's discourse is most fitting: the enduring relationship between God and creatures makes it clear that God's Word is not merely *flatus vocis*.

Although the position of the Ikhwān al-Ṣafā' with regard to the divine attributes is unclear[30], by far the most widely held view in Islam is that the attributes are eternal, as is the Qur'ān.

28. The second part of the chapter restates the same concepts with further considerations – a syllogistic argument is included.

29. Cf. for example, Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 115-16.

30. Cf. e.g., C. Baffioni, *L'Epistola degli Iḫwān al-Ṣafā' «Sulle opinioni e le religioni»* (Naples 1989), 147 and 192-200; C. Baffioni, *Appunti per un'epistemologia profetica. L'Epistola degli Iḫwān al-Ṣafā' «Sulle cause e gli effetti»* (Naples 2006), 75-78, 85, and 178.

Hence, it is not by chance that the comparison with writing must have been introduced into this passage. On the one hand it is problematic[31], as writing is similar in nature to the house because it exists independently of the scribe, and it too is formed from pre-existing, though unspecified, elements. In this sense the image is correctly used to deny any similarity between the world originating from nothing and a script's origination from a scribe. But the universe is considered, metaphorically, to be the second Book written by God, after Qur'ān. And since the Qur'ān is viewed as eternal if applied to the universe as divine script, the Ikhwān's comparison would contradict their idea on the contingent origin and duration of the world.

In fact, the universe has a so-to-speak "conditional" duration that represents a mediation between the two extremes of an eternal existence and a momentary existence, such as that of a *flatus vocis*. This intermediate connotation of the universe is precisely the "voluntary" emanation of divine goodness and favor, to which the duration of the world is subordinated on pain of extinction, without the need to introduce pre-existing components that would invalidate its origin from nothing. In this case the contradiction can be resolved.

The mention of *ta'līf* (aggregate) and *tarkīb* (composition) recalls two key terms of the ontology of the Ismāʿīlī *dāʿī* Abū Yaʿqūb al-Sijistānī. In his well-known ontological representation in the form of a "Christian cross," al-Sijistānī places at the top of the cross the Intellect (that is, the first originated being, *al-mubdaʿ al-awwal*), to which corresponds, at the base of the cross, the *asās*, whose proper acts are *ta'yyid* and *ta'wīl* (inspirational help and interpretation); and he places at the extremities of the horizontal branch of the cross the Soul and the *nuṭaqā'* ("speaking") prophets, whose proper acts are *tarkīb* (composition) and *ta'līf* (aggregate, in this case, of letters). The Soul and the speaking prophets enact two types of composition: that of matter and form giving rise to Nature, and that of letters giving rise to God's books.

In al-Sijistānī the sublunar world finds an exact correspondent in the "Word of God" that has become a book. But there is no explicit mention of the possible existence of either one or the other independently of the Intellect, which according to this conception would take the place of God the Creator.

31. See the English translation, 163 and 189, respectively.

On the other hand, it is noteworthy that in another passage of the *Kitāb al-yanābīʿ* (Book of wellsprings) (*Yunbūʿ* 39), al-Sijistānī explains the distinction between speech and writing by linking speech to "verbal compilation" deriving from the "power" of the speaking prophets, and by linking writing to interpretation (*ta'wīl*), which is the act proper to the *asās* at the base of the cross:

Text 6: [paragraph 183] In a similar fashion, parallel to the letters of *kalima(t) Allāh*, things have existence in four [different] senses: that is, as essences, as psychic-motifs, as speech, and as script. Corresponding [to these] are spiritual inspiration, physical composition, verbal compilation, and interpretation. Spiritual inspiration parallels the essences of things, [... and] is within the domain of intellect, and thus accordingly things also possess significations that have been produced by intellect.

[paragraph 184] As for the psychic-motifs, they parallel physical compounding since physical compounding is in the domain of the Follower. And as for speech, it parallels the verbal compilation that the Speaking-prophet compiles by means of his power, since compilation parallels the sounds that exist through the power [of speech].... Script parallels interpretation, since interpretation is explanation and the engraving of intellectual forms in the hearts of novices. As there is nothing in the world that is not susceptible to script, be it wood, clay, the species, minerals, or animals, accordingly, interpretation extracts something from everything and finds an inference in all things. Speaking does not exist except in a person capable of speech....[32]

The "power" of each speaking prophet is the same as the speaker's "act" in the Ikhwān's passages: it gives sounds or *flatus vocis* a distinct existence by making them comprehensible through mutual connection ("verbal compilation"). The durable form of a speech is writing once it has been inscribed on a material medium. Similarly, the words of the sacred books find their stability in the hearts of initiates through interpretation. "Interpretation" is obviously beyond the scope of the passages that we have examined, but al-Sijistānī adds that while everything can be inscribed, speech can only exist in someone capable of speaking.

32. Cf. P. E. Walker, *The Wellsprings of Wisdom: A Study of Abū Yaʿqūb al-Sijistānī's Kitāb al-Yanābīʿ Including a Complete English Translation with Commentary and Notes on the Arabic Text* (Salt Lake City 1994), 108-9.

Ideally we could consider the Ikhwān's encyclopedia and the *Jāmiʿa* as the origin of these doctrines. Closer to our texts – in an addition to Epistle 50 *Fī kammiyyat anwāʿ al-siyāsāt wa-kayfiyyatihā* (On the quantity and the quality of the species of a [proper] attitude) found in MS Esad Efendi 3638 that I have recently edited[33] – there is a distinction between *khilqa ibdāʿiyya* ("creation through origination", proper to the higher hypostases) and *khilqa tarkībiyya* ("creation by composition", proper to the sublunar world)[34].

Later, when clarifying the significance of the particular – that is, the biblical-Adam – , "the first of the human forms and of creation by composition (*al-khilqa al-tarkībiyya*)"[35], and his sin, the author(s) mention God's entrusting Adam with the "letters of the names by which the knowledge of things is extracted, after [their] composition and aggregation". Here we find once again the *tarkīb* of the natural beings *via* the action of the Universal Soul and in parallel the *ta'līf* of the letters through the prophets who write down revelations[36]. Their comprehension of such letters also makes things comprehensible.

But what about the relationship of these texts with al-Andalus?

With respect to the above distinction between "part", "[voluntary] act," and "[necessary] disposition", al-Baṭalyawsī's discourse does not seem to take a position. It could be inferred that for him creation is in some way a "part" of God.

An aid to understanding al-Baṭalyawsī's position may be drawn from the passage in *al-Risāla al-jāmiʿa*, which echoes the two texts of the Ikhwān examined above:

Text 7: And know O my brother… that the origination of the Creator… is neither a composition, nor an aggregate, but [it is] an origination and an invention, and a bringing from non-existence to existence. The example

33. Cf. W. Madelung, C. V. Uy, C. Baffioni, and N. Alshaar (eds. and trans.), *Epistles of the Brethren of Purity: On God and the World. An Arabic Critical Edition and English Translation of Epistles 49-51* (New York 2019), 237-77. For my translation of the Arabic word *siyāsa* in the title of the epistle, see ibid., 124.

34. I refer here to paragraph 4 of the Arabic text.

35. The word I read *tarkībiyya* is completely undotted in the text. The term hints at the creation of the sublunar beings consisting in composition of matter and forms, whereas the heavenly beings emanate from each other. I refer to paragraph 21 of this addition.

36. For an overview of this doctrine see e.g., P. E. Walker, *Abū Yaʿqūb al-Sijistānī's, Intellectual Missionary* (New York 1998), 50.

for that [is] the discourse of a speaker and the writing of a writer: one of them resembles origination – namely, discourse – and the other resembles composition – namely, writing. Because of that, when a speaker is silent, the existence of the discourse ceases, whereas when the writer refrains [from writing], the existence of writing does not cease; and likewise, if the Creator ceased His generosity, the existing beings would instantaneously cease. Through this demonstration it has been confirmed that the creation of creatures [is] an origination and an invention, and it is not a composition or an aggregate, since composition and aggregate remain if the aggregator refrains from his aggregation, and the composer is cut off after his composition, as a writer is stopped from his writing, and the form of its letters remains. The evidence of the soundness of what we have said and of the true nature of what we have described [is] God's saying, *It is God who sustains the heavens and the earth, lest they cease* (*to function*)*: and if they should fail, there is none – not one – can sustain them thereafter*..., and His saying,... *every day in* (*new*) *splendour doth He* (*shine*)!, no concern distracts Him from any other. Through this exposition one attains knowledge of causes and effects[37].

This immediate negation that *ibdāʿ* is a composition and an aggregate thus summarizes what was said in Epistle 40, and it is repeated that *ibdāʿ* is an *ibdāʿ*[38] and an *ikhtirāʿ*, as well as an *ikhrāj min al-ʿadam ilā l-wujūd*. This is followed by a comparison with the speech of the speaker (*kalām al-mutakallim*), which is also similar to an *ibdāʿ*, while writing is considered a *tarkīb* (composition). We still find the verb pairs *sakata-baṭala* and *amsaka-baṭala*.

Essentially this text summarizes the two texts of the encyclopedia, but with some major differences. The *Jāmiʿa* is the only one that overturns the plans, moving not from the world but from the creative act of God that is unquestionably indicated as *ibdāʿ*.

There are also some entirely new elements. God, it is said, could

37. Until the new edition by Wilferd Madelung and Mourad Kacimi is published, I base myself on the edition by Muṣṭafā Ghālib (ed.), *al-Risāla al-jāmiʿa: Tāj Rasāʾil Ikhwān al-Ṣafāʾ wa-khullān al-wafāʾ, taʾlifu al-imām al-mastūr Aḥmad b. ʿAbdallāh b. Muḥammad b. Ismāʿīl b. Jaʿfar al-Ṣādiq* (Beirut 1984). Cf. here 481 line 8 to 482 line 2.

38. This repetition might be a mistake. Kacimi, like Jamīl Ṣalībā (*al-Risāla al-jāmiʿa al-mansūba li l-ḥakīm al-Majrīṭī, al-Juzʾ al-awwal; al-Risāla al-jāmiʿa al-mansūba li l-ḥakīm al-Majrīṭī wa-hiya tāj Rasāʾil Ikhwān al-Ṣafāʾ wa-khullān al-wafāʾ, al-Juzʾ al-thānī* [Damascus 1949], 2:288 line 2) has instead *wa-huwa iḥdāth*. I refer to Kacimi's provisional edition, which I am translating for the Institute of Ismaili Studies.

"withhold" (*qabaḍa*) His generosity if, as Epistle 39 states, He chose to do so. The verb *qabaḍa* expresses the opposite idea to that of "emanating" (*fāḍa*). For the first time we encounter the term *khalq* (*khalq al-khāliq al-makhlūqāt*), again explicitly identified as an *ibdāʿ* and an *ikhtirāʿ* but not as a *tarkīb* or a *taʾlīf*. The permanence of the effects of the acts of the *muʾallif* and the *murakkib* is rendered with various forms of *baqā*, and the interruptions of their acts with forms of *amsaka* (to stop) and *qaṭaʿa* (to be cut off). And for the first time letters are mentioned as the pre-existing elements of the scribe's writing that enable the writing to persist. The evidence (*dalīl*) of the veracity of the speech is still indicated by the partial quotations of Q. 35:41 and Q. 55:29. The general impression is that speech is the same as divine emanation, but the parallels variously established by the Ismāʿīlī texts between words, scriptures, and things are completely abandoned.

Above all, the *Jāmiʿa* passage presents an extremely interesting conclusion: "Through this exposition (*iʿtibār*) one attains knowledge (*takūnu maʿrifa*) of causes and effects". These words reflect the title of Epistle 40, which the *Jāmiʿa* clarifies. But this is also the first time that the idea of knowledge appears in the passages we are examining, as in the passage by al-Baṭalyawsī.

The key to understanding al-Baṭalyawsī's claim is to be found in the contexts from which we have taken our quotations, particularly those from the *Jāmiʿa* and Epistle 40. They present some significant differences from one another, but the issue is more clearly addressed in Epistle 40, where the emphasis, though in a similar context, is quite different.

The long chapter 1 of Epistle 40 mentions the confusion and doubts of those who try to understand the "origination of the world from nothing" (*ibdāʿ* [*li l-ʿālam*] *min ghayr shayʾ*). These doubts arise from the fact that every artisan makes his artifact from a given matter, in a given space and time, and through given movements and tools, while the innovation (*ḥadath*) and the making (*ṣanʿa*) of the world by the Creator were a process of bringing of such things – matter, space, time, movements, and tools – into existence out of nothing[39].

Many, the Ikhwān say, believe that God's knowable objects are eternal (*lam tazal*), as are the artifacts in the souls of craftsmen before

39. Cf. Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 181; and Jevolella (ed. and trans.), *Ibn as-Sīd*, 55.

they implement them in the materials proper to their arts, or as are the forms of the knowable objects in the souls of the learned, but this is not so. The context censors the opinion of those who think that the forms of the intelligible objects in the science of the Creator (*ṣuwar al-maʿlūmāt fī ʿilm al-Bāriʾ*) are similar to the forms of artifacts in the souls of craftsmen before they make them explicit (*qabla ikhrājihā*) by placing them in the material proper to their arts, or to the images of the forms of the intelligible objects of the learned (*ʿuqalāʾ*) and their representations.

The knowledge of artifacts in the souls of artisans only occurs after they have examined the artifacts of their masters, who, because of their mental sharpness, have grasped the forms in the objects of nature – the effects (*mafʿūlāt*) of nature –, and the original creations (*badāʾiʿ*) of the Universal Soul, in the same way as the learned know the intelligible objects after their examination of the sensible objects.

Therefore, it is clear that forms are not innate in human minds but are derived from something that precedes those who know them – teachers, nature, the Neoplatonic hypostases. What about the forms in the mind of God?

The difference with respect to human knowledge is explained with the origin of numbers from the number one[40]. Things are substances and forms that emanate and originate from the Creator, just as a number consists of various substances that emanate from the number one by repetition in human minds:

Text 8: ... things were in the knowledge of the Creator..., since He was the source of the existing beings and the root of the generated beings before His origination and His invention of them, like the coming-to-be of numbers in the [unit] one before their appearance in the minds of people (*al-ashyāʾ kānat fī ʿilm al-Bāri ... annahu ʿayn al-mawjūdāt wa-aṣl al-kāʾināt qabla ibdāʿihi lahā wa-ikhtirāʿihi iyyāhā, mithla kawn al-aʿdād fī l-wāḥid qabla ẓuhūrihā fī afkār al-nufūs*)[41].

40. Number being compared, as in Epistle 1, to «divine writing». Cf. e.g., Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 182; Arabic text, 70 line 5; further references ibid., 104, nn. 74 and 75, and 112. In the *Jāmiʿa*, it is Epistle 1 «On Arithmetic» that is called «the way to divine unity and oneness» (cf., e.g., 93 line 5). Divine knowledge is assimilated to the existence of number in the one (*kawn al-ʿadad fī l-wāḥid*) also in the *Jāmiʿa*. See Ghālib (ed.), *al-Risāla al-jāmiʿa*, 479 lines 13-14.

41. Cf. Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 74 lines 4-7 (Arabic text); 185 (English translation).

Alongside a number of notions frequently expressed in the encyclopedia[42], we read that

Text 9: … if the Creator… had an opposite (*ḍidd*), that would be non-being (*ʿadam*), but non-being is not a thing whereas the Creator… is in everything, and with everything, without any admixture or blending with them, just like the [unit] one is in every number and [in every] numbered [thing], without any admixture or blending with them[43].

In conclusion, "His knowledge belongs to His essence (*ʿilmuhu min dhātihi*), just as a number belongs to the essence of the [unit] one (*min dhāt al-wāḥid*)"[44].

This enables us to understand the status of created beings with respect to the Creator in al-Baṭalyawsī's passage: they are neither act nor disposition nor part[45] [of God] if there can be no intermingling between God and His creatures; the total otherness of the one with respect to the others is a fundamental assumption of both Sunnī and Shīʿī Islam.

Quite different is the question of divine knowledge with respect to God. In the *Jāmiʿa*, in the chapter preceding the quotation numbered Text 7, the ultimate stage of the knowledge of causes and effects is identified in the knowledge of the cause of the world (*maʿrifat ʿillat al-ʿālam*), of the cause of the existence of the world (*sabab wujūdihi*), and of that existence from the First Cause (*hādhā l-wujūd ʿan al-ʿilla al-ūlā*), as well as of the appearance of things from one another:

42. The Creator does not change while inventing things, just as the one does not change after the appearance of other numbers. The Creator is the source and cause of beings, just as the one is the root, beginning, and origin of numbers. He encompasses everything with His knowledge, power, and mercy, just as the one implies every number or numbered thing. Therefore, when the one is removed, all numbers are lost, but if a number is removed, the one is not removed. Thus, if there were no Creator, nothing would exist, but when things cease, He does not cease. All things are arranged in relation to God like the various numbers in relation to the one. Some of these concepts are expressed in Jevolella (ed. and trans.), *Ibn as-Sīd*, 56.

43. Cf. Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 185.

44. Cf. Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 187.

45. Despite what has been tentatively suggested above, at p. 288.

Text 10: Therefore, the greatest of the searched [objects] with regard to the cognizance (*wuqūf*) of causes and effects is the modality of the cognizance of [1] the knowledge of the cause of the world (*maʿrifat ʿillat al-ʿālam*) from which it occurred, and from which came the reason for its existence (*sabab wujūdihi*), [of] [2] how that existence came from the First Cause (*hādhā l-wujūd ʿan al-ʿilla al-ūlā*), and [of] [3] the appearance of things from each other[46].

If we understand *ʿillat al-ʿālam* as a possessive of *maʿrifa* and not as its object, it becomes clear that the existence of the world is an actualization of that knowledge – an actualization of forms existing in the divine mind; and the legitimacy of this interpretation is due precisely to the fact that the cause that gives rise to the world is distinct from the cause mentioned earlier, to the extent that a different – though synonymous – term (i.e., *sabab*) is used to designate it. Subsequently, the *ʿilla* is made explicit as *al-ʿilla al-ūlā* (i.e., in this case, God). Immediately afterward, the *Jāmiʿa* also restates the radical otherness between the knowledge of the forms of the intelligible objects by the Creator and their knowledge by craftsmen and scholars.

Created things are therefore the cognitive patrimony of God. It is precisely suggestions like these that seem to be present in al-Baṭalyawsī. In them there are the seeds of an explanation for his simultaneous mention of *mawjūd* and *maʿrūf* (Text 4). His final considerations appear to derive from the idea that in a certain sense God and His artifacts are identical.

These artifacts can be compared to the generation of numbers from the one, because craftsmen learn the forms of the various artifacts only after they have studied them from their masters, and those, in turn, have grasped the forms in the objects of nature; the same is true of the intelligible objects that are formed from the sensible. We may deduce that unlike objects knowable by humans, God's knowledge is eternal. God is indeed far beyond human knowledge – and science is one of God's attributes.

Both the *Jāmiʿa* and the Ikhwān express this by resorting to the expression *min dhātihi*, to which they ascribe the meaning of "belonging to an individual's essence". From the alleged "identity" of known objects and created objects it follows that they are identically knowable and hence God's knowledge of creation is guaranteed.

46. Ghālib (ed.), *al-Risāla al-jāmiʿa*, 479 lines 3-6.

Text 11:

Jāmiʿa:

His knowledge belongs to His essence (*min dhātihi*), as number belongs to the essence of the [unit] one (*min dhāt al-wāḥid*). The example [of that] must be applicable to what is exemplified in the majority and the most general of senses, not in [just] a few or the most defective of them. Therefore, His image… [is] the [unit] one, and the created beings (*mabrūʾāt*) [are] like numbers…

Every complete existing being is cause for what [is] below itself – that, because from every complete existing being a perfect emanation is emanated into the one below itself, and that emanation belongs to its substance, namely, to its preceding form that is its essence[47].

Epistle 40:

… [the Creator's] knowledge belongs to His essence (*ʿilmuhu min dhātihi*), just as number belongs to the essence of the [unit] one (*min dhāt al-wāḥid*). The example of that must be applicable to what is exemplified in the majority of senses (*maʿānī*), not in [just] a few of them. So, exemplifying the Creator… with the [unit] one is the most suitable, and [exemplifying] the created beings (*mabrūʾāt*) with numbers has a greater applicability than other examples…

Every complete existing being emanates a certain emanation into the one below itself, and… [that emanation] belongs to (*min*) its substance, namely the constitutive form that is its essence[48].

Both contexts end with a well-known concept – the continuity of emanation as a warrant for the permanence of creation; the *Jāmiʿa* explicitly mentions the Neoplatonic hypostases.

47. Ghālib (ed.), *al-Risāla al-jāmiʿa*, 480 lines 1-7.

48. Cf. Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 79 lines 2-7 (Arabic text); 187-88 (English translation). Needless to say, the reading *muqawwima* at the end of the passage is more suitable for the context than *muqaddima*, as we find in the *Jāmiʿa* (in his edition, Mourad Kacimi reads *al-muqawwima li-dhātihi* and not *allatī hiya dhātuhu*). The *Jāmiʿa* emphasizes that causes are the same as emanation.

Text 12:

Jāmiʿa:	Epistle 40:
And know that insofar as emanation (*fayḍ*) into the object of emanation (*mufāḍ*) is uninterrupted [and] continuous (*mutawātiran muttaṣilan*), it [= the object of emanation] remains (*bāqin*) as it is; and if [the emanation] fails to reach it (*qaṣara ʿanhu*), its existence ceases (*baṭala*); likewise the existence of things, [is] uninterrupted from the giver of their existence (*mūjid*): they come out from non-existence to existence through His generosity and graciousness, and if He withholds (*qabaḍa*) that generosity, [that leads] to the cessation of [their] existence (*li-buṭūl al-wujūd*).	Know that, insofar as an emanation is uninterrupted and continuous (*mutawātiran muttaṣilan*) from [its] emanating [source], that [emanation] will continue [emanating] into what is emanated. When it is no [longer] uninterrupted and continuous, then the existence [of the emanation] upon [the emanated object] will vanish and cease for it, because it fades away accordingly.
The example for that [is] the succession of the union of light with air: until it is continuous, [and the] coming of [light] to it [is] uninterrupted, it [= the air] shines and radiates, and when light and brightness are shut off (*inqabaḍa*) from it, it becomes obscure…	This can be compared to brightness in the air: when lightning is uninterrupted and continuous, the air continues to light things up, as in daytime, when the emanation of the sun from itself into the air is uninterrupted and continuous; and when there is a barrier between the two, that light will vanish from the air…
So the emanation of the Intellect [is] into the Soul, and the emanation of the Soul into the bodies, and Matter [is] continuous with the first [originated being], and the first [originated being is continuous] with the Creator….	
And as when the soul separates from the body life disappears, death occurs to it, and its movement	And likewise continuous and uninterrupted life is [emanated] from the soul into bodies, and when

ceases, so all things – if the Creator's emanation unto them and His looking at them with the glance of the heavenly volition that makes them come to being as they exist, running according to His purpose, will, and omnipotence disappears – …, their existence ceases, and they drop into the abyss of not-being[49].

the soul departs from the body, its life instantaneously ceases… And the same is true for the rule [that governs] the existence and permanence (*baqā'*, here and later) of the world due to (*min*) the Creator… as long as the emanation, the generosity, and the gift are uninterrupted and continuous [from God], the existence and the permanence of the world will last, and if it is obstructed [even] for an instant, the existence of the world will cease and instantaneously vanish[50].

To sum up, I hope that the foregoing may modify, at least in part, de Callataÿ's judgment quoted at the beginning of this article. On the other hand, I fully share his words on the late Mauro Zonta's view that *Kitāb al-dawā'ir* is "a sort of compendium of the Brethren's doctrine" that can be fully shared. Certainly, as de Callataÿ states, the Ikhwān "unquestionably inspired […] a large part of the ideas at the basis of [Baṭalyawsī's] treatise". However, as he explains, «the *Kitāb al-dawā'ir* deserves to be regarded as an innovative work in which the material deriving from other sources – the *Rasā'il Ikhwān al-Ṣafā'* but also many other works of the past – has been re-elaborated into a new and profoundly original synthesis".

The comparisons in my paper also show that al-Baṭalyawsī not only had the Ikhwān's encyclopedia and the *Jāmi'a* in mind, but that he also revised and reworked them profoundly. Other examples from the *Kitāb al-dawā'ir* (Book of circles) could of course be provided in support of this claim.

But let us confine ourselves for the moment to recalling Michael Ebstein's assertion that: "Unfortunately, the Ikhwān's Epistles are the only Ismā'īlī text known to have directly influenced the intellectual scene in al-Andalus"[51]. The Ismā'īlī suggestions are undoubtedly

49. Ghālib (ed.), *al-Risāla al-jāmi'a*, 480 line 14 to 481 line 7.

50. Cf. Baffioni and Poonawala (ed. and trans.), *Sciences of the Soul and Intellect*, 80 line 4 to 81 line 8 (Arabic text); 188-89 (English translation).

51. Ebstein, *Mysticism and Philosophy*, 236.

also found in the passages that we have discussed. But such suggestions seem to have been entirely lost in al-Baṭalyawsī, as is clear from the concerns in chapter 6, to which we have referred: divine knowledge of creatures. Despite Ebstein's idea of some influence of al-Baṭalyawsī on Ibn ʿArabī, I think that his *Kitāb al-dawāʾir* (Book of circles), although rich in the influence of the Ikhwān, is some distance removed from Ismāʿīlī sentiment – at least with regard to the examination of its references to the Ikhwān al-Ṣafāʾ. Preserving the close connection between God and creatures through his philosophical elaborations on the divine knowledge of them, however, one could say that al-Baṭalyawsī gave some emphasis to – in Ebstein's words – the "spiritual" and "salvational" intentions of the Epistles over and above their possible Ismāʿīlī commitment.

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Abstract

Carmela Baffioni, *The Andalusī Reception of Ontological Options and Cosmological Descriptions in the Ikhwān al-Ṣafāʾ and* al-Risāla al-Jāmiʿa: *A Case Study*

In line with M. Ebstein's considerations in his book *Mysticism and Philosophy in al-Andalus: Ibn Masarra, Ibn al-ʿArabī and the Ismāʿīlī Tradition*, my article considers a few lines from al-Baṭalyawsī's *Kitāb al-ḥadāʾiq* that are strongly influenced by two passages from the *Rasāʾil Ikhwān al-Ṣafāʾ*. Al-Baṭalyawsī substantially differs in his general approach from the Ikhwān, despite his literal borrowing from their texts. His aims seem to follow their own goal, far from the possible Ismāʿīlī reading of the *Epistles*, legitimized in particular by some cosmological descriptions in *al-Risāla al-jāmiʿa*. The *Jāmiʿa* emphasizes, in fact, terms and themes close to Ismāʿīlī cosmological representations (such as the concepts of *amr*, divine imperative; or *ibdāʿ*, immediate origination). An Ismāʿīlī approach can also be recognized in conceptions similar to those of the Ikhwān's passages found, for example, in the Ismāʿīlī *dāʿī* Abū Yaʿqūb al-Sijistānī or in an addition to Epistle 50 that I have recently discovered and edited. On the one hand, al-Baṭalyawsī's elaboration of the Ikhwān's sources can be better understood through their rather different version in *al-Risāla al-jāmiʿa* that, contrary to the widespread framework of neo-Platonic origin often recurring in the Ikhwān al-Ṣafāʾ, combines the "Ismāʿīlī" cosmological representations with the idea of "emanation." On the other hand, while one cannot deny the similarities between the aforementioned Ismāʿīlī texts and the Ikhwān's encyclopedia, the contacts scholars claim to have existed between the Ikhwān and Andalusī thinkers do not automatically imply an Ismāʿīlī reading of them in al-Andalus.

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IN A HIDDEN PLACE: TRACES OF BĀṬINISM IN THE FRAGMENTS OF THE CAIRO GENIZAH

The approximately 350,000 manuscript fragments retrieved from the Genizah of the Ben Ezra Synagogue of Old Cairo have significantly contributed to our understanding of several aspects of medieval Judaism, of the status and life of Jewish communities in the Arabo-Islamic context, and of the medieval Mediterranean world in general[1]. The Cairo Genizah, which has exceeded its strictly religious aim as a repository for worn-out writings containing the name of God, has come to embrace the wider scope as a storage room for any form of writing in any language (mostly Judeo-Arabic, Hebrew, and Arabic). It is undoubtedly a rare example of a non-curated manuscript jumble embracing the sacred and the mundane, the official and the ephemeral, the public and the private, the elevated and the trivial. Together with pages from luxurious bibles, prayer books, and rabbinical writings, the Genizah has preserved leaves of philosophical, medical, alchemical, and astronomical books, but also commercial and private letters, writing exercises, lists of expenses, petitions to communal and Islamic authorities – the whole range of writings produced by a community in all its daily endeavors[2]. For this reason, research on

1. Bibliography on the documentary corpus of the Genizah is vast. The fundamental work on the relevance of Genizah manuscripts for the study of medieval societies in the eastern Mediterranean world remains S. D. Goitein, *A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*, 6 vols. (Berkeley 1967-93). On the importance of Genizah documents for the reconstruction of the administrative practices of Egyptian caliphates, see M. Rustow, *The Lost Archive: Traces of a Caliphate in a Cairo Synagogue* (Princeton 2020).

2. Effective tools for the discovery of Genizah fragments are the Cambridge University Digital Library (https://cudl.lib.cam.ac.uk/collections/genizah/1, accessed December 2023) and the Princeton Genizah Lab website (https://genizalab.princeton.edu, accessed December 2023); all the images of Genizah manu-

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Genizah fragments has also revealed non-mainstream aspects of medieval Judaism, from non-standard systems of vocalization of the biblical text, to the widespread diffusion of magical theories and practices, from details of the private lives of medieval Jewish celebrities to features of the system of education of children in the community[3]. The Genizah has also preserved Arabic originals, Judeo-Arabic renditions, and Hebrew translations of texts that were believed to be lost or that were preserved only in much more recent or defective manuscripts[4]. The majority of the materials retrieved form the Cairo Genizah have been roughly dated to the so-called "classical Genizah period," spanning from the fourth/tenth to the end of seventh/thirteenth century, a period that saw the Ikhshīdid, Fāṭimid, Ayyūbid, and Mamlūk dynasties in power in Egypt[5]. The influence of each of these dynasties' political, religious, and intellectual orientation is na-

scripts can be viewed on the website of the Friedberg Genizah Project (https://fjms.genizah.org, accessed December 2023). The monthly feature «Fragment of the Month» of the Genizah Research Unit at Cambridge provides an entry into the variety of fragments preserved in the Genizah Collections and new discoveries (https://www.lib.cam.ac.uk/collections/departments/taylor-schechter-genizah-research-unit/fragment-month, accessed December 2023).

3. On non-standard systems of vocalization of the Hebrew Bible, see, for instance, the medieval section of W. R. Garr, S. E. Fassberg (eds.), *A Handbook of Biblical Hebrew* (University Park, PA 2016). On magic in the Genizah, see the work of Gideon Bohak, particularly his «Greek, Coptic and Jewish Magic in the Cairo Genizah», *Bulletin of the American Society of Papyrologists* 36, no. 1 (1999), 27-44. On the education of children, see S. D. Goitein, *Jewish Education in Muslim Countries Based on Records from the Cairo Genizah* (Jerusalem 1962) [Hebrew]; and J. Olszowy-Schlanger, «Learning to Read and Write in Medieval Egypt: Children's Exercise Books from the Cairo Geniza», *Journal of Semitic Studies* 48, no. 1 (2003), 47-69.

4. Discoveries in the Genizah are frequent. Some recent finds include a Judeo-Arabic version of Thābit b. Qurra *On Talismans* which is lost in its Arabic original (the two extant Latin versions are *De Imaginibus* and *Liber Prestigiorum*), see G. Bohak and C. Burnett, *Thābit ibn Qurra On Talismans: Ps.-Ptolemy on Images 1-9 Together with the Liber Prestigiorum Thebidis of Abelard of Bath* (Florence 2021); and a very early Judeo-Arabic version of a medical work of Qusṭā b. Lūqā, see G. Ferrario, «Graeco-Arabic Medicine in Jewish Attire: An Early Judaeo-Arabic version of Qusṭā b. Lūqā's On Numbness from the Cairo Genizah», *Technai* 13 (2022), 9-29.

5. The outlines of Egypt's historical developments during the Middle Ages and the peculiarity of the Egyptian cultural and religious context are surveyed in C. Petry, *The Cambridge History of Egypt* (Cambridge 1998). On religious minorities in Egypt, see in particular, chapter 7, 175-97, by T. Wilfong and chapter 8, 198-210, by N. Stillman.

turally also reflected among Genizah fragments and, in consideration of the intellectual climate of the surrounding Muslim societies, it is not surprising that fragments of material showing esoteric, or rather *bāṭinī* intellectual tendencies, made their way into the Genizah of the Ben Ezra Synagogue. The concept of *bāṭin* can be applied to a wide range of intellectual products since everything that is hidden or reflects a reliance on hidden rather than apparent causes can be legitimately defined as *bāṭin*: the label *bāṭinism* has been used to talk about aspects of Shīʿī Ismāʿīlī thought, about tendencies of mysticism, about Neoplatonically-oriented philosophies, and about every hermetic and esoteric topic, from alchemy to astrology, from numerology to magic[6].

In this contribution, I present some examples of *bāṭinī* materials that surfaced during a survey of the relevant Genizah fragments. Together with the limitations of my own expertise, this survey and its results are characterized by other limitations that should be taken in consideration. First, my survey is mainly focused on the fragments preserved at Cambridge University Library, and includes the Taylor-Schechter, the Lewis-Gibson, and the Mosseri collections: these collections account for about 200,000 of the approximately 350,000 Genizah fragments originally retrieved from Cairo[7]. The handlist of *bāṭinī* fragments I collected while cataloguing portions of these collections has been supplemented by the material found in the extant catalogues, in particular in those devoted to the Arabic and Judeo-Arabic manuscripts, the online entries in the Cambridge University Digital Library, and the material available from the Princeton Genizah Lab[8]. A second limit lies in the fragmentary nature of the manuscripts themselves: the very aim of the Genizah and the

6. A survey of the various historical meanings attached to the word *bāṭin* can be found in P. E. Walker, «Bāṭiniyya», in *EI*[3], online: http://doi.org/10.1163/1573-3912_ei3_COM_30635 (accessed December 2023) and in the bibliography there mentioned.

7. My bias toward the Genizah collections at Cambridge has very practical origins: I was a research associate at Cambridge's Genizah Research Unit from 2010 to 2017 with the general task of producing catalogue entries for the still uncatalogued fragments.

8. C. F. Baker and M. R. P. Polliack, *Arabic and Judeo-Arabic Manuscripts in the Cambridge Genizah Collections* (Cambridge 2001); A. Shivtiel and F. Niessen, *Arabic and Judaeo-Arabic Manuscripts in the Cambridge Genizah Collections: Taylor-Schechter New Series* (Cambridge 2006).

ravages of time have often left us only portions of texts that are just a few pages long in rare lucky cases, but are more commonly single leaves or portions of leaves of just a few lines. Colophons, dedications, copying circumstances, authors' names, titles of books and of sections were very often lost, leaving the identification of the larger works these fragments belonged to (in case these books are known) to the memory, prowess, and luck of the researcher. Third, I have not included in the survey items from the vast magical corpus of the Genizah. These fragments, that clearly deserve a notable mention in a discussion of *bāṭinism*, have been thoroughly studied by Gideon Bohak, who showed the cultural, doctrinal, and practical features displayed in these materials, and evidenced the simultaneous presence of Neoplatonic, Islamic, and Rabbinic influences in medieval Jewish magical production[9].

Two Lists of Books

Traces of the circulation of *bāṭinī* ideas and texts in medieval Jewish Cairo are found in fragments preserving lists of books. These lists, which have been the object of significant scholarly contributions, were produced for a number of occasions and fulfilled various functions[10]. They were prepared as inventories of private libraries and often organized by shelfmarks, size, color of volumes, incipits, and topics; lists were used in the book trade, compiled by booksellers and by their customers, and often provided with prices; lists were also compiled when a book owner died and his possessions were put up for sale; in the case of renovation works to a synagogue that required the dislocation of its library, a list of its books was drawn up to ensure the preservation of the synagogue's belongings; copyists also prepared lists of books they could produce, and sometimes provided the

9. See Bohak, «Greek, Coptic and Jewish»; and G. Bohak, «The Book of Twitches of Shem Son of Noah and Other Manuals of Palmomancy from the Cairo Genizah and from al-Quṣayr», in *From Samarqand to Toledo* (Leiden 2023), 139-61. On geomantic fragments in the Genizah, see B. Villuendas Sabaté, *La geomancia en los manuscritos judeo-árabes de la Gueniza de El Cairo* (Cordoba 2015).

10. See N. Allony, T*he Jewish Library in the Middle Ages: Book Lists from the Cairo Genizah* (Jerusalem 2006) [Hebrew]; and M. Frenkel, «Book Lists from the Cairo Genizah: A Window on the Production of Texts in the Middle Ages», *BSOAS* 80, no. 2 (2017), 233-52 (and the bibliography mentioned at 234-35).

prices for their labor; book owners often wrote the titles of the books they loaned and sometimes also recorded the deposit for borrowing the book(s); finally, thematic lists of reading material for specific topics were prepared by students who, at times, also indicated the name of their teacher and the topic of the course.

The fragment T-S Ar.42.9 (Cambridge University Library) is a paper page measuring 18×12.4 cm and including 19 lines of Arabic text on recto and 11 lines on verso. Although fundamentally a Jewish institution, the Genizah preserved a significant number of Arabic manuscripts in Arabic script. Judeo-Arabic was naturally the most widespread language used in the Genizah fragments, but the Jewish scholars of Cairo were familiar with the Arabic language that they read and used regularly. As is very common among Genizah fragments, the content of the recto and verso of this leaf are disparate and do not belong together. While the verso preserves a portion of an unidentified secular poem in Arabic, the recto is a list of book titles that reveals *bāṭinī* topics. The state of conservation of the fragment, which is holed, torn, and shows signs of rubbing of the ink, does not allow a complete decipherment. It is, however, possible to read (line 1) that these are "all the books of the wise master" (*jamīʿ kutub al-shaykh al-ḥakīm*), whose interest in *bāṭinī* readings is revealed by the presence, at line 19, of the mention of a specific portion of the *Epistles* of the Ikhwān al-Ṣafāʾ; while the name of the Brethren of Purity is clearly legible, the portion of text that precedes it is damaged and allows only conjectural readings. We could read either a reference to "the portion on the soul" of the *Epistles* or the numeral "the fifth". If the first hypothesis is correct, the booklist of the wise master would refer to the contents of *Epistles* 32-41[11]; according to the other option, *Epistle* 5, which corresponds to the Brethren's treatise on music, may have been intended here[12]. The context of the booklist in which the *Epistles* are mentioned in this fragment provides – where readable –

11. The psychological epistles of the Brethren of Purity have recently been edited and translated in P. E. Walker, D. Simonowitz, I. K. Poonawala, and G. de Callataÿ (eds. and trans.), *Sciences of the Soul and Intellect, Part I: An Arabic Critical Edition and English Translation of Epistles 32-36* (Oxford 2016); and in C. Baffioni and I. K. Poonawala, *Sciences of the Soul and Intellect, Part III. An Arabic Critical Edition and English Translation of Epistles 39-41* (Oxford 2017).

12. The most recent edition and study of Epistle 5 is O. Wright, *On Music: An Arabic Critical Edition and English Translation of Epistle 5* (Oxford 2010).

further information about the literary possessions and interests of the "wise master". A book by Yūḥannā (*Kitāb Yūḥannā*) is mentioned at line 2, and possibly refers to Yūḥannā b. Māsawayh, the Nestorian Christian physician active in the first part of the third/ninth century; Yūḥannā was the personal physician for the ʿAbbāsid caliphs al-Maʾmūn, al-Muʿtaṣim, al-Wāthiq, and al-Mutawakkil, and was for some time the teacher of Ḥunayn b. Isḥāq. His production includes an extensive treatise on pathology, the *Kitāb al-kamāl wa-l-tamām* (The complete and perfect book) and several works on pharmacology and specific ailments[13]. The upper left side of the page is densely written and fairly damaged. Among the books listed here, three titles of Aristotelian works are clearly detectable: a discourse on the soul (*Maqāla fī al-nafs*) can be identified as Aristotle's *De Anima*, the *Metaphysics* (*Kitāb mā baʿd al-ṭabīʿa*), and the fifth book of the *Physics* (*al-khāmis min al-Simāʿ al-Ṭabīʿī*)[14]. The right side column also preserves the title of *Kitāb al-irshād* (Book of the guidance), which could be identified with the *Kitāb al-irshād li-maṣāliḥ al-anfus wa-l-ajsād* (The book of the guidance for the welfare of souls and bodies), a medical compendium begun in the sixth/twelfth century by Abū l-Makārim Hibat Allāh b. Zayn al-Dīn b. Jumayʿ al-Isrāʾīlī and completed after his death by his students. Ibn Jumayʿ al-Isrāʾīlī was chief physician in the court of Ṣalāḥ al-Dīn, and a contemporary of Maimonides in the medical duties at the Ayyūbid court[15]. The library of the wise master also

13. Ibn Abī Uṣaybiʿah, '*Uyūn al-anbāʾ fī ṭabaqāt al-aṭibbāʾ*', ed. and trans. E. Savage-Smith, S. Swain, G. J. van Gelder, 3 vols. in 5 (Leiden 2020), section 8.26, online: https://doi.org/10.1163/37704_0668IbnAbiUsaibia.Tabaqatalatibba.lhom-ed-ara1 (accessed 16 March 2024); E. Savage-Smith, «Ibn Māsawayh, Yūḥannā», *EI*^{3}, online: http://doi.org/10.1163/1573-3912_ei3_COM_30635 (accessed December 2023); see also M. Ullmann, *Islamic Medicine* (Edinburgh 1978), 41-42.

14. On the Arabic *De Anima*, see ʿA. Badawi, *Aristutalis fī n-nafs* (Cairo 1954); and A. Ivry, «The Arabic Text of Aristotle's De anima and Its Translator», *Oriens* 36 (2001), 59-77. On the *Metaphysics*, see Aristotle, «Maqāla al-Lām min Kitāb Mā baʿda al-ṭabīʿa li-Arisṭū», ed. ʿA. Badawī, in *Arisṭū ʿinda l-ʿArab* (Cairo 1947), 1-11; and C. D'Ancona and G. Serra, *Aristotele e Alessandro di Afrodisia nella tradizione araba* (Padova 2002), 19-74. I am thankful to Sébastien Moureau for the identification of the last title and for the identification of other titles in this manuscript. I have not been able to decipher and identify the other works mentioned in this portion of manuscript due to material damage and its unclear script.

15. Ibn Abī Uṣaybiʿah, '*Uyūn al-anbāʾ*', section 14.2; D. Nicolae, «Ibn Jumayʿ», in *EI*^{3}, online: http://doi.org/10.1163/1573-3912_ei3_COM_30847 (accessed December 2023); and M. Meyerhof, «Mediaeval Jewish physicians in the Near East, from Arabic sources,» *Isis* 28 (1938), 432-60.

included medical classics, as the mention of Hippocrates' *Fuṣul Abuqrāṭ* (Medical aphorisms) at line 6 shows[16]. The medical focus of this booklist is further confirmed by the mention at line 9 of the *Firdaws al-Ḥikma* (a medical encyclopedia composed by ʿAlī b. Sahl b. Rabban al-Ṭabarī in the third/ninth century) by the anonymous mention of a *Kitāb al-iʿtimād* (Reliable book, or Book of confidence) at line 10, and of a *Kitāb al-iʿtidāl fī quwā al-adwiya* (Book on the balancing of the faculty of medicines) at line 12. Both titles could be identified as medical works by Abū Jaʿfar Aḥmad b. al-Jazzār al-Qayrawanī, the fourth-/tenth-century physician more notoriously credited with the authorship of the *Kitāb zād al-musāfir wa-qūt al-ḥāḍir* (Provisions for the traveler and nourishment for the sedentary), a medical treatise that gained widespread fortune in its Latin translation as *Viaticum*[17]. At line 11, reference is made to an *al-īʿtilā* (Ascension/Elevation), but this title is not enough for a univoque identification of this work. Further below, at line 13, the list appears to deviate from medicine with the mention of a *Kitāb al-ḥakīm* by a certain al-Māwardī, whose identification is bound to remain conjectural: there was an author with the same *nisba*, namely ʿAlī b. Muḥammad b. Ḥabīb, who became chief judge (*qāḍī*) of Baghdad during the first half of the fifth/eleventh century and penned several extensive political treatises. If this is the case, the title *Kitāb al-ḥakīm* mentioned in the fragment could be an abbreviation of *Kitāb al-aḥkām al-sulṭāniyya wa-l-wilāyāt al-dīniyya* (The ordinances of government), in which he

16. Our understanding of the Arabic reception of Hippocratic Aphorisms has benefitted from the recent research project lead by Peter Pormann at the University of Manchester. See P. Pormann, *The Cambridge Companion to Hippocrates* (Cambridge 2018), in particular, ch. 15: 340-61; P. Pormann and K. Karimullah, «The Arabic Commentaries on the Hippocratic Aphorisms: Introduction», in *Oriens: Journal of the International Society for Oriental Research* 45 (2017), 1-52; P. Pormann and P. Joosse, «Commentaries on the Hippocratic Aphorisms in the Arabic Tradition: The Example of Melancholy», in *Epidemics in Context: Greek Commentaries on Hippocrates in the Arabic Tradition* (Berlin 2012), 211-49; T. Mimura, «Ḥunayn ibn Isḥāq and the Text of the Hippocratic Aphorisms», *Galenos* 10 (2017), 67-71. A brief and useful note on the Hebrew tradition of Hippocrates' *Medical Aphorisms* with a list of extant manuscripts can be found in J. Jacobs and M. Schloessinger, «Hippocrates», in *Jewish Encyclopaedia* (1903), 6:403-4. See also L. Ferre, «The Medical Work of Hunayn ben Ishaq (Johannitius) in Hebrew Translation», *Korot* 11 (1995), 42-53.

17. Ibn Abī Uṣaybiʿah, '*Uyūn al-anbā*', section 13.3; G. Bos (ed. and trans.), *Ibn al-Jazzār's Zād al-Musāfir wa-Qūt al-Ḥādir, Provisions for the Traveller and Nourishment for the Sedentary* (Leiden 2015).

defined the functions of the caliphate during a time in which these functions tended to be obfuscated[18]. Line 15 appears to preserve the mention of a grammatical work, if the tentative reading *al-Muqaddima fī al-naḥw* (The introduction to grammar) is correct. Further below, at line 16, a faint trace of ink in the fragment can be read as the title of Muḥammad b. Zakarīyāʾ al-Rāzī's *Kitāb al-ḥāwī*, the extensive notebook of the fourth-/tenth-century polymath; this appeared after it was revised by his students and it became a medical classic in Europe as *Liber Continens*[19]. However, the fragment does not appear to mention any medical book by Ibn Sīnā that would have found a natural collocation in the list, but rather one of his more advanced philosophical works, the *Kitāb al-ishārāt* (generally known by the longer title *Kitāb al-ishārāt wa-l-tanbīḥāt* (The book of pointers and remainders, at line 18). The presence of this suggestive philosophical work may provide contextual evidence for the philosophical interests of the wise master, who also owned the portion of the *Rasāʾil Ikhwān al-Ṣafāʾ* mentioned at line 19. The *Ishārāt wa-l-tanbīḥāt* is a peculiar work of Ibn Sīnā, since the exposition of its topics – logic, physics, and metaphysics – is intentionally concealed from the understanding of laymen by the use of allusion and obscurities[20]. From the titles of the books in this list that are still readable, it is possible to note that we are looking at a significant collection of medical classics and a remarkable bibliographic source for the time. Although the focus and main strength of the library described by this list is clearly medical, some philosophical works are notably present: the *Ishārāt* by Ibn Sīnā, the Aristotelian works, and the *Rasāʾil Ikhwān al-Ṣafāʾ* provide a philosophically char-

18. C. Brockelmann, «Al-Māwardī», in *EI²*, online: http://doi.org/10.1163/1573-3912_islam_COM_0713 (accessed December 2023); ʿA. b. M. al-Māwardī, *Kitāb al-aḥkām al-sulṭāniyya wa-al-wilāyāt al-dīniyya* (Beirut 1996).

19. Muḥammad b. Zakariyya al-Rāzī, *Kitāb al-ḥāwī fī l-ṭibb* (*Continens of Rhazes*): *An Encyclopaedia of Medicine* (Hyderabad 1955-); M. Meyerhof, «Thirty-Three Clinical Observations by Rhazes [from the Ḥāwī]», in *Isis* 23 (1935), 321-56.

20. Ibn Sīnā, *Le livre des théorèmes et des avertissements*, ed. J. Forget (Leiden 1892); M. Zāreʿī, *al-Ishārāt wa-l-tanbīhāt li-l-Shaykh al-Raʾīs Ibn Sīnā* (Qum 2002); Ibn Sīnā (Avicenne), *Livre des directives et remarques*, trans. A. M. Goichon [French] (Paris 1951); *Ibn Sīnā, Remarks and Admonitions. Part One: Logic*, trans. S. C. Inati [English] (Toronto 1984); *Ibn Sīnā and Mysticism: Remarks and Admonitions: Part Four*, trans. S. C. Inati [English] (London 1996); *Ibn Sina's Remarks and Admonitions: Physics and Metaphysics*, trans. S. C. Inati [English] (New York 2014).

ged context for the medical materials in the list and suggest the wide interests of the owner of this library and possibly his sympathy for a non-mainstream approach to some philosophical themes.

The *Epistles* of the Brethren of Purity are also mentioned in another list of books found in a very small (6×6 cm) Genizah[21] fragment preserved at Cambridge University Library. Fragment T-S AS 181.79 (Fig. 1) is written on paper, is blank on verso, and preserves only 6 lines of Arabic text on recto. The nature of this fragment is difficult to establish, since there is no mention of the aim of this list, nor is there any clue to the ownership of the books. The first line preser-

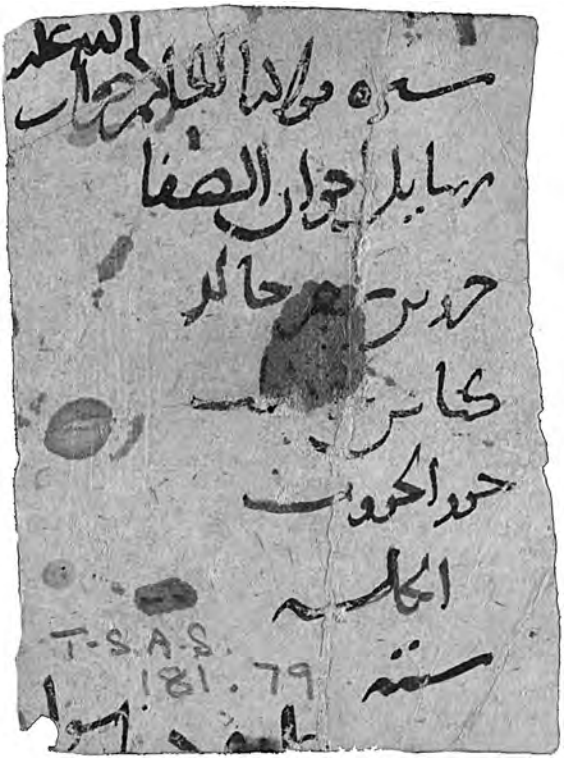


Fig. 1. Cambridge University Library, T-S AS 181.79 *recto*.

21. All images of Genizah fragments in this article were reproduced by kind permission of the Syndics of Cambridge University Library. I would like to thank Benjamin Outhwaite and Melonie Schmierer-Lee for their kind help in retrieving images of the fragments.

ves the title *Sīra Mawlānā l-Ḥākim* followed by a scribbled formula of blessing. The *Mawlānā l-Ḥākim*, whose biography is mentioned here, may be identified as Abū ʿAlī Manṣūr, also known as al-Ḥākim bi-Amr Allāh (d. 411/1021), the sixth Fāṭimid caliph and sixteenth Ismāʿīlī Imām. The Druze sect notoriously considered al-Ḥākim as a manifestation of God and put his figure at the center of their beliefs. His support for the education of Ismāʿīlī propagandists was fostered by the establishment of the *dār al-ʿilm* in Cairo, a center for the study of the Qurʾān, *ḥadīth*, logic, astronomy, and philosophy[22]. The mention of the *Sīra* of al-Ḥākim is followed by the mention of the *Epistles* of the Brethren of Purity or rather of a portion of the encyclopedia (the line reads: *min Rasāʾil Ikhwān al-Ṣafāʾ*). A possible interpretation of the third line of the fragment as "two parts of the *poem by Khālid*" (*juzʾayn shiʿr Khālid*) would reinforce the characterization of the cultural context of this booklist as a *bāṭinī* one. This Khālid could be identified with the Umayyad prince Khālid b. Yazīd b. Muʿāwiya, who died at the beginning of the second/eighth century, and to whom are attributed several alchemical works in both prose and verse[23]. Given the aforementioned titles in this list, a very likely reading of the title at line 5 is *juʾz al-ḥurūf* ("the section on letters"). Although the identification of this entry with any known work is impossible, its title may add a lettristic tinge to a fragment that clearly shows how materials of a *bāṭinī* persuasion circulated in the world that left its trace in the Cairo Genizah.

22. The bibliography on al-Ḥākim, his rule, and his religious importance is vast, see the rich entry and the bibliography in P. E. Walker, «al-Ḥākim Bi-Amr Allāh», in *EI*³, online: http://doi.org/10.1163/1573-3912_ei3_COM_30213 (accessed December 2023).

23. For an overarching assessment of the figure of Khālid b. Yazīd, see R. Forster, «Khālid b. Yazīd», in *EI*³, online: http://doi.org/10.1163/1573-3912_ei3_COM_35436 (accessed December 2023). On Khālid as an initiator of the translation of alchemical texts, see the passages in al-Nadīm, *Kitāb al-fihrist* (Leipzig 1871-72), 2:353, trans. B. Dodge, *The Fihrist of al-Nadīm: A Tenth-Century Survey of Muslim Culture* (New York and London 1970), 850-51. On Khālid as an alchemist, see J. Ruska, *Arabischen Alchemisten. I. Chālid ibn Jazīd ibn Muʿāwija* (Heidelberg 1924); and M. Ullmann, «Ḫālid ibn Yazīd und die Alchemie: Eine Legende», *Der Islam* 55 (1978), 181-218. The most complete study of Khālid's alchemy to date is M. Dapsens, «The Alchemical Works of Khālid b. Yazīd b. Muʿāwiya (d. c. 85/704)», *Asiatische Studien* 72.2 (2021), 327-427. See also the forthcoming M. Dapsens, *Arabice hoc elixir nuncupatur. Les Masāʾil Khālid li-Maryānus al-rāhib dans leurs versions arabe et latine* (Florence forthcoming).

Fragments of the Rasāʾil Ikhwān al-Ṣafāʾ

While the mentions of the *Rasāʾil* in booklists appears to show their circulation, or at least the knowledge of their existence, in the community reflected by the Genizah papers, the retrieval of a number of fragments preserving the actual text of portions of the *Epistles* both in Arabic and Judeo-Arabic is a clearer sign that this work found interested readers among the Jews of medieval Cairo. In the following section, I focus on three of these manuscripts: an extensive fragment – at least for Genizah standards – of a Judeo-Arabic rendition of the epistles on the natural sciences; a single Judeo-Arabic leaf with a portion of the 35th *Epistle On the Intellect and the Intelligibles*; and a single-leaf Arabic fragment preserving a section of the treatment of music by the Ikhwān.

Cambridge University Library T-S Ar.29.54 and T-S Ar.43.289 became disjoined either in the Genizah chamber itself, or in some phase between their retrieval, conservation, encapsulation, and labeling. In any case, they belong to the same manuscript and preserve separate passages of the *Rasāʾil* devoted to the natural sciences. The paper folios all measure approximately 19×12.5 cm and are densely written in a very neat and angular handwriting, which may hint, palaeographically, at a production of this copy in the sixth/twelfth or seventh/thirteenth century in the eastern Mediterranean area. The single leaf catalogued together with the multi-page fragment, T-S Ar.43.289 (P1)[24], preserves the end of the fourth, the fifth, and the beginning of the sixth *fuṣūl* of the 19th *Epistle*, the fifth epistle of the division on the natural sciences. The topics of these sections are the

24. Genizah fragments in the Cambridge Genizah Collections are labeled on the bottom right corner of their recto with a yellow (or more rarely white) tag showing their classmark. In the case of single-leaf manuscripts, this makes the identification of their recto and verso straightforward. In the case of bifolia, the label is found on the bottom right corner of the verso of the second leaf, so that the recto of the first page is the adjacent page on the left in the same opening. In the case of multiple bifolia, the provisional order of pages proposed by the cataloguers is signaled by a page number (e.g., P1, P2, P3) on a smaller white label. In what follows, I refer to pages of fragments according to this system: e.g., P2 2 recto indicates the recto of the second page of the second fragment in a multiple-leaf manuscript: this is the page that is found behind the one labeled with the fragment's classmark.

formation of hills and mountains from argils and sands that proliferate at the bottom of the seas, the connection of the different seas through visible gulfs and invisible passages and veins, the nature of internal lakes, and the causes of the agitation of the seas. It must be noted that the fragment was mislabeled: the recto and verso identified by the labels do not reflect the progression of the text of the *Epistles* and should be inverted. Fragment T-S Ar.29.54, where, like in the previous fragment, recto and verso have been inverted in the labeling phase, preserves a portion of the sixth *faṣl* of the 19th *Epistle*, where the discussion of the causes of the movements of the seas in relation to the movements of the Moon and the discussion on mountains are found. The bifolium T-S Ar.43.289 (P2) contains the longest portion of text of the *Rasāʾil*, a Judeo-Arabic rendition of parts of the 21st *Epistle*, the seventh of the division on natural science, devoted to plants. The labeling on the fragment is again misleading. With regard to the text, the order of reading should be: P2 2 recto to P2 2 verso-[lacuna]-P2 1 recto to P2 1 verso. The fact that only the recto and verso of the two folios of this bifolium preserve a continuous text and the text does not run continuously throughout the two folios shows, first, that this fragment was part of a quire composed of multiple bifolia and, second, that this was not the central page of the quire. The fragment contains the end of the first *faṣl*, where kinds of plants are assessed according to the proportion of their parts; the complete second *faṣl*, where the topic is the variety of soils and environments in which plants can grow; the very beginning of the third *faṣl*, on spring as the season of growth for most plants; and a portion from the second half of the same *faṣl* devoted mainly to a very detailed description of the palm tree and the fig tree. A further point of interest in this manuscript, when considered as a whole, is the sporadic presence of Arabic words in Arabic script in the context of a Judeo-Arabic text: this feature occurs throughout the fragments of the 21st *Epistle* and points to the presence of an Arabic *Vorlage*: the Judeo-Arabic copyist may have struggled to understand some of the Arabic words and decided to reproduce their *ductus* without attempting a transcription in Hebrew script. In order to evaluate this Judeo-Arabic version of sections of the 19th *Epistle* and the 21st *Epistle* of the Ikhwān against the recently edited Arabic text, my diplomatic edition of the extant fragments can be found in the appen-

dix to this article[25]. This cluster of fragments, with its extent and its codicological features, shows that the *Rasā'il* – or at least the epistles on the natural sciences – were copied and circulated among the Jews of medieval Cairo.

More evidence to back the previous statement is available. The Judeo-Arabic single-leaf fragment T-S Ar.43.286 is a paper manuscript measuring 14.10×9.3 cm. The 11 lines of text on recto and 12 on verso are written in a neat but unprofessional-looking handwriting[26]. The presence of deleted words on verso may point to a private destination of this copy or to its being a draft. Given the lack of any further means of dating it, the fragment should be ascribed to the "classical Genizah period". The Judeo-Arabic text preserved in this fragment is a short portion of the 34th *Epistle*, on the intellect and the intellegibles, the fourth of the division on the soul and the intellect. The Judeo-Arabic fragment, in particular, preserves the passage from the section on the human soul that discusses the relationship between the sensible images, the imaginative faculty, and the rational faculty, and includes the vivid description of a man who visits a new city: his senses take in the forms, the colors, the shapes, and sounds of the city and its inhabitants; these sensible images are impressed on the soul and will be retrieved from there when, once far from the city, the man wishes to recall them. The text itself does not present significant variants from the recent Oxonian edition[27].

Although the Cairene Jewish readership may have favored the Hebrew script, the first contact with the *Epistles*, and likewise with most of the Arabic philosophical and scientific production, must have happened through the circulation of Arabic manuscripts in Arabic script that Jewish scholars, physician, and notables in general obtained from their Muslim colleagues.

This may have been the case of fragment T-S Ar.41.23, a single leaf fragment on paper penned in a professional 'Abbāsid bookhand;

25. The text of the fragment corresponds to the edition by C. Baffioni, *On the Natural Sciences: An Arabic Critical Edition and English Translation of Epistles 15-21* (Oxford 2013), 262-71, 434-47, 464-49.

26. The labeling of recto and verso of the fragment is incorrect: what is now identified as recto should be considered the verso.

27. P. Walker, D. Simonowitz, I. S. Poonawala, G. de Callataÿ (ed. and trans.), *Sciences of the Soul and Intellect. Part I: An Arabic Critical Edition and English Translation of Epistles 32-36* (Oxford 2016), 121-22.

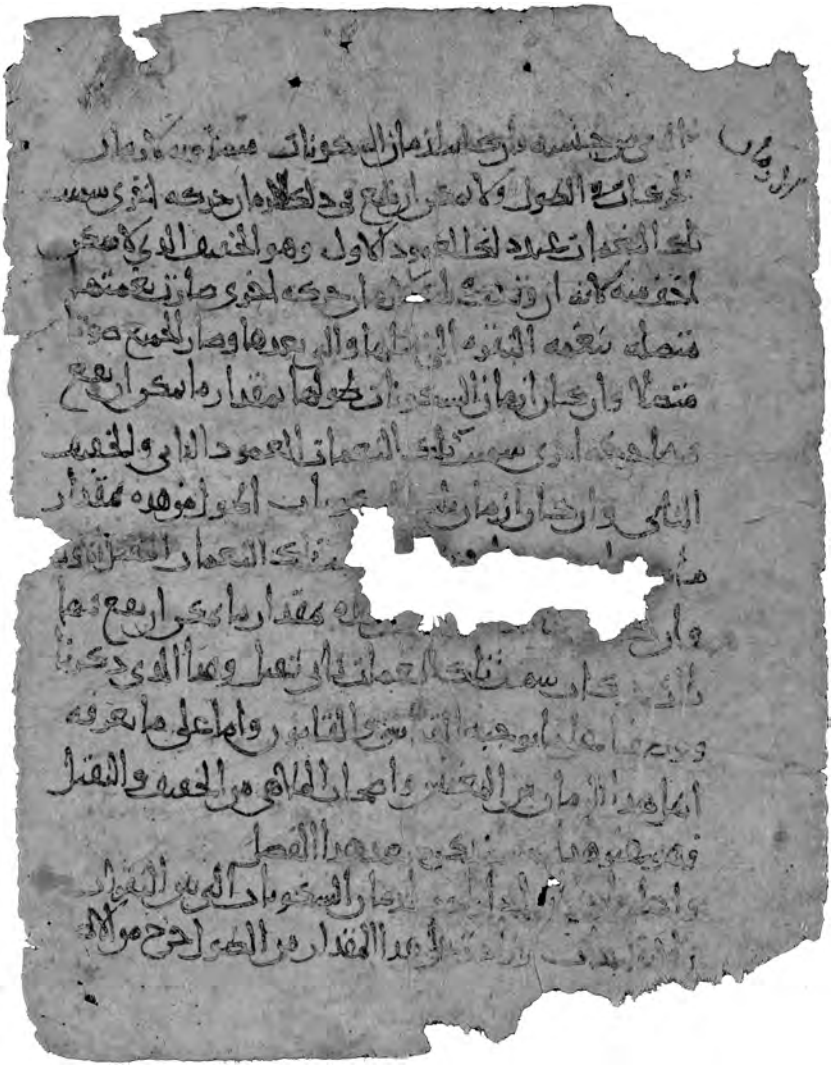


Fig. 2. Cambridge University Library, T-S Ar.41.23 *recto*.

this fragment appears to point to the early origin of this witness, possibly the fifth/eleventh century[28]. The fragment preserves a very accomplished copy of a portion of *Epistle* 5, the one devoted to music, and in particular its seventh chapter[29]. In this chapter the Brethren expound on the basic elements of music and rhythmic principles: music is made up of melodies and melodies are made up of notes, which are composed of rhythmically arranged attacks. The Brethren argue that knowledge of prosody is a prerequisite for the musician, since it allows the understanding of the basic sequences of long and short sounds in both poetry and music, and of the basic rhythmic patterns. In the passage of this chapter preserved in the Genizah fragment, the Brethren summarize the aim of their encyclopedia:

> to demonstrate to the practitioners of each art the oneness of the sublime Creator in relation to that art, so that they may understand more readily and be provided with clearer arguments and more cogent proofs… and also to show the manner in which existing things come into being one from another, with the permission of the Creator…[30]

After this general statement, the focus returns to music and in particular to the sequences of attacks and pauses that make up the "light" (*khafīf*) and the "heavy" (*thaqīl*) rhythms. Among Genizah fragments, the retrieval of this folio from an early Arabic copy of the *Rasā'il* hints further at the multiple ways in which Arabic *bāṭinī* ideas and materials could penetrate the environment of the medieval Jewish Cariene community, through Judeo-Arabic renditions of Arabic texts – as seen above – but also through the direct acquisition and introduction of Arabic manuscripts on these topics. Fragments of the *Rasā'il Ikhwān al-Ṣafā'* corroborate the impression given by the booklists presented in the first part of this paper: Cairo Genizah fragments preserve evidence of the diffusion of *bāṭinī* works and ideas in the medieval eastern Mediterranean area.

28. In the evaluation of this fragment, I have benefited from Lucia Raggetti's skilled palaeographic eye and academic generosity.

29. O. Wright, *On Music: An Arabic Critical Edition and English Translation of Epistle 5* (Oxford 2011), 56-58.

30. Wright, *On Music*, 106.

Jābirian Materials in the Genizah

Other rather unexplored sources that have already shown promising results and could contribute to our image of the circulation of *bāṭinī* ideas and influences are the fragments pertaining to the alchemical corpus of the Genizah[31]. This corpus, which currently consists of approximately 110 fragments, surely cannot be compared, in extent, with the abundance of medical fragments – which are around 2,000 only in the Cambridge collections – but it is particularly interesting when projected against the scarcity of sources on alchemy among medieval Jews and the desideratum for further critical work on the topic[32]. The alchemical fragments of the Genizah draw a portrait of engagement in both alchemical theories and practices, with a significant inclination toward the latter. More than half of the fragments record recipes, and more than 80 percent do not mention alchemical authorities nor titles of alchemical books, a possible sign of the more widespread appreciation for practical rather than theoretical alchemy among Cairene Jews. Also, in the case of alchemy, the fragments are distributed unevenly among the languages represented in the col-

31. Work toward the establishment of this corpus is still underway. The first core of manuscripts was identified by Gideon Bohak during his complete survey of Cambridge University Library's holdings on magic, and generously passed on to me. During my long-term research associateship with the Genizah Research Unit and thanks to the help of the Unit's experts, I managed to expand the corpus. I am working on an edition and translation of a selection of these alchemical fragments. For an introductory study, see G. Ferrario, «Fragments of Alchemy from a Cairene Synagogue: Context, Codicology, and Contents of the Alchemical Corpus of the Cairo Genizah», *Ambix* 71, no. 2 (2024), 141-71.

32. Although a certain privileged connection between Judaism and alchemy is described in ancient alchemical sources, the assessment regarding Jewish alchemical production, in particular during the Middle Ages, in R. Patai, *The Jewish Alchemists: A History and Source Book* (Princeton 1994) appears to be overstated; see in this regard G. Freudenthal, «Review of Patai, R. *The Jewish Alchemists: A History and Source Book*», *Isis* 86 (1995), 318-19; and Y. T. Langermann, «Review of Patai, R. *The Jewish Alchemists: A History and Source Book*,» *JAOS* 116 (1996), 792-93. Recent surveys on medieval Jewish alchemy and alchemists include G. Ferrario, «The Jews and Alchemy: Notes for a Problematic Approach,» in *Chymia: Science and Nature in Medieval and Early Modern Europe* (Newcastle upon Tyne 2010), 19-30; G. Freudenthal, «Alchemy in Medieval Jewish Cultures: A Noted Absence», in *Science in Medieval Jewish Cultures* (Cambridge and New York 2011), 343-58; G. Ferrario, «Alchemy in the Jewish Context», in *A Cultural History of Chemistry*, vol. 2: *Middle Ages* (London 2022), 2:87-91.

lection, with a predominance of Judeo-Arabic, the language of the vast majority of the fragments, followed by Arabic, and then Hebrew materials. A handful of alchemical fragments are written in a mixture of these three languages. Caution should always be applied when attempting to draw conclusions from materials found in the Genizah; technically, the Genizah does not offer the portrait of a society, but rather the portrait of the detritus of a society, through writings that were deemed useless and thrown away at a certain point of their existence. Perfectly sound and bound books surely circulated among the Jews of Fusṭāṭ, but these volumes may not have become disjointed and may have continued their lives outside and possibly far from the Genizah chamber. The small number of alchemical fragments that mention alchemical and philosophical authorities are a useful lens through which it is possible to note the diffusion of materials linked to the name of the notorious alchemist Jābir b. Ḥayyān, a vehicle for the transmission of *bāṭinī* ideas[33].

A significant fragment needs to be reconstructed by joining two torn pieces of manuscript that ended up in two different divisions of the Taylor-Schechter Genizah Collections: T-S Ar.44.4 and T-S NS 31.6. The two fragments were briefly mentioned by Paul Fenton in 1997 as preserving a *fihrist* of alchemical literature, a description that

33. The most important works on the Jābirian corpus, its philosophical sources, and ramifications include P. Kraus, *Jābir ibn Ḥayyān: Essay sur l'histoire des idées scientifique dans l'Islam*, vol. 1: *Textes Choises* (Paris and Cairo 1935); P. Kraus, *Jābir ibn Ḥayyān, contribution à l'histoire des idées scientifiques dans l'Islam*, vol. 2: *Jābir et la science grecque* (Cairo 1942); and P. Kraus, *Jābir ibn Ḥayyān, contribution à l'histoire des idées scientifiques dans l'Islam*, vol. 1: *Le corpus des écrits jābiriens* (Cairo 1943). See also P. Lory, *Jābir ibn Ḥayyān, Dix traités d'alchimie. Les dix premiers traités du Livre des soixante-dix* (Paris 1983). The historical reality and chronological collocation of Jābir b. Ḥayyān has been at the center of a lively scholarly debate. Kraus maintains that «Jābir» should be considered a collective name for a group of third-/ninth-century scholars with Shī'ī inclinations. Although Kraus' hypothesis has been criticized (e.g., by S. Nomanul Haq, *Names, Natures and Things: The Alchemist Jābir ibn Ḥayyān and his Kitāb al-Aḥjār* (*Book of Stones*), [New York 1994], 3-32, who maintains the existence of a single alchemist called Jābir, who flourished in the second/eighth century and composed all the books that bear his name), it remains still the most solid. Important new findings that further problematize the question of Jābir's biography and historicity appear in T. Delva, «The Abbasid Activist Ḥayyān al-'Aṭṭār as the Father of Jābir b. Ḥayyān: An Influential Hypothesis Revisited», *Journal of Abbasid Studies* 4.1 (2017), 35-61. The most recent and complete assessment of Jābir is R. Forster, «Jābir B. Ḥayyān», in *EI*^{3}, online: http://doi.org/10.1163/1573-3912_ei3_COM_32665 (accessed December 2023).



Fig. 3. Cambridge University Library, T-S Ar.44.4 *recto*.



Fig. 4. Cambridge University Library, T-S NS 31.6 *verso*.

only partially fits the content of the fragments[34]. The codicological features of the two torn halves of this fragment are the first clues that they were part of the same page: both fragments are on similar paper; both measure approximately 22×10 cm and both have 40 lines on one side (recto for T-S Ar.44.4 and verso for T-S NS 31.6, which has been mislabelled) and 42 on the other; both are written in a very minute but clear Judeo-Arabic hand from the "classical Genizah period". Once the two fragments are joined along the tear, the lines match and their contents form an extensive portion of an alchemical work. Unfortunately, due to physical damage to the manuscript, the text cannot be completely deciphered. The fragment describes a series of alchemical operations, starting with recipes on silver, its cleaning, ways to increase its volume, and techniques for dyeing other metals in order to transmute them into silver. In this regard, its content is not different from other dozens of alchemical works found in the Genizah. It stands out because the practical operations are interspersed with bibliographic indications of alchemical books and authorities and, at times, it comments on the physical features of those books or their contents. Line 1 mentions Ibn Waḥshiyya without reference to a title[35]. Line 8 mentions a *Kitāb al-rukn li-Jābir* (The book of the basis or The book of the pillar by Jābir), which is the seventh book of the *Kutub al-mi'a wa-l-ithnā ʿashara* (The one hundred and twelve books)[36]. After the title, the text adds a very interesting note: *dūn waraqtayn* ("without two leaves"), a remark that may indicate the presence of a physical copy of this Jābirian work at the disposal of the writer of this passage. On lines 10 and 15, the *Kitāb mujarradāt* is mentioned as a source for an operation involving the dissolution of mercury, salt, and alkali salt. The Jābirian *Kitāb al-mujarradāt* (Book of abstractions) is the 56th book of the One hundred and twelve books[37]. Jābir himself described its content in chapter 33 of his *Kitāb*

34. P. Fenton, «Judaeo-Arabic Mystical Writings of the XIIIth-XIVth Centuries», in *Judaeo-Arabic Studies: Proceedings of the Founding Conference of the Society for Judaeo-Arabic Studies* (Amsterdam 1997), 88 n. 3.

35. On the intriguing figure of Ibn Waḥshiyya and his works, see the overview in J. Hämeen-Anttila, «Ibn Waḥshiyya», in *EI*^{3}, online: http://doi.org/10.1163/1573-3912_ei3_COM_32287 (accessed December 2023); and M. Ullmann, *Die Natur- und Geheimwissenschaften im Islam* (Leiden 1972), 209, 440-43.

36. Kraus, *Contribution*, 1:17.

37. Kraus, *Contribution*, 1:30.

al-khawāṣṣ, saying that "all the operations of the One hundred and twelve books are condensed in this single work, in which Jābir listed five thousand operations [sic] and which constitutes the basis and the accomplishment of all the One hundred and twelve books"[38]. At line 14, the title of another Jābirian work is mentioned: the *Kitāb al-riyāḍ* (The book of the garden or The book of the flowerbed)[39]. Further below, at line 29, we find a reference to *al-Kitāb al-thānī min al-Sabʿīn wa-huwa Kitāb al-bāb* (The second book of the *Book of seventy*, which is the book of the door)[40]. These numerous references imply that a vast selection of the Jābirian corpus was somehow available to the person who wrote this text. Moreover, the explicit mention of their precise location in the traditional collections of treatises attributed to Jābir naturally presupposes that such collections had already assumed their traditional shape by the time this fragment was written; this was an organization and order that was also well known among the Jewish "alchemists" of medieval Cairo[41]. A further phrase, at line 38, may hint even more about the compiler's familiarity with a physical volume of the works by Jābir. The title of the work referred to here is unfortunately unreadable due to the bad rubbing of the ink at the bottom of T-S NS 31.6, but, when the text moves to the better-preserved half of T-S Ar.44.4, the phrase: *fī al-waraq al-tāsiʿa min* ("in the ninth page of"), can be read as a clear reference to an actual copy of a book.

In order to provide more evidence of the availability of Jābirian material to the Jewish readership of medieval Egypt, mention should be made of the recent discovery and possible identification of fragment T.S Ar.35.104[42]. Made up of three bifolia for a total of twelve pages, the manuscript stands out as possibly the most extensive fragment of the Genizah alchemical corpus. Penned by a very crude and

38. Kraus, *Essay sur l'histoire*, 1:324-25. The *Kitab al-ḥawāṣṣ* is also found in Kraus' catalogue, see Kraus, *Contribution*, 1:33.

39. Kraus, *Contribution*, 1:37.

40. Kraus, *Contribution*, 1:45.

41. By using the word «alchemist» here I am not implying that the writer of this fragment was a practicing alchemist. I use the term for brevity, implying the interest of the writer of these pages in alchemy, be it in its theory, practice, or both, since the content of this fragment aptly addresses both *theorica* and *practica*.

42. See G. Ferrario, «Alchemy in the Cairo Genizah: The Nachlass of an Untidy Jewish Alchemist», *Asiatische Studien* 75.2 (2021), where I discuss this fragment in the context of other manuscripts copied by the same hand.

irregular hand – surely not by a trained scribe – it preserves what at first sight appears to be a long list of Jābirian works. As an example, P1 1 recto mentions in order the titles of the ten *Kutub al-muṣaḥḥaḥāt* (Books of the rectifications) by Jābir[43]:

> The first is *The Rectifications of Pythagoras*, the second is *The Rectifications of Socrates*, the third is *The Rectifications of Plato*, the fourth is *The Rectifications of Aristotle*, the fifth is *The Rectifications of Aristotle*[44], the sixth is *The Rectifications of Arkājālīs*[45], the seventh is *The Rectifications of Homer*, the eight is *The Rectifications of Democritus*, the ninth is The Rectifications of Ḥarbī, the tenth is *Our Rectifications by us*.

And P2 verso appears to establish a sequence in which Jābirian books should be read:

> The *Book of the Transmutation*[46] is in ten parts; this is a noble and very extensive book, in which sciences that I have never [explained] thoroughly before are presented and through which man reaches the goal in this art as well as in all the things, the sciences and philosophy, if God (glorified and exalted be He) wills. *The Book of the Guidance*[47] is in one part and it must be read afterwards, if God (glorified and exalted be He) wills. My *Epistle to Manṣūr b. Aḥmad b. Barmak*[48], is in one part and must be read after that, if God (glorified and exalted be He) wills, and He grants success. My *Epistle to Jaʿfar b. Khālid b. Yaḥyā b. Barmak*[49] is in two parts and they must be read afterwards, if God wills…

43. The ten *Kutub al-muṣaḥḥaḥāt* are catalogued in Kraus, *Contribution*, 1:64-67.

44. This name, written in Arabic script in the fragment, could be read as «Aristajālis» or, rather less likely, as «Aristaḥalis», or «Aristakhalis». This appears as a duplication of the mention of Aristotle that the Jewish copyist did not identify as such. For the same confusion in the *Fihrist*, see al-Nadīm, *Fihrist* 2:194 n. 1.

45. Kraus, *Contribution*, 1:66 lists two titles, *Kitāb muṣaḥḥaḥāt Arshījānas* and *Kitāb muṣaḥḥaḥāt Arkāghānīs*, as the Rectifications of Archigenes.

46. Kraus, *Contribution*, 1:38, 98.

47. Kraus *Contribution*, 1:38. The title could be read as *Kitāb al-hudā* (The book of the guidance) or *Kitāb al-hadā* (The book of the offering); the two readings are mentioned by Kraus, who adds that the fifth book of the Jābirian *Seventy Books* also has the same title.

48. Kraus, *Contribution*, 1:39 mentions a *Kitāb talyīn al-ḥijāra ilā Manṣūr b. Aḥmad al-Barmakī* (The book on the softening of stones for Manṣūr b. Aḥmad al-Barmakī), which could be identified with the book in the list.

49. Kraus *Contribution*, 1:39 mentions a *Kitāb aghrād al-ṣanʿa ilā Jaʿfar b. Yaḥyā al-Barmakī* (The book on the aims of the art for Jaʿfar b. Yaḥyā al-Barmakī) which could be identified with the book in the list.

The two passages translated above may suffice to represent the content of the whole fragment, which can be described roughly as an annotated list of titles of Jābirian treatises and epistles, of their usefulness, but – most interestingly – also as a guide to the order in which they should be read. Indeed, this Judeo-Arabic text very often uses the expression *wa-yanbaghī an yuqraʾ baʿdahu* ("and it needs to be read after it") and similar phrases that aim at tracing a progressive learning path through the vast Jābirian production. In a sense, this fragment offers a remedy for Jābir's infamous *tabdīd al-ʿilm* ("scattering of knowledge"), a principle that requires the presentation of the alchemical "secrets" to take place not in a linear and progressive way, but rather by disseminating them throughout various works and hence concealing their sequential understanding. Once ascertained that this list of book does not reproduce al-Nadīm's *fihrist* of Jābirian treatises, it appears very likely that the identification of this fragment as the only (although fragmentary) known extant copy of Jābir's *Kitāb tartīb qirāʾat kutubinā* (The book on the order of reading of our books), which is mentioned in the second book of the Jābirian *Book of seventy* and is listed by Kraus as lost, appears very likely. Another possible identification of this fragment could point to either Jābir's *al-Fihrist al-kabīr* (The great index), that would include a list of all of the works of the alchemist, or the al-*Fihrist al-ṣaghīr* (The small index) that would only be devoted to his works on the alchemical art[50]. These two catalogues are considered lost by Kraus, who argues that these indexes were not only lists of titles, but also determined the relationships between the different parts of the corpus – a feature that may well describe the content of fragment T-S Ar.35.104[51].

Both the alchemical fragments discussed above appear to point at the circulation, presence, and thorough familiarity with the alchemical corpus attributed to Jābir b. Ḥayyān, whose works may have functioned as an enticing point of entry of *bāṭinī* ideas into the intellectual horizon of the society that left its writings in the Genizah of the Ben Ezra Synagogue.

50. Al-Nadīm, *Kitāb*, 1:355; Kraus, *Contribution*, 3-4.

51. Kraus, *Contribution*, 1:3 notes that Jābir mentions the existence of these catalogues in his *Kitāb usṭuqus al-uss*, in the *Kitāb al-kabīr*, in the *Kitāb al-sabʿīn*, in the *Kitāb al-ʿawālim*, in the *Kitāb al-mizān al-ṣaghīr* and in the *Kitāb al-naqd*.

Conclusion

The examples presented in this very limited survey suggest that Genizah material can be a fruitful source of evidence to reconstruct the ways *bāṭinī* ideas and texts circulated in the Mediterranean world. The relevance of the Genizah is connected to the prime role of Cairo as the center of medieval Judaism between the fourth/tenth and the seventh/thirteenth centuries. Geographically positioned in the middle of the routes between eastern Jewish centers (like Jerusalem and the rabbinical academies in Iraq) and the Jewish centers on the Mediterranean coast and al-Andalus, Cairo was a mandatory stop for traveling intellectuals and a crucible of innovations. As far as *bāṭinī* ideas and texts are concerned, Genizah materials have the potential of revealing their modes of transmission from the Islamic East to al-Andalus and, vice versa, of shedding light on the texts and ideas Jews brought out of al-Andalus during the Almohad (al-Muwaḥḥidūn) period, when a large number of Jewish intellectuals left the Iberian Peninsula for other areas of the Islamic world and for Europe. Incidentally, Cairo was also a center of trade, being suitably positioned as a commercial hinge between the Mediterranean and the Indian trade routes. As we know, texts and ideas travel with people, not by themselves. The presence of a significant trace left by *bāṭinī* ideas and works in the Genizah calls for more research in this direction. In many respects, the Genizah is still a rich and understudied treasure trove of information not only about Cairene Judaism, but about all aspects of life and of intellectual exchanges and influences in the medieval Mediterranean world.

Appendix

1) Diplomatic edition of T-S Ar.43.289 and T-S Ar.29.54, Cambridge University Library, a fragmentary Judeo-Arabic version of *Epistle* 19 and *Epistle* 21 of the Ikhwān al-Ṣafā'[52].

T-S Ar.43.289 (P1) verso

[262] בחאר גבאלא ותלאלא ורואבי כמא תנבת מן הבוב
אלריאח פי אלבראר֯י דעאץ אלרמאל. ואעלם יאכי
באנה [263] כלמא אנצמת קעור אלבחאר מן הדה אלגבאל
ואלתלאל אלתי דכרנא אנהא תנבת פאן אלמא ירתפע
ויטלב אלאתסאע וינבסט עלי סואחלהא נחו אלבראר֯י
ואלקפאר פיגטיהא לאמא פלא יזאל דלך דאימא
בטול אלזמאן חתי תציר מואדע אלבראר֯י בחארא
ומואצע אלבחאר יבסא וקפארא והכדא לא יזאל
אלגבאל תתכסר ותתחטם פתציר חצא ורמלא
ואחגארא ותחמלהא אלאודיה ואלאנהאר בגדריאנהא
נחו אלבחאר ותנעקד הנאך כמא וצפנא חתי תנכפץ
אלגבאל אלשאמכה חתי תסתוי בוגה אלארץ [264] והכדא
לא יזאל דלך אלטין ואלרמאל תנבסט פי קעור אל
בחאר ותתלבד ותנבנת מנהא אלתלאל ואלרואבי
ואלגבאל וינצב ען דלך אלמכאן אלמא חתי תטהר
תלך אלגבאל ותנכשף תלך אלתלאל ותציר גזאיר
ובראר֯י ויציר מא יבקי מן אלמא פי והדאתהא
וקעורהא בחיראת או אגאמא וגדראן וינבת
חולהא אלקצב فالدخول ולא תזאל אלסיול תחמל
אלי הנאך אלטין ואלרמאל ואלוחול חתי תגף תלך
אלמואדע ותנבת הנאך אלאשגאר ואלעשב
والعكرش ותציר מואדע ללסבאע ואלוחוש תם
יקצדהא אלנאס לטלב אלמנאפע

52. Numbers between square brackets in the text of the edition indicate the corresponding pages in the edition of the Arabic texts in Baffioni, *Natural Sciences*.

T-S Ar.43.289 (P1) recto

אלמראפק מן אלחטב ואלציד וגירהמא ויסכנהא אלנאס
ותציר מואצע ללזרע אלגרס ואלבלדאן [265] ואלקרי ואלמדן
ואעלם יאכי אידך אללה ואיאנא ברוח מנה באן הדה
אלבחאר אלתי דכרנאהא באנהא מסתנקעאת עלי וגה
אלארץ ובינהא גבל שאמכה והי כאלמסניאת להא
פהי מתסלה בעצהא בבעץ אמא בחלגאן בינהא
עלי טהר אלארץ ואמא במנאפד להא וכרוק פי באטן
אלארץ ואן פי וסט הדה אלבחאר גזאיר כתירה
צגאר וכבאר פמנהא עאמרה באלנאס ופיהא מזארע
וקרי ומדן וממאלך ומנהא בראר וקפאר ופיהא
גבאל ואגאם [266] ופיהא סבאע ווחוש ואנעאם ואנואע
מן אלחיואנאת לא יעלם כתרתהא אלא אללה עז וגל ואן
פי וסט תלך אלגזאיר בחיראת צגאר וכבאר ואנהאר
וגדראן ואגאם פמנהא מא מיאההא עדבה אלמיאה
ומנהא מאלחה שדידה אלמלוחה ומנהא שדידה
אלמראררה ומנהא בעיד קערהא גליט מאוהא
שדיד אמואגהא ומנהא דון תלך מכתלפה אלואנהא
ואחואלהא ואוצאפהא אכתלאפא כתירא מתפאותא
לא יחצי עדדהא אלא אללה תבארך ותגלי וסנדכר
טרפא מן עלל דלך ליעלם חקיקה מא קלנא
וצחה מא וצפנא פאמא עלה היגאן אלבחאר
וארתפאע מיאההא ומדודהא עלי [267] סואחלהא
ושדה תלאטם אמואגהא והבוב

T-S Ar.29.54 verso

אלריאח וקת היגאנהא אלי אלגהאת אלה״ פי אוקאת מכתלפה
מן אלשתא ואלציף ואלרביע ואלכריף ואויאל אלשהור
ואואכרהא וסאעאת אלליל ואלנהאר פהו מן אגל אן מיאההא
אדא חמית פי קראהא וסכנת לטפת ותחללת וטלבת
מכאנא אוסע ממא כאן קבל פדאפע בעץ אגזאיהא
בעצא אלי אלגהאת אלכמס פוקא ושרקא וגרבא וגנובא
ושמאלא ללאתסאע פיכון פי אלוקת אלואחד עלי
סואחלהא ריאח מכתלפה מן גהאת מכתלפה ואמא
עלה היגאנהא פי וקת דון וקת פהו בחסב אשכאל
אלפלך ומטארח שעאעאת אלכואכב עלי [268] סטוח תלך
אלבחאר מן אלאפאק ואלאותאד אלד״ ואתצאלאת אלקמר
בהא ענד חלולה פי מנאזלה אלכ״ח כמא הו מדכור

פי כתב אחכאם אלנגום ואמא עלה מדוד בעץ
אלבחאר פי וקת טלועאת אלקמר ומגיבה דון גירהא
מן אלבחאר פהי מן אגל אן תלך אלבחאר פי קראהא
צכור צלבה ואחגאר צלדה פאדא אשרק אלקמר עלי
סטוח תלך אלבחאר וצלת מטארח שעאעאתה אלי
תלך אלצכור ואלאחגאר אלתי פי קראהא תם אנעכסת
מן הנאך באלשעאעאת ראגעה פסכנת תלך אל
מיאה וחמית ולטפת וטלבת מכאנא אוסע
וארתפעת אלי פוק ודפע בעצהא בעצא ותמוגת
אלי סואחלהא ופאצת עלי סתותהא ותראגעת ותרדדת
תלך אלאנהאר אלתי כאנת תנצב אליהא אלי כלף
ראגעה [269] וארתפעת מיאה אלאנהאר ותדאפעת
ראגעה אלי כלף ולא יזאל דלך דאבה אמא דאם

T-S Ar.29.54 recto

אלקמר מרתפעא אלי ותד אלסמא פאדא תנאהא
ואקבל ינחט סכן ענד דלך גליאן תלך אלמיאה וברדת
ואנצמת תלך אלאגזא וגלטת ורגעת אלי קראהא
וגרת אלאנהאר עלי עאדאתהא פלא יזאל דלך דאהבא
אלי אן יבלג אלקמר אלי אפק תלך אלבחאר אלגרבי
מנהא תם יבתדי אלמד במתל עאדתה והו פי אפק
אלמשרק ולא יזאל דלך דאבה חתי יבלג אלקמר אלי
ותד אלארץ פינתהי אבד אלמד ירגע אלי אן יבלג אל
קמר אלי אפקה אלשרקי מן אלראס וכל דלך בתקדיר
אלעזיז אלעלים פאן קיל פלם לא יכון אלמד [270] ואלגזר
ענד טלוע אלשמס ואשראקהא עלי סתוח תלך
אלבחאר פקד בינא דלך פי רסלה אלעלל ואלמעלולאת
פאערפהא מן הנאך אן שא אללה ואמא עלה אכתלאף
תצאריף אלריאח פי אלגהאת אלסת פי אוקאת אלליל
ואלנהאר ואלשתא ואלציף פקד דכרנאהא פי רסלה
אלאתאר אלעלויה ואמא אלגבאל אלתי דכרנא אנהא
כאלמסניאת ללבחאר والبرندات להא פהי ראסיה
פי אלארץ וצולהא שאמכה פי אלגו ורוסהא שאהקה
פי אלהוא ארתפאעהא ממתדה עלי וגה אלארץ
באטואלהא מא בין פראסך פמנהא מא הו מן אל
משרק אלי אלמגרב ומנהא מא הו מן אלגנוב אלי
אלשמאל ומנהא מא הו פי נכבאואת הדה אלגהאת
מדכורה [271] פי רסאלה جغرافيا בעץ אוצאפהא
ואעלם יאכי באן מן הדה אלגבאל

T-S Ar.43.289 (P2) 2 recto

[432] ממא לא תמרה להא או מן אלורקה להא ולא סמג להא
אעלם באן מן אלאשגאר אלתאמה מא הי אתם ואכמל
מן בעץ ותתפאצל פי דלך מן גהאת עדה פמנהא מא הי
מן גהה אצולהא ודלך אן מנהא מא יקום עלי אצולהא
ותרתפע פי אלהוא ותתפרע פי אלגהאת כשגרה אלתין
ואלתות ואלגוז וגירה ומנה מא תרתפע פי אלהוא
מנתצבא מפרדא כשגרה אלנכל ואלסרו ואלקנא ואלסאג
וגירהא והכדא חכם [433] ערוקהא פי אלארץ פאן מנה מא
תנזל ערוקה פי אלארץ כאלאותאד מנתצבה ומנהא מא
ידב פי אלגהאת עלי אלאסתקאמה ומנה מא ינעטף
וינפרג וילתף ומנהא מא יגאור בעצהא בעצא ומעהא מא
יגאוד בעצהא באצא פי מנאבתהא ותזדחם
מא תנפדר לא תנבת תחתהא גירה ומן אלנבאת ואל
שגר מא ורקתה ותמרתה מתנאסבין פי אלכבר מתל
אלואן ואלשכל ואלמס כאלאתרג ואלנארנג ואללימון ואל
כמתרי ואלתפאח ומא שאכלהא ומן אלנבאת אלשגר
מא תמרה וחבתה גיר מנאסב לורקה פי אלכבר ואל
שגר אלרמאן ואלתין ואלענב ואלגוד ואלנכל וגירהא ממא
ישאכלהא ודלך [434] אן שגרה אלאתרג מדחרג אלשכל
תמרהא אכדר אללון לין אללמס מנאסבא לורקה ואלנארנג
מסתדיר אלשכל מנסבא לורקה שגרתה ואלכמתרי
מכרוט אלשכל כדלך ורקה שגרתה ואלתפאח מסתדיר
אלשכל וכדלך ורקה שגרתה פאמא תמרה אלרמאן
פגיר מתנאסב פי אלכבר וכדלך אלתין ואלענב
וגירהמא עלי הדא אלקיאס

T-S Ar.43.289 (P2) 2 verso

חכם חבוב אלנבאת [435] ובזורהא מנה מא הו מנאסב
מא הי גיר מנאסב כל דלך לעלל ואסבאב ומראתב
פצל פי ביאן אגנאס אלנבאת מן גהה אלאמאכן
אעלם יאכי באן מן אלנבאת מא ינבת פי אלבראר ואלקפאר
ומנהא מא ינבת עלי רווס אלגבאל ומנהא עלי שטוט
אלאנהאר וסואחל אלבחאר ומנהא פי אלאגאם ואלגיאץ
ומנה מא יזרעונהא אלנאס או יגרסונהא פי אלקרי
אלסואדאת ופי אלבסאתין ואלאקרחה ואעלם יאכי אן
אכתר אלנבאת ינבת עלי וגה אלארץ אלא אלקליל מנהא
פאנה ינבת בחית אלמא כקצב אלסכר ואלארז ואלנילופר

ואנואע מן אלעכס ומן אלנבאת מא ינבת עלי [436] וגה
אלמא כאלטחלב ומנהא מא ينفسخ עלי אלשגר ואלנבאת
כאלכשותא ומנהא מא ינבת עלי וגה אלצכור ככצר
אלזהר ומן אלנבאת מא לא ינבת אלא פי אלבלדאן אלדפיה
ומנהא פי אלבלדאן אלבארדה ומנהא מא לא ינבת
אלא פי אלתרבה אלטיבה ומנהא מא לא ינבת אלא פי אל
רמאל ובין אלחצא [437] ואלאחגאר ואלצכור ואלארצין אל
יאבסה ומנהא מא לא ינבת אלא פי אלארצין אלסכנה
الشورجة **פצל פי אכתלאף אלנבאת מן גהה אלאזמאן**
ואעלם יאכי באן אכתר אלעשב ואלכלא ואלחשאיש
תנבת פי איאם אלרביע לאעתדאל אלזמאן וטיב
אלהוא וכתרה אלאמטאר אלמתקדמה פי אלשתא
ואמא אלדי ינבת מנהא פי אלפצול אלתלתה פהי
קלילה פמנהא מא יזרעהא

T-S Ar.43.289 (P2) 1 recto

[464] אלארתפאע מסתדיר אלאצל מסדס مجارح אלשעב
מסתטיל אלאוראק מזדוג מקאבל ריכו אלגרם מתכלכל
תרכיב אלגסם מחשו כללהא بزئبر ריכו מלתף חולה
עלי אצול סעפה ליפאת [465] מנסוגה מורבה טבקאת ג״
להא עלה כתירה עדד ערוק הדה אלשגרה והי אנמא
תגדב בהא אלקוה אלטביעיה אלגאדבה אלמואד אלכתירה
ותלך לשדה חאגה הדה אלגנס מן אלנבאת אלי אלמואד
אלכתירה לכתר גתתהא ועטם גרמהא וטול קאמתהא
וכתרה עדד סעפאתהא ואוראקהא לכימא תסתעמל
אלטביעה תלך אלמואד בעצהא פי גרם ערוקהא טולא
וערצא ועמקא ובעצהא יסתעמל פי גרמה אסולהא
טולא וערצא ועמקא ובעצהא פי גרם סעפהא מתל דלך
ובעצהא פי גרם [466] אוראקהא ובעדהא פי ליפהא ובעצהא פי
כרוג אכמאם טלעהא ובעצהא פי כרוג קצבאן קנואנהא
ובעצהא פי גרם נואה תמרתהא ובעצהא פי לחם תמרתהא
ודבסהא ושירגהא ואמא אלעלה פי אן געל תרכיב
גרם אצלה רכצא רכוא מתכלכלא לכימא יסהל
עלי אלקוה אלטביעיה גדב תלך אלמואד מן אספלהא [467] אלי
אעאליהא ורוס אגדאעהא ופרוע סעפהא ואוראקהא
פלו כאן גרם אצלהא צלבא מתכאתפא כתירא
כסאיר אלאשגאר אלטואל כאלסאג ואלדלב ואלסרו
לעסר עלי אלקוה אלטביעיה גדב תלך אלמואד
אלי הנאך ולכתרה עדד

T-S Ar.43.289 (P2) 1 verso

ערוק שגר אלנכל עלה אכרי ודלך אן אסל גרמה למא
כאן מרכבא כאנהא כיוטאת מגמועה מתדאכלה
געל לכל [468] כיט מנהא ערקא ממתדא פי אלארץ ימתץ
בהא אלמואד אלי דלך אלכיט מפרדא ליסהל עלי אלטביעה
תקסם תלך אלמואד עלי תלך אלקצבאן מן אול אלאמר
ולמא כאן תרכיב שגר אלנכל עלי מא דכרנא מן אלרכאוה
ואלתכלכל לפת עליהא אלטביעה סעפאת מן אלליף עלי
אצול מכארג סעפאתהא מן אגדאעהא כאנהא מנאזל
מסתדידה עלי וסט גבאל מתשמר כל דלך לכימא ימסך
אצול תלך אלסעפאת עלי גדועהא ולא ינפסל ענהא
ענד הב אלריאח אלעאצפה ולא תנצדע תלך אלאגדאע
מן אעאליהא עלי אסאפלהא ענד מילאנהא ימנה ויסרה
ענד תחרך אלריח להא ואמא אלסבב אלדי מן אגלה
געל עלי אלטלע אלגלאף לכימא יחפטה ויצונה מן אלאפאת
אלעארצה מן אלברד ואלחר אלמפרט ואלקטר אלשדיד
[469] ואלריאח ואלעואצף ואלגבאר ומא שאכל דלך מן הדה אל
אשיא אלמצרה להא לאנהא רטבה נדיה רכצה רכוה
פאדא אסתחכמת ואשתדת ואנשקת תלך אלאכמאם
ואלגלף ענהא וטהרת לנסים אלהוא וחרארה אלגו
לתרבו ותסמן וינצגהא חרארה אלשמס ותציר
בסרא או רטבא גניא הצימא תם תגף לתציר
תמרא או דבסא ואמא אלסחאח אלחריריה
אלנסג אלתי עלי [...]

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Abstract

Gabriele Ferrario, *In a Hidden Place: Traces of Bāṭinism in the Fragments of the Cairo Genizah*

The fragments retrieved from the Genizah of the Ben Ezra Synagogue in Cairo represent a treasure trove of sources on medieval Judaism and the medieval Mediterranean world at large. A survey of the fragments reveals the circulation of *bāṭinī* texts and ideas in the Genizah: book lists preserve mentions of the *Epistles* of the Brethren of Purity, which are also found in a handful of partial copies in both Arabic and the Judeo-Arabic language. These fragments, together with two alchemical manuscripts that preserve several titles of the works of Jābir b. Ḥayyān, are discussed in this article as evidence of the circulation of *bāṭinī* ideas among the Jews of medieval Cairo. An edition of a partial Judeo-Arabic version of the natural philosophical epistles of the Brethren of Purity is presented in the appendix.

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RESTORING HARMONY THROUGH THE PROPAEDEUTIC SCIENCE OF MUSIC: A RECONSIDERATION OF THE BRETHREN OF PURITY'S EPISTLE ON MUSIC AND ITS RELATION WITH THE EPISTLE ON PROPORTIONS

At the turn of the seventh to eighth/thirteenth to fourteenth centuries, the Persian compendium *Mujmal al-ḥikma*[1] describes the work of the Ikhwān al-Ṣafā' (Brethren of Purity) as "obscure, mysterious, redundant". Although more than eight centuries have passed since the *Mujmal*'s probable date of writing, we can still gain insight into its perception by examining "music" and "harmony"[2], subjects that scholars have traditionally considered to be systematized and extensively discussed.

This article reconsiders topics from the commonly known "Epistle on Music" (*Epistle* 5). It proposes that the treatise, unlike any previous work in the field of propaedeutic sciences, makes a meaningful distinction between "music" and "harmony" as well as their divine and human aspects. In light of this, it can be argued that when reading *Epistle* 5, the art of harmony should be viewed as the human counterpart of divine Harmony and the art of music as the human counterpart of divine Music.

1. Anonymous, *Mujmal al-ḥikma, tarjume-yi guneh-i kehan az Rasā'il Ikhwān al-Ṣafā'*, ed. M. Dāneshpazūh and I. Afshār (Tehrān 1996), 29.

2. As discussed later in this article, the Greek tradition frequently used the terms «music» and «harmony» interchangeably, without distinguishing between their divine and human aspects. In this article, we employ quotes to refer to these concepts in a general sense as «music» and «harmony». However, when they denote a divine dimension, we capitalize them as «Music» and «Harmony». This convention is particularly relevant when referring to the Brethren's texts.

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Considering that the relationship between "music" and "harmony" was never formalized in the supposedly well-structured Greek tradition transmitted to the Arabic scientific literature, this distinction seems justified and interesting.

In addition, this article aims to stimulate a rethinking of the original purpose of *Epistle* 5, which, according to our reading, explains how divine Harmony can be traced and the art of harmony achieved through the exemplary study of the art of music. Since it is essentially composed of harmonic proportions, the art of music is the noblest art and the ideal model (lit., *mithāl*) for exploring, understanding, and reproducing divine Harmony over other human arts. Thus, music is not the only human art discussed in *Epistle* 5 and in the "Epistle on Proportions" (*Epistle* 6), since the art of harmony and proportions can be grasped and achieved through all the arts.

This article also seeks to show how *Epistle* 5 and *Epistle* 6, generally considered two independent treatises[3], may have been conceived, originally, as two related parts of the same subject, namely "harmony". Indeed, *Epistle* 5 provides a detailed description of how to discover and achieve "harmony" by recognizing affinities (*munāsabāt*) and applying proportions. Complementarily, *Epistle* 6 explains the mathematical relations on which the same affinities and proportions are based. By sharing the same subject matter and reorganizing earlier Greek material on this subject, the epistles demonstrate an intimate connection.

In this article, I have made a few assumptions about how the Brethren approached a purportedly, but inorganic, Greek tradition on the propaedeutic science of music, a subject that deserves greater attention.

In addition, I have revised earlier readings of *Epistle* 5, recognizing that even the most accurate interpretation of past sources is not without inconsistencies. This new perspective on the treatise is not an exception.

3. Previous studies indicated that *Epistle* 6 belongs to the propaedeutic sciences, but do not investigate the reasons for this.

What the Epistle On Music *Is Not About*

ليس غرضنا في هذه الرسالة تعليم الغناء وصنعة الملاهي ... بل غرضنا معرفة النسب وكيفية التأليف...

Our aim in this treatise is not to teach the practice of music (*al-ghinā'*) nor the construction (*ṣan'a*) of instruments… Our purpose is the knowledge of proportions and the modality by which Harmony manifests [itself][4]…

Music should not be studied in its instrumental or practical aspect since it corresponds to the mathematical fundamentals of divine Harmony.

Despite its position among propaedeutic sciences, after arithmetic, geometry, and astronomy/geography, traditionally, the commonly known *Risāla fī l-mūsīqī* ("Epistle on music") has been identified as a treatise on the fundamentals of music, belonging to the same tradition as al-Kindī's *Risāla fī khubr ṣinā'at al-ta'līf* and al-Fārābī's *Kitāb al-mūsīqī l-kabīr*.

In spite of this identification, note that, with the exception of a few sections dedicated to music (the fundamentals of acoustics, lute tuning, rhythm, and prosody), the treatise does not include instruction about musical intervals[5], how to construct them, how to derive them through arithmetic operations, or how to play them; also it does not discuss genres, modes, tonalities, melodies, instrument construction, and instrument classification.

When viewed as a treatise for teaching music as a mathematical propaedeutic science, one will not find the section on harmonic proportions and rational numbers. Instead this topic is covered in *Risāla fī l-nisab al-'adadiyya wa-l-handasiyya wa-l-ta'līfiyya* ("Epistle on arithmetic, geometric, and harmonic proportions", corresponding with *Epistle* 6)[6]. In addition, note that after the explication of ratios and

4. [Ikhwān al-Ṣafā'], *On Music: An Arabic Critical Edition and English Translation of Epistle 5*, ed. O Wright (Oxford 2010); Ar., 6. The excerpts included in this article are translated by L. Tribuzio.

5. The only reference to a list of ratios that express intervals appears in chapter 8: «4:3, 3:2, 5:4, 9:8». [Ikhwān al-Ṣafā'], *On Music*, Eng. 116, Ar. 71.

6. [Ikhwān al-Ṣafā'], *On Composition and the Arts: Arabic Edition and English Translation of Epistles 6-8*, ed. N. El-Bizri and G. de Callataÿ (Oxford 2018).

proportions, the same *Epistle* 6 deals with the domains in which proportions can be used, and shares a good deal of content with *Epistle* 5[7].

What the Epistle On Music *Is About*

The Brethren provide insight into the content of the treatise at the beginning of the epistle when they describe it as "commonly known *On Music*" (*mulaqqaba bi-l-mūsīqī*). This description associates the treatise with the art of harmony and the ways in which divine Harmony and proportions manifest (*nisab wa-kayfiyya al-ta'līf alladhīna bi-himā*).

فنريد أن نذكر في هذه الرسالة الملقبة بالموسيقي الصناعة المركبة بين الجسمانية والروحانية التي هي صناعة التأليف ومعرفة النسب، ليس غرضنا في هذه الرسالة تعليم الغناء وصنعة الملاهي، وإن كان لا بد من ذكرها، بل غرضنا معرفة النسب وكيفية التأليف الذين بهما وبمعرفتهما يكون الحذق في الصنائع كلها.

In this epistle, which is commonly known as (*al-risāla al-mulaqqaba*) "Epistle on music," we want to mention the art, which is composed by bodily and spiritual [matter] which is the art of harmony (*ṣinā'at al-ta'līf*), and the knowledge of proportions (*nisab*). Our aim in this treatise is not to teach the practice of music (*ghinā'*) nor the construction (*ṣan'a*) of instruments, although such matters deserve to be addressed. Our purpose is [to establish] the knowledge of proportions and the modality by which Harmony manifests (*kayfiyya al-ta'līf*) [itself], which by both (*alladhīna bi-himā*) of them and their acquaintance the dexterity in all the arts is attained[8].

Thus, the epistle *On Music* relates to "music" in the sense that it expresses the art of harmony (*ṣinā'at al-ta'līf*), the human and crafted realization of divine Harmony[9]. Specifically, it aims to explain the

7. [Ikhwān al-Ṣafā'], *On Composition and the Arts*, chapter 5, *On the Merit of the Science of Arithmetic, Geometric, and Musical Proportions*, Ar. 27-44, Eng. 57-68.

8. [Ikhwān al-Ṣafā'], *On Music*, Ar. 6-7. A similar purpose is stated in *Epistle* 2 and *Epistle* 7. See *infra*, 357-59. «Harmony in music: not just 'fitting together' but arranging according to numerical proportions».

9. In his description of the propaedeutic sciences, al-Kindī classifies the science of numbers (on the discrete quantities), the science of geometry (planes and surfaces), astronomy (solids in motion), and harmony *'ilm al-ta'līf*, which concerns «finding the ratio of one quantity to another and the nature of the relationship two by two. This is the knowledge of what is in harmonic combination and what is divergent. This research concerns the quantity that is in

mathematical proportions and modalities (*kayfiyya*) through which divine Harmony manifests [itself] and could even be realized in the human arts ("the dexterity in all the arts is attained by both of them the knowledge of proportions and the modalities of Harmony")[10].

Earlier readings

A few observations will probably arise when comparing the above translated excerpt with previous readings[11].

• Earlier interpretations did not properly consider the use of the expression "commonly known", which is a translation of the Arabic word *mulaqqaba*;

• Earlier readings did not relate the adjectives *jusmaniyya* (bodily) and *rūḥāniyya* (spiritual) to "matter" (*hayūlā*), which is discussed later in the Brethren's text. This, together with other oversights, likely led to the failure to recognize the exceptional nature of the art of music.

proportion to the other». Al-Kindī, *Risāla fī kammiyyat kutub Arisṭūṭālīs* (On the quantity of Aristotle's books), in *Rasā'il al-Kindī l-falsafiyya*, ed. Abū Rīdāh (Cairo 1950), 377. It is noteworthy that in al-ʿĀmirī's division of sciences (in the fourth/tenth century) reported in *al-Iʿlām bi-l-manāqib al-Islām, ta'līf* (harmony) is placed as the fourth of the propaedeutic sciences, after arithmetic, geometry, and astronomy. «Harmony refers to establishing proofs of what is or is not harmonized among powers and quantities in the heavenly and earthly worlds, that is the spiritual and physical worlds». Abū l-Ḥasan al-ʿĀmirī, *al-Iʿlām bi-l-manāqib al-Islām* (Exposition on the merits of Islam), ed. A. ʿAbd al-Ḥamīd Ghurāb (Riyadh 1988), 86.

10. As already observed, *Epistle* 5, *On Music*, more properly covers the subjects of modalities, while *Epistle* 6, *On Composition*, addresses the topic of proportions and rational numbers separately.

11. The following observations are not meant to be exegetical in any way, but rather to illustrate that *Epistle* 5 *On Music* can be read differently than it has previously been. A brief – hopefully illustrative – explanation is provided without comparing translations directly, which is not the purpose of this paper. Below are translations of the epistle, with the exception of Wright's translation, see note 4: [Ikhwān al-Ṣafā'], «L'Epître sur la musique des Ikhwān al-Ṣafā'», ed. and trans. A. Shiloah, in *Revue des Etudes Islamiques* 32 (1965), 125-62, and 34 (1967), 159-93; [Ikhwān al-Ṣafā'], «The Epistle on Music of the Ikhwān al-Ṣafā'», in *Documentation and Studies* 3 (Tel Aviv 1978), repr. in Shiloah, *The Dimension of Music in Islamic and Jewish Culture* (Aldershot 1993); [Ikhwān al-Ṣafā'], «Die Propaedeutik der Araber im zehnten Jahrhundert», *Die Philosophie bei den Arabern im X Jahrhundert n. Chr.*, vol. 3, ed. and trans. F. Dieterici (Berlin 1865), repr. Hildesheim 1969, 100-53.

It is described as the noblest of the arts (Epistles 5, 6, 21, 36) and an exception among them because it is composed of both spiritual and physical matter[12].

• Earlier readings disregarded the expression *ṣināʿat al-taʾlīf* as being different from *taʾlīf*, the former being the "art of harmony" and the latter being divine harmony, Harmony. This significant distinction occurs throughout the epistle and may go undetected unless a literal reading of the epistle is combined with an understanding of the Brethren's purported attempt to reinterpret the unsystematized Greek material on music as a propaedeutic science, which is on the basis of the epistle. The same Greek tradition underlies the next treatise corresponding to the epistle *On Proportions*.

• Earlier readings translated *nisab* as "ratios" instead of proportions, without considering that when talking of "harmony" the reference could also refer to harmonic proportions. Unfortunately, in Arabic *nisba* (sing.) can also be translated as the two mathematical concepts of "ratio" and "proportion".

• The substantive *kayfiyya*, "modality" was interpreted as a technical musical term, whereas here it refers to the original meaning of the Arabic root k-y-f ("how to"). During the fourth/tenth and the fifth/eleventh centuries, *laḥn* or *ṭarīq* were the two most commonly used terms to indicate musical modality[13]. The Ikhwān do not deal with the subject in the epistle. Thus, *kayfiyya* cannot be considered "musical modality".

• The expression *maʿrifat al-nisab wa-kayfiyyat al-taʾlīf alladhīna bi-himā*, which contains a relative with a dual subject, was grammatically misinterpreted.

• Earlier readings did not recognize the echo of the Greek tradition, supposedly Theon of Smyrna's *Expositio* (first/second century).

12. See *infra*, 347. «Evidence 2: The art of music belongs to the art of harmony».

13. In this regard, refer to L. I. al Faruqi, *An Annotated Glossary of Arabic Music* (London 1981). As an example of «modality» as a specific musical term, refer to (1) al-Kindī who uses *laḥan, Risāla fī khubr ṣināʿat al taʾlīf*, ed. and trans. Y. Shawqī (Cairo 1969), 35-41; (2) al-Ḥasan b. ʿAlī b. Aḥmad al-Kātib uses *ṭārīq, Kamāl adāb al-ghinā'*, ed. Maḥmūd Aḥmad al-Ḥifnī (Cairo 1975), 112-17.

In his treatise, Theon, as the Brethren later do[14], explains that since the purpose of his treatise is "the intellectual understanding of harmony and the music of the cosmos" (ὀρεγόμεθα δὲ τὴν ἐν κόσμῳ ἁρμονίαν καὶ τὴν ἐντούτῳ μουσικὴν κατανοῆσαι, 17_{2-3}), the instrumental and practical aspects of music are not considered. In stating this, Theon was following Plato (Rep. VII 531 a6-7) when he said "there is no need to torture the strings as if chasing a neighbour's voice"[15].

The role of "commonly known" in the Epistles

As observed, it is important to note that *Epistle* 5 is referred to as the "commonly known Epistle on music" (*al-Risāla al-mulaqqaba bi-l-mūsīqī*) rather than by its actual designation, which is the object of the same treatise, namely the art of harmony. The ratio of occurrences of the lexeme *mullaqaba* (Ar., l-q-b) in the 52 epistles supports this conclusion (see appendix, *Frequency of the lexeme 'laqaba' in Rasā'il Ikhwān al-Ṣafā'*)[16].

14. An in-depth analysis of Theon of Smyrna's contribution to the Brethren's *Epistle* 5 would be very interesting, and would require more attention. As such, in this article it is just as pertinent to highlight the way this resonates (more than previously thought) with a richer Greek tradition.

15. «We shall first recall the fundamental notions of arithmetic, to which are inextricably linked those of music in numbers; we do not absolutely need that in instruments, according to Plato's saying that there is no need to torture the strings as if chasing a neighbour's voice. We aspire rather to an intellectual understanding of harmony in the cosmos and music in it». Theon of Smyrna, *Expositio Rerum Mathematicarum ad Legendum Platonem Utilium*, ed. E. Hiller (Leipzig 1878), 16 line 24 to 17 line 3 (trans. L. Tribuzio). There is also a translation of the *Expositio* in English, though at times the translation is loose. Theon of Smyrna, *Mathematics Useful for Understanding Plato*, trans. R. and D. Lawlor, ed. and annotation, Ch. Toulis et al. (San Diego 1979). A more reliable translation, in Italian, is provided by F. M. Petrucci, *Expositio rerum mathematicarum ad legendum Platonem utilium. Introduzione, traduzione, commentario* (PhD thesis, Università degli studi di Pisa 2011/2012).

16. This Arabic root is peculiar because it invariably defines a name other than the one originally given. See this repository of Arabic lexicons for evidence: http://arabiclexicon.hawramani.com/search/%D9%84%D9%82%D8%A8. In the fifty-two epistles, l-q-b occurs seventeen times (oversights excluded and hopefully excused) and is used to refer either to generally known names or titles. For example, the original science of prophets (*'ilm al-anbiyā'*) is also known as the *science of theological objects* (*al-mulaqqab bi-l-ʿilm al-ilahiyyāt*). «The Epistle on Intellect and the Objects of the Intellect» (*Risāla al-ʿaql wa-l-maʿqulāt*) is also

According to the analysis of its recurrence, it emerges that this root is only used to indicate that commonly used expressions stand for more appropriate expressions or contents, as follows:

• "The generally known SCIENCE NAME corresponds to the original OTHER NAME" (e.g., the generally known *Science of theological objects* corresponds to *The science of prophets*);

• "The Epistle generally known as BOOK TITLE is about NAME OF THE CONTENT" (e.g., the epistle generally known *as On knowledge of death* is about the "knowledge of death and life");

• "The epistle named after BOOK TITLE from the ARISTOTELIAN TRADITION in ARABIC is about NAME OF THE CONTENT (e.g., the epistle named after [Aristotle's] *On the heaven and the world* is about "planets, constellations and the four elements")[17].

Recovering "Harmony," the Example of "Music": Evidences

According to the literature, the classification of μουσική (music) in μαθήματα (mathematical sciences) can be traced back to Pythagorean speculations (fifth century BCE). Since then the two terms, μουσική or ἁρμονία (harmony) have not been univocally used to define a mathematical science whose main purpose was the study of relations among quantities[18]. These quantities[19] could be identified by num-

commonly known by the abridged title, «The Epistle on the Objects of the Intellect» (*Risāla al-maʿqulāt*). A few times l-q-b refers to titles from the Greek Aristotelian tradition as translated and known in Arabic, for example «The Epistle on Planets, Constellations and the Four Elements» (*Risāla fī l-aflāk wa-l-kawākib wa-l-arkān al-arbiʿa*) corresponds to the exposition of Aristotle's *Περὶ οὐρανοῦ* (*De Caelo* or *De Caelo et Mundo*), which circulated in Arabic under the title *On the Heaven and World* (*al-mulaqqaba bi-l-sama' wa-l-ālam*). In the appendix, a list of recurrences of the root l-q-b in the fifty-two epistles is provided with an explanation for each of them.

17. For more details, please refer to the appendix.

18. «It is obvious that music was strategically situated to lend elaboration and structure to the concept of harmony in a way that proved ineradicable. Indeed, the term 'music' becomes at times more or less synonymous with 'harmony' and takes on the same breadth of meaning». A. Lippman, «Hellenic Conceptions of Harmony», in *Journal of the American Musicological Society* 16.1 (Spring 1963), 4.

19. This article does not deal with the distinction between numbers ἀριθμός and magnitude (μέγεθος), nor with the distinction between proportions of num-

bers. As a result, this science, known as "harmony"[20] or "music", dealt with the relationship between numbers, but also with the movements of solids as expressed through numerical relationships. In fact, Plato called it ἁρμονία (harmony) and connected it to astronomy[21].

In our analysis there are a number of evidences that could prompt us to re-evaluate *Epistle* 5 and *Epistle* 6 strictly within this tradition, where "harmony" and "music" were not systematized and were not univocally used to define specific domains.

In contrast to this tradition, the Brethren sought to rethink issues and themes, such as the relationship between "harmony" and "music", that were not previously unanimously organized. Thus they formalized a distinction between "music" and "harmony", which were often intertwined concepts, and between their divine and human dimensions. "Music" is the mathematical expression of "harmony". Through "music" it is possible to recognize and reproduce "harmony" in its divine and human dimensions. However, music is just the most effective manifestation of "harmony"; it does not exclusively coincide with it. As a consequence, "harmony" can be perceived in other phenomena and achieved through other arts. Eventually, the Brethren distinguish between a qualitative approach to the

bers and magnitudes, nor with the question of «real number» from the original Greek mathematical perspective. Instead, a generalization of these concepts has been used, for lack of adequate space. See J. Klein, *Greek Mathematical Thought and the Origin of Algebra*, trans. E. Brann (New York 1992). Among other subjects, this study examines the revival and assimilation of ancient Greek mathematics through Arabic science during the seventh/thirteenth to tenth/sixteenth centuries. I. Grattan-Guinness, «Numbers, Magnitudes, Ratios, and Proportions in Euclid's Elements: How Did He Handle Them?», in *Historia Mathematica* 23 (1996), 355-75.

20. In Plato's Republic VII 522-617b, a sequence of mathematical disciplines is as follows: arithmetic, namely the study of the unit (a point without position); numbers and calculation; geometry, which deals with one-dimensional lines and two-dimensional surfaces; solid geometry (stereometrics); astronomy, in which the solids are in motions, i.e., in the circular revolutions of the heaven; and harmony, which studies the motions according to numerical ratios.

21. Plato's Republic VII 530d argues that they are «sister sciences, as the Pythagoreans admit». They are closely connected because «as the eyes frame the world of astronomy, so are the ears framed by the movements of harmony». This statement recalls Archytas of Taranto (Fragment 1). In his description of astronomy, geometry, arithmetic, and music, Archytas calls the four disciplines «sister studies» (H. Diels-Kranz, *Die Fragmente der Vorsokratiker* (Berlin 1960), bk 1, 1:431-32).

subject of "harmony" and its relationship to "music" (*Epistle* 5) and a quantitative approach (*Epistle* 6) describing rational numbers.

Five of these evidences are discussed in more detail below, preceded by a brief overview.

Overview

The first two evidences (evidence 1 and evidence 2) indicate that the Ikhwān were cognizant of the interchangeable use of the terms "music" and "harmony". This interchangeability stemmed from the fact that "music" fundamentally consists of harmonic proportions, which are regarded as the most perfect proportions, surpassing both arithmetic and geometrical ones. It is with this recognition that the Ikhwān sought to distinguish between divine Music as the expression of divine Harmony and the art of music as the most appropriate example on earth of the art of harmony. Notwithstanding its exceptional nature, because it is essentially composed of perfect harmonic proportions crafted by God (lit., see *infra*), the art of music, like other human arts, has a limited purpose, which corresponds to the harmonization of melodies and tunes. This exceptional condition makes it the noblest and most excellent example of the art of harmony among all the other human arts. This is also shown in the third proof [evidence 3]. Here it is implied that "music", as the most representative of other arts, is the first, but not the only, art to be discussed in *Epistle* 5. All other non-propaedeutic arts are thus treated as related to it by affinities (*munāsabāt*) and considered in terms of their possibility of expressing the art of harmony[22]. Once the perfect artifact is created, the other arts realize "harmony" through the application of harmonic proportions, unlike the art of music, which is intrinsically harmonious.

The same evidence explains the relationship between the art of music and divine Music. The art of music is the most powerful expression of heavenly Harmony on earth, and recalls, through sounds, the divine Music of the spheres and planets, the hearing of which is the ultimate goal of the soul after death.

22. It is important to consider that as a propaedeutic art or science, it does not stand alone, rather it transverses other arts.

The structure of *Epistle* 5 and the contents of the chapters [evidence 4] are mainly concerned with explaining how harmonic proportions identify natural phenomena and human activities (arts), and the influences of the art of music on man's soul. Apart from rhythms and their cycles, which are part of the fundamentals of the art of music and are discussed extensively in the epistle, little attention is paid to other specific musical components.

Complementing *Epistle* 5, *Epistle* 6 offers a numerical, quantitative view of harmonic proportions as they relate to ratios and proportions (rational numbers). *Epistle* 5 and *Epistle* 6 are therefore both related to the Greek tradition of the science of music (mathematical relationships between quantities) and should therefore be considered as two parts of the same treatise.

This perspective is further reinforced by the list of propaedeutic sciences reported in the epistle *On the Theoretical Speculative Arts* (*Epistle* 7). Here "proportions" are not mentioned except as part of "music", which is indeed "the science of harmony, that is, to knows the quiddity of proportions".

By considering the epistle *On Proportions* [evidence 5] as a separate treatise but following the so-called epistle *On Music*, the Brethren could have restored an intimate connection between the qualitative and quantitative dimensions of the science of music. In doing this they could have revised the role and positioning of the section on rational numbers proposed by Nicomachus. Unlike Nicomachus' *Introduction to Arithmetic*, on which part of the epistle *On Proportions* is based (Book II, ch. 21 further on), rational numbers are not part of arithmetic but are directly related to music. In this way, the Brethren could have revised a contradiction in Nicomachus' treatise. Despite Nicomachus' understanding of rational numbers as part of the propaedeutic science of music, he placed this topic in arithmetic, leading to an apparent inconsistency that has been overlooked in recent publications[23].

23. See *Brill's Companion to the Reception of Pythagoras and Pythagoreanism in the Middle Ages and the Renaissance*, ed. I. Caiazzo, C. Macris, and A. Robert (Leiden 2021).

Evidences

Evidence 1: "Harmony" can be named "music"

وإنما أردنا نحن أن نذكر من كل جنس من الموجودات مثالا، ليكون دالا علي شرف علم
النسب الذي يعرف بالموسيقى وأن هذا العلم محتاج إليه في بالصنائع كلها. وإنما خص هذا العلم
باسم الموسيقى، الذي هو تأليف الألحان والنغم، لأن المثال فيه أبين
وذلك أن القدماء والفلاسفة والحكماء إنما استدلوا أصول الألحان والنغم من المعرفة بالنسبة
،العددية والهندسية، لما جمعوا بينها
خرجت لهم النسبة الموسيقية كما بينا في الفصل الذي في استخراج النسب.

We wanted to mention for every species of existents (*min kull jins al-mawjūdāt*) an example, in order that it can serve as a signifier of the excellence of the science of proportions that is known as music (*yuʿraf bi-l-mūsīqā*). For this science (the science of proportions) is needed in all the crafts. And this science has been designated by the name "music" (*khuṣṣa bi-l-ʿilm al-mūsīqā*) due to its harmonization of melodies and tunes, since it is a lucid exemplar (*mithāl*) herein, and because the ancients, the philosophers, and the sages derived the principles of melodies and tuning from their knowledge of arithmetic and geometric proportions. For when these are combined, a musical proportion (*al-nisba al-mūsīqiyya*) is revealed through them as we have shown in the chapter on the derivation of proportions[24].

The first evidence corresponds to an excerpt from *Epistle* 6. Here the Brethren explain that "the science of proportions" is generally known or defined as "music" (*yuʿraf bi-l-mūsīqā and khuṣṣa bi-l-ʿilm al-mūsīqā*), but "music" – they claim – corresponds properly with the harmonic combination of melodies and tunes (*taʾlīf al-alḥān wa-l-nagham*) wherein proportions, with their best expression in harmonic proportions, can be found in every species of existents (*min kull jins al-mawjūdāt*). This once again[25] proves that the Brethren acknowledged the lexeme "music" as a general term that refers to another more appropriate term. The examplar (*mithāl*) of music for the application of harmonic proportions explains why the term is used to refer generally to harmonic proportions and even more generally to all propor-

24. [Ikhwān al-Ṣafāʾ], *On Composition and the Arts*, Ar. 32; Eng. 63, with slight revisions.

25. See *supra*, para. «The role of 'commonly known' in the Epistles», in which the meaning of *mulaqqab* (commonly known) is discussed.

tions. Thus "music" is often used as a synecdoche (the particular for the general). Additionally, this lexical phenomenon is associated with the adjective "musical proportion" (*al-nisba al-mūsīqiyya*) to refer to "harmonic proportion"[26].

It must be noted that even original Greek sources were aware of the mutual sense expressed by the word "music." As an example, Iamblicus (third/fourth century CE) called the harmonic proportions μουσική[27].

Evidence 2: The art of music belongs to the art of harmony

بداند که موسیقی تألیفی است که وضع ونهادن آن ارحواح حیوانی راست نه اجسام را که جسم را از آن نصیبی نیست. وموسیقی صناعتی است مرکب از جسمانی وروحانی، وتألیف غناء والحان از وی است.

You should know that Music is a kind of Harmony (*ta'līfī ast*) whose domain is that of vital spirits and not bodies because Harmony has nothing to do with the body.

As a form of art (*ṣinā'at al-mūsīqī*), music consists of both bodily and spiritual [matter]; as a result, the harmony of playing (*ta'līf-i ghinā'*), and melodies belong to it[28].

The second evidence comes from a seventh to eighth-/thirteenth to fourteenth-century Persian compendium, *Mujmal al-ḥikma*, that was intended, as mentioned above, to explain the epistles. At the beginning of the epistle *On Music*, there is a clear explication of what "music" is and how it is related to "harmony". Music is a type of Harmony. It is made by vital spirits. In this way, it differs from its human counterpart, which is the art of music (*ṣinā'at al-mūsīqī*) composed of both spiritual and physical matter[29].

26. For example, ch. 5 from [Ikhwān al-Ṣafā'], *On Composition and the Arts*, reports the title «On the merit of arithmetic, geometric and musical proportions».

27. Iamblichi, *In Nicomachi Arithmeticam introductionem liber*, ed. H. Pistelli (Leipzig 1975; repr. 1894), 118 line 20.

28. Anonymous, *Mujmal al-ḥikma*, 77.

29. Being made of spiritual and physical matter is at the core of the uniqueness and excellence of the art of music, refer *supra*, 339. «Earlier readings».

Evidence 3: Divine and human dimensions of "harmony" and "music"

An important evidence is provided by the statement at the beginning of chapter 12 of *Epistle* 5, which clarifies the content of the treatise. The epistle is devoted to explaining how Harmony is related to the cycle of life and death.

Thus, the Ikhwān begin the chapter by stating that the previous chapters were meant to demonstrate that all artifacts are arranged according to proportions (*bi-an fī l-i'tibār hādhihi al-mithalāt allatī tuqaddamu dhikruhā fī hādhihi al-fuṣūl*). Among them, the most perfect are those made by God, the finest Harmonizer (lit., *mu'allafan laṭīfan*), who arranged them according to harmonic proportions. These artifacts reveal Harmony and materialize in "the structure of the celestial spheres and their heavenly bodies, the dimensions of their parts, the measures of the elements and what is derived from them".

> You should know, dear brother, may God aid you and us with His spirit, that the considered examples mentioned above in these chapters (*bi-an fī l-iʿtibār hādhihi al-mithālāt allatī tuqaddamu dhikruhā fī hādhihi al-fuṣūl*) were meant to demonstrate that the best-made artifacts, the most masterfully structured, and the most beautiful of those harmoniously composed are those in which the structure of their constitution is arranged according to the perfect proportion (*al-nisba al-afḍal*)[30] and, likewise are the harmonious composition of its parts. So it is a demonstration and an analogy for everyone who understands, reflects, and considers that the structure of the heavenly spheres and their heavenly bodies, the dimensions of their parts, the measures of the elements, and what is derived from them, are also made one in relation to the other according to the most perfect proportion, and likewise the order of the distances of these spheres and stars, and their motions, correspond to the perfect proportions and are harmonious according to them[31].

30. In the Epistles the expression *al-nisba al-afḍal* essentially refers to harmonic proportions as superior, and thus perfect, as compared to the arithmetic and geometric proportions contained in them. This is the reason harmonic proportions are also considered three-dimensional. See, Nicomachus of Gerasa, *Introduction to Arithmetic*, ed. and trans. M. L. D'Oodge (London 1926), 2:39: «It remains for me to discuss briefly the most perfect proportion, that which is three-dimensional and embraces them all, and which is most useful for all progress in music and in the theory of the nature of the universe. This alone would properly and truly be called harmony». Nicomachus of Gerasa, *Introductionis arithmeticae*, ed. R. Hoche and G. B. Teubner (Leipzig 1866), 284.

31. [Ikhwān al-Ṣafā'], *On Music*, *Epistle* 5, ch. 12, Ar. 137-38.

These harmonic proportions, the perfect ones, are not set by humans but are intrinsic to the heavenly movements of the planets and serve as a defining characteristic of divine Harmony. In the same way heavenly movements define heavenly music, harmonic proportions describe heavenly music mathematically.

Thus, God is "the wise craftsman who crafted the harmonic proportions, the skilled artificer who constructed them, the finest harmonizer"[32] who, instead of creating out of nothing, used Harmony to manipulate and organize the chaotic matters through a process. This process consists of arranging opposite natures (lit., *mutaḍāddāt*) and quantities according to harmonic proportions, handling and giving forms and concepts to undifferentiated matters. As a result of Harmony, God preserves forms and proportional dimensions during emanations until the word of generation and corruption is reached.

Fortunately, in the world of earthly matters, man is able to recreate the harmonic proportions that originally describe heavenly musical sounds, through the art of harmony. This is because philosophers have been able to derive them (*istakhrajūhā*) by observing divine heavenly movements. They then transmitted these proportions to masters, who in turn transmitted them to disciples and common people in the form of the art of harmony. In this way people can duplicate the Harmony of God through a human art.

The philosophers extracted all the arts (*istakhrajūhā*) with their philosophy. After that, the people (*al-nās*) learned the arts from the sages (*al-ḥukamāʾ*) and passed them on to each other, so that they became a heritage that was passed on from the sages (*al-ḥukamāʾ*) to the community (*al-ʿāmma*), from the scholars (*al-ʿulamāʾ*) to the disciples (*al-mutaʿallimīn*), and from the masters (*al-asātīdh*) to the pupils (*al-talāmidha*). The same happened with music. The sages extracted it through their philosophy, and the people learned it from them and applied it in their activities and behavior, as well as for the other arts according to their various purposes[33].

32. [Ikhwān al-Ṣafāʾ], *On Music*, *Epistle* 5, ch. 12, Ar. 139.
صانعا حكيما صنعا ومركبا متقنا ركبها ومؤلفا لطيفا ألفها
Note the Arabic verbs and adjectives used to describe the stages of God's involvement in manipulating (*ṣanaʿ*), combining (*rakkaba*), and harmonizing (*allafa*) through mathematical proportions at the end.

33. [Ikhwān al-Ṣafāʾ], *On Music*, *Epistle* 5, ch. 2, Ar. 13.

The art of music, to which *Epistle* 5 is devoted, is the most effective and perfect expression of the art of harmony since it is intrinsically based on harmonic proportions, the same proportions that characterize the movement of the heavenly bodies. For this reason, the art of music serves as a model for all other arts, in achieving the human equivalent of divine Harmony. Each man, through his craft (calligraphy, prosody, cooking, mechanics, medicine, alchemy, magic, construction, architecture, painting), can achieve the perfect harmonic proportions that human music intrinsically possesses and create the most perfect artifact[34].

Evidence 4: *Epistle* 5 and the quality (*kayfiyya*); Epistle 6 and the quantity (*kammiyya*)

Epistle 5, affinities and how "harmony" is expressed

Epistle 5 consists of seventeen chapters, which can be divided into three main parts. The first part contains chapters 1 to 7. The second part contains chapters 8 to 14, with the exception of chapter 13. The third part contains the chapters 15 to 17. The first and third parts deal with the art of music as an expression of the art of harmony; it is described more for its ethos than for its theoretical fundamentals, which are limited to sound and rhythm topics. In the second part, the Brethren of Purity begin to draw a universe characterized by affinities (*munāsabāt*) and connections between natures, substances, spirits, heavenly and earthly words, human arts and crafts. These affinities describe a relationship of similarity between matters (whether spiritual or bodily matter) based on numbers in a mathematical relationship. This mathematical relationship is explained in the following *Epistle* 6.

With the exception of chapters 1 and 2, which deal with the influences of the art of music, chapters 3, 4, and 5 deal with acoustics and the lute, chapter 6 presents the universality of the art of music, chapter 7 deals with prosody and rhythm in relation to music, and chapters 8, 9, 10, and 11 describe, in no particular order, how proportions can be found as we move from heavenly bodies to the earth. Proportions are found everywhere, from the heavenly bodies to the

34. As later emerged in the *Mujmal*, this ability could be dangerous and is the reason some arts were hidden from the common people.

earth and its elements, nature, and temperaments; to the human body and newborn children; to calligraphy[35], rhythm, and prosody; to artifacts created through sculpture, painting, construction, and composition[36].

Chapter 12 examines the life cycle of the individual soul and how harmonic proportions relate to it. Picking up on one of the many themes discussed in chapter 9, this chapter describes the ultimate goal of the individual soul, which yearns to bear witness to the celestial harmonic music when it leaves the earth. During its earthly life, the soul has already been reminded of heavenly music by earthly melodies[37].

Chapter 13 deals with the rule of Arabic rhythms. Chapter 14 concerns the opposing and concordant tetrads that exist in nature, and how pragmatically craftsmen can overcome their opposites by using harmonic proportions to create the most useful of artifacts. Chapter 15 is about the skillful musicians, those who know the modality for influencing souls. Chapter 16 reports on the wise sayings of the philosophers concerning "music". Chapter 17 deals with the variety of effects of the musician's tones (*naghamāt*) on the souls of the listeners.

The narrative structure of *Epistle* 5 confirms that the core of the epistle lies in tracing affinities to demonstrate how Harmony can be observed and the art of harmony achieved; accordingly, Music and the art of music are treated as the most representative among harmonic phenomena (divine Music is displayed by heavenly movements) and the most exemplary of the crafted arts, so they are discussed as the first and most perfect examples to be considered. The relationship between the art of music and the other arts is realized when

35. An intriguing exploration of the later reworkings in Ottoman literature that incorporate certain images drawn from the Brethren's epistle *On Music*, particularly those related to the human body and calligraphy, is presented by F. S. Eryilmaz and G. De Callataÿ in their work titled «Following the Steps of the Ikhwān al-Ṣafā' in the Ottoman World I: Insights from Three Universal Histories», in *Journal of Islamic Studies* (2023), 20-28.

36. It is according to the same analogy and model that skilled artists produce their artifacts, whether shaped, sculpted, or painted, so as to be proportionate to one another in construction, composition, and arrangement. *On Composition and the Arts*, paraphrasing *Epistle 6* from the English translation, 60.

37. In conjunction with chapter 9, this chapter provides a comprehensive analysis of how harmony, the life cycle, and death are interrelated, thus complementing the content of the treatise *On the Quiddity of Death and Life* (*Epistle 29* in the critical edition).

they respect and reproduce the harmonic proportions, which the art of music exemplarily displays, by producing the most perfect of artifacts.

Epistle 6, rational numbers and the quantity of "harmony"

If *Epistle* 5 explains through affinities how the reader can effectively recognize on which modalities Harmony is really effective (*kayfiyyat al-ta'līf*) in the natural and supernatural worlds and how man himself can reproduce it through the art of harmony, *Epistle* 6 describes the mathematical relations (rational numbers) at the basis of affinities. In doing so, the Ikhwān again carefully re-examined the Greek material and reconsidered the proper place for rational numbers as the subject of "harmony" and "music"[38].

Rational numbers, as a subject belonging to the propaedeutic science of music, has its tradition in Greek literature, probably from the very beginning of the Pythagorean speculations, since Philolaus' (fifth to fourth century BCE)[39] speculations on mathematics, and continuing up to Nicomachus and Theon of Smyrna (second century CE) and beyond. As a propaedeutic science concerned with proportions and ratios as well as commensurability and incommensurability, "music" has been a crucible of mathematical questions and answers, even up until the sixteenth century, when irrational numbers were still discussed on the basis of musical reasoning[40].

As Arpad Szabo has shown, the concepts of ratio (λόγος) and proportion (ἀναλογία), and even the expressions for operations on ratios, were all developed from considerations and experiments in music theory and then applied to arithmetic and geometry[41].

38. See *infra*, 355-57. «An assumption on the Brethren's approach to revise Nicomachus on rational numbers and 'music'».

39. For more on the mathematical connotation of harmony starting from Philolaus, see C. A. Huffman, *Philolaus of Croton, Pythagorean and Presocratic. A Commentary on the Fragments and Testimonia with Interpretive Essays* (Cambridge 1993).

40. See P. Pesic, «Hearing the Irrational: Music and the Development of the Modern Concept of Number», in *Isis* 101.3 (September 2010), 501-30.

41. The fact that «the original theory of proportions was concerned exclusively with music and that it was subsequently applied to arithmetic and geometry» is extensively explained and proved by Arpad Szabo in the second part of his compelling work, *The Beginnings of Greek Mathematics* (Dordrecht 1978), 170. Szabo's evidence was later expanded by L. Borzacchini in «Incommensurability, Music, and Continuum: A Cognitive Approach», in *Archive for History of Exact Sciences* 61 (2007), 273-302. Peter Pesic's article is in the same vein.

When we read *Epistle* 6, we must bear in mind this close connection between these two realms that seem so distant to us today.

Finally, we should consider another point, namely the absence of any reference to the subject of proportions in the epistle *On the Theoretical Speculative Arts* (*Epistle* 7), except to define the propaedeutic science of music, which is described as: "…the science of harmony, that is, to know the quiddity of proportions[42], the way to harmoniously combine (*kayfiyyat al-ta'līf*) things different in substances". Later in the same passage, the Brethren say: "For each of these arts, we have produced an epistle, [to serve] as an introduction or preliminaries"[43].

If *Epistle* 7 only refers to proportions in connection with the science of music, the question arises as to why there is an epistle *On Proportions* at all.

Given the tradition of Greek music on the subject of rational numbers as part of musical speculation, the content and structure of *Epistle* 5 and *Epistle* 6, as well as the fact that *Epistle* 7 mentions proportions in relation to the science of music, it seems reasonable to identify *On Music* and *On Proportions* as being part of the same treatise.

Evidence 5: Recovering the connection between proportions and the art of harmony

Epistle 6 is simply organized: Chapter 1 describes ratios (*nisab*) and their five types; chapter 2 covers proportions (*nisab*)[44] which are divided into three types (arithmetic, geometric, and harmonic); chapter 3 deals with the extraction of continued proportions; chapter 4 concerns proportionality; chapter 5 is "on the merit of the science of arithmetic, geometric, and musical proportions"[45]; and an

42. Please refer *supra*, para. «Earlier readings» and *infra* «A way to reassess the Epistles 5 and 6 and their topics».

43. [Ikhwān al-Ṣafā'], *On Composition and the Arts*, *Epistle* 7, Eng., 109-10 with slight revisions, Ar. 76.

44. Λόγος (ratio) and ἀναλογία (proportion) are rendered by the Brethren with the same word, *nisba*, pl. *nisab*. In Thābit b. Qurra's *Madhkhal*, λόγος (ratio) is translated as *nisba*, ἀναλογία (proportion) is translated as *tusāwi al-qiyās*, and a definition of the two arithmetical relation is given. *Ṯābit b. Qurra, Madkhal ilā ʿilm al-ʿadad: Arabische Übersetzung der* Ἀριθμητικὴ εἰσαγωγή *des Nikomachos von Gerasa*, ed. W. Kutsch (Beirut 1959), 93.

45. As noted, «music» and «musical» can also refer to «harmony» and «harmonic».

appendix on the rule for finding the cube root is added in the critical Oxford edition[46].

Notwithstanding the limited evidence we have of the Greek tradition on "music/harmony" transmitted into Arabic up to the third/ninth century, it remains to be proved that, with the exception of Euclid's *Elements* (Book V)[47] and Nicomachus' *Introduction to Arithmetic* (Book I, chs. 17-23; Book II, chs. 21 onward)[48], the Ikhwān may not have considered other Greek texts such as Theon of Smyrna's *Mathematics Useful for Understanding Plato* or Ptolemy's *Harmonics*, or even Nicomachus' *Manual of Harmony*[49].

46. The cube is the expression of «harmony» by some Pythagorean authors. As also noted by El-Bizri, the appendix should echo book II, ch. 26, but also – it is worth adding – ch. 29, where harmony is defined as a cube (ο κύβος αρμονία). Further comparisons with Nicomachus' *Introduction* should be made in the context of Philolaus' fragments on geometric harmony represented by a cube.

47. According to tradition, it seems that there existed two versions of Στοιχεῖα (Elements) by al-Ḥajjāj b. Yūsuf b. Maṭar and one by Isḥāq b. Ḥunayn edited by Thābit b. Qurra. For more detail and a new perspective, see S. Brentjes, «Who Translated Euclid's Elements into Arabic?», in *Translation and Transmission: Collection of Articles*, ed. J. Hämeen-Anttila and I. Lindstedt (Munster 2018), 21-54.

48. Three Arabic versions of Nicomachus are known to have existed: Ḥabīb b. Bahrīz's translation from the Syriac, now lost; al-Kindī's revision of the latter, lost in Arabic but extant in a Hebrew translation by Qalonymos ben Qalonymos; and Thābit b. Qurra's translation from the Greek. See M. Zonta and G. Freudenthal, «Nicomachus of Gerasa in Spain, ca. 1100: Abraham bar Hiyya's Testimony», in *Aleph* 9 (2009), 189-224. For the edition of the Arabic translation of Thābit b. Qurra, see *Ṯābit b. Qurra, Madkhal ilā ʿilm al-ʿadad*. Hebrew translation by Qalonymos ben Qalonymos, G. Freudenthal, and T. Levy, «De Gerase a Bagdad [De Gérase à Bagdad]», *De Zénon d'Élée à Poincaré: Recueil d'études en hommage à Roshdi Rashed*, ed. R. Morelon and A. Hasnawi (Leuven 2004), 479-544. See also G. de Vaulx D'Arcy, *Aḥmad b. al-ṭayyib al-Sarakẖsī*, «Réviseur de l'Introduction Arithmétique de Nicomaque de Gérase et rédacteur ses Rasā'il Ikhwān al-Ṣafā'», in *Arabic Sciences and Philosophy* 29 (2019), 261-83.

49. Unfortunately, no evidence has been found for the translation into Arabic of Theon of Smyrna, *Expositio Rerum Mathematicarum ad Legendum Platonem Utilium*, nor for Ptolemy's Ἁρμονικόν (Harmonics) and Nicomachus' Ἐγχειρίδιον ἁρμονικῆς (Manual of harmony). Apart from the absence of Greek material in Arabic, the proximity of Ptolemy's *Harmonics* and Nicomachus' *Manual of Harmony* to the Brethren of Purity's Epistle *On Music* seems at first sight less relevant. Nevertheless, Theon's Expositio seems to be very close in some respects, and its possible tradition in Arabic deserves further investigation. For more information on Ptolemy and Theon in the Arabic tradition, see J. Lippert, «Theon in der Orientalischen Literatur», in *Apollonius, Geminus, Heron, Ptolemaeus, Theon in the Arabic Tradition: Texts and Studies*, coll. and repr. F. Sezgin, Islamic Mathematics and Science, vol. 68 (Frankfurt am Main 1998). A. Jones, «The Ancient Ptolemy», in *Ptolemy's Science of the Stars in the Middle Ages*, ed. D. Juste, B.

In the case of a limited[50] or extended relevance of the Greek materials, which is more plausible when reading *Epistle* 5 and *Epistle* 6 together, we can assume that the Brethren recognized a fundamental contradiction in Nicomachus' *Introduction to Arithmetic* with regard to rational numbers. This understanding could explain the positioning of *Epistle* 6, which deals with rational numbers, not as part of arithmetic, but as directly related to music and harmony. The following paragraph gives a more detailed explanation of the subject.

An Assumption on the Brethren's Approach to Revise Nicomachus on Rational Numbers and "Music"

In earlier Greek speculations transmitted to Arabic philosophical culture from the second/eighth century onward, the concept of "music" as a propaedeutic science and its relation to "harmony", an art originally belonging to God and His creation, were extensively discussed but not unanimously systematized. Then an apparent inconsistency could be envisaged in Nicomachus' *Introduction to Arithmetic* which, we assume, could have been recovered and reinterpreted in *Epistle* 6.

Inconsistencies of this kind could be seen as the physiological result of the fact that the process of identifying and defining various fields of knowledge took time to develop and institutionalize, from early Pythagorean speculations about the science of music to the later formalization of the *quadrivium*.

In fact, the determination of the subjects of what was later called the *quadrivium* does not seem to have been precisely identified and widely shared in the Greek tradition[51].

In his *Introduction to Arithmetic*, Nicomachus of Gerasa, whose influence on *Epistle* 6 has been explained above, disregards throughout

van Dalen, D. N. Hasse, and C. Burnett, Ptolemaeus Arabus et Latinus Studies 1 (Turnhout 2020), 13-34.

50. As El Bizrz reports, the relevance of other Greek sources seems unclear, [Ikhwān al-Ṣafā'], *On Compasition and the Arts*, *Epistle* 6, 16 n. 3.

51. Sometimes it seems that scholars in general have been more concerned with reconstructing unity in the Greek and Arabic traditions than with understanding any form of inconsistency regarding the relationship between music and harmony and their place in the mathematical sciences.

his treatise the original claim made at the very beginning, in which the subjects of the four mathematical sciences are defined (in book I, chapter 3). In this renowned part of the treatise, which is considered the foundation of the Boethius' *quadrivium*, the study of numbers, whether absolute or per se, belongs to arithmetic; numbers in relation to one another, to music; geometry deals with quantities at rest; and astronomy concerns quantities in motion[52].

In truth, Nicomachus seems to have neglected the first two of these definitions; he discusses rational numbers, which should fall under the domain of music, in a long section of the treatise on arithmetic. In addition, numbers are also covered in another section of the *Introduction to Arithmetic*; namely, geometric planes and solids, though it should have been placed in the geometric domain.

Presumably – according to my analysis – Nicomachus could have followed and fixed a tradition on which this apparent contradiction was based. I call this contradiction "apparent" because, as Theon of Smyrna, Nicomachus' contemporary, explains in his discussion and different ordering of the propaedeutic sciences, it is not possible to intellectually grasp the Harmony of the cosmos and the Music in it without acknowledging the numerical rules of sound.

ὀρεγόμεθα δὲ τὴν ἐν κόσμῳ ἁρμονίαν καὶ τὴν ἐν τούτῳ μουσικὴν κατανοῆσαι· ταύτην δὲ οὐχ οἷόν τε κατιδεῖν μὴ τῆς ἐν ἀριθμοῖς πρότερον θεωρητικοὺς γενομένους.

Instead, we seek to grasp Harmony and Music in the cosmos, but Harmony cannot be grasped until a theoretical understanding of numbers is applied[53].

It could be said that Theon, instead of following the same conflicting tradition, tried to find a logical solution – as he himself explains – by incorporating musical numerical rules into arithmetic, by considering the mathematical science of music (the relationship between movement and rest) as the fifth in the mathematical order after arithmetic (numbers), geometry (surfaces), stereometrics (solid objects), and astronomy (solids in motion).

52. The only scholar to suggest this contradiction was M. L. D'Oodge (ed. and trans.) in his translation into English, *Introduction to Arithmetic*, 184 n. 1 (in the 1926 edition).

53. Theon of Smyrna, *Expositio Rerum*, 17 lines 2-4.

For this reason, according to Plato, music is also the fifth discipline and corresponds to the music that is in the cosmos, in the movement, order, and consonance of the stars that move there. However, it is necessary for us, and according to Plato himself, to place it second after arithmetic, because music in the cosmos cannot be conceived unless it is accounted for in numbers and understood intellectually[54].

In his definition of the sciences of mathematics, Theon, following Plato (Republic VII, 522-617b), identifies five sciences in which music is concerned with the relationship between motion and rest, in contrast to Nicomachus, who identified music as the analysis of the relationship between numbers.

Harmony in Music: Not Just "Fitting Together" but Arranging according to Numerical Proportions

As part of a general effort to reconsider *Epistle* 5 together with *Epistle* 6, here it seems necessary to briefly emphasize another point relating the epistles to the Greek elaborations on the propaedeutic sciences of "harmony" and "music".

This point concerns the mathematical conception of "harmony" which, through Nicomachus, must have been transmitted to the Brethren by pre-Socratic authors, in particular Philolaus.

It would seem that this extract from the *Introduction* of Nicomachus was intended to echo Philolaus when he says[55]:

ἁρμονία δὲ πάντως ἐξ ἐναντίων γίνεται ἔστι γὰρ ἁρμονία πολυμιγέων ἕνωσις καὶ δίχα φρονεόντων συμφρόνησις (II.19).

Harmony in every way arises out of opposites. For harmony is the unification of what is a mixture of many ingredients and the agreement of the disagreeing[56].

54. Theon of Smyrna, *Expositio Rerum*, 17 lines 5-11.

55. See also Theon of Smyrna, *Expositio Rerum*, 2 lines 10-12: «καὶ οἱ Πυθαγορικοὶ δέ, οἷς πολλαχῇ ἕπεται Πλάτων, τὴν μουσικήν φασιν ἐναντίων συναρμογὴν καὶ τῶν πολλῶν ἕνωσιν καὶ τῶν δίχα φρονούντων συμφρόνησιν», «Even the Pythagoreans, whom Plato often follows, affirm that music is the harmonious combination of opposites, the unification of the multiplicity as well as the agreement of different understandings».

56. In *Philolahus of Croton*, Theon of Smyrna, *Expositio Rerum*, 416.

The excerpt corresponds to the following Arabic translation by Ibn Qurra:

والتأليف بالجملة إنما يكون عن الأشياء المتضادة وذلك أن التأليف هو اتحاد أشياء مختلفة (نفقة؟) والجمع بين أشياء منفردة بعضها عن بعض.[57]

Harmony in general is about things that are opposites, and that is because harmony is the union of different things (expense?)[58] and the combination of things that are separate from each other.

Philolaus is of great importance for the development of the concept of "harmony" in the Greek tradition, since more than other Pythagorean authors he associated ἁρμονία (harmony), a word previously used to express "fitting together", with numbers, thus becoming quantitatively congruent and beginning to mean the relationship between what is limited and what is unlimited according to numerically specified relationships.

The authenticity of the previous fragment is uncertain, and is more likely to be pseudo-Pythagorean. Nevertheless the concept of harmony it "promotes", which relates it to a mathematical thought in which opposed substances (*mutaḍādd* is the lexeme identifying the concept) are not simply put together but are arranged according to mathematical relationships, must have been of great concern to the Brethren.

In fact, the same claim is reiterated by the Brethren in the epistle *On Proportions*, in the epistle *On Geometry*, and in the epistle *On the Theoretical and Speculative Arts*, where again a conception of harmony as the combination and unification of opposites (*mutaḍāddāt*) according to mathematical proportions (*nisab*) is presented.

Epistle *On Geometry* (*Epistle* 2)

[Music is the knowledge of the] … harmonic composition (*ta'līf or ta'līfāt*) and proportions [ratios] that exist between entities that differ in substance and sustain opposite potencies (*al-mutaḍādda al-quwā*). The origin of this

57. Thābit b. Qurra, *Madhkhal ilā ʿilm al-ʿadad*, 89.

58. Thābit b. Qurra, *Madhkhal ilā ʿilm al-ʿadad*, 89 n. 4. Admittedly, this term does not have mathematical or philosophical connotations.

science lies in the equality of ratios[59], like the ratio of equivalence and qualification, such as the ratio of three to six, which brings the same result as the ratio of two to four[60].

Epistle *On Proportions* (*Epistle 6*)

اعلم أن هذا الأركان متغالبات القوى، متضادات الطبائع، مختلفات الصور، متباينات الأماكن، متعاديات، متنافرات، لا تجتمع ولا تأتلف إلا بتأليف المؤلف لها. والتأليف متى لا يكون على النسبة لم يمتزج ولم يتحد. ومن أمثال ذلك أصوات النغم الموسيقية...

Know that these elements overwhelm each other with their powers and are opposites in their natures (*mutaḍāddāt al-ṭabā'i'*), distinct from each other in their forms, divergent in their places, antithetic, and incongruous wherein they do not come together or get harmonized [combined] except by the composition of a composer. When the composition is in proportion (*'alā l-nisba*), they do not merge and unite; and the examples of this are in the sounds of musical melodies…[61]

Epistle *On the Theoretical Speculative Arts* (*Epistle 7*)

والرابع الموسيقي، الذي هو علم التأليف، وهي معرفة ماهية النسب وكيفية تأليف الأشياء المختلفة الجواهر المتباينة الصور المتضادة القوى المتنافرة الطبائع، كيف يجمع ويؤلف بينهما، كيما لا تتنافر وتأتلف وتتحد وتصير شيئا واحدا فعلا وحدا أو عدة أفعال.

[The fourth is Music, which is the science of harmony [composition], that is, to know the quiddity of proportions [ratios], the way to combine (*kayfiyyat al-ta'līf*) things different in substances, distinct in forms, opposite in powers (*al-mutaḍādda al-quwā*), and incompatible in natures, how they are gathered together and [harmoniously] combined with each other in such a way that they are no longer incompatible but [apt to] be [harmoniously] combined with each other, joined together, and to become one thing, [and apt to] perform one act, or a certain number of acts[62].

59. The equality of ratios means proportion, because proportion is the equality of ratios.

60. [Ikhwān al-Ṣafā'], *On Arithmetic and Geometry: An Arabic Critical Edition and English Translation of Epistles 1 & 2*, ed. and trans. N. El-Bizri (Oxford 2012), Eng. 104; Ar. 84-85.

61. [Ikhwān al-Ṣafā'], *On Composition and the Arts*, *Epistle* 6, Eng. 58, Ar. 29.

62. [Ikhwān al-Ṣafā'], *On Composition and the Arts*, *Epistle* 7, Eng. 109-10 with slight revisions, Ar. 76.

A Way to Reassess Epistles 5 and 6 and Their Topics

As we have seen, a few misconceptions and presumptions underlie the identification of the epistle *On Music* in relation to its actual purpose and content.

Supposedly, a bias in some readings could have been caused by two main factors.

1. The Ikhwān relate "music" and "harmony" according to tradition. Unfortunately, throughout the classical Greek tradition, and in most of the studies devoted to the subject, the concepts of "harmony" and "music" have been intertwined and often confused. Earlier readings of this epistle was probably affected by such confusion.

2. The Ikhwān did not provide a theoretical plan to explain the concepts in this epistle; rather it seems to assume that the reader is already familiar with the concepts and knows how to distinguish between them. The narrative approach of the Ikhwān to the text has probably been overlooked by previous scholars and translators. Since the epistle is listed as propaedeutic, it was probably intended to be expository. As a result, scholars have not paid attention to some of the key concepts implied throughout the epistle.

In this context, the following conclusions can be drawn.

a. Studies on the epistle, references to it, and translations of it have confused divine Harmony with the art of harmony, which is its human counterpart, and similarly divine Music with the art of music. However, if one translates the epistle literally and reports the expressions used by the Brethren accurately, it becomes obvious that they applied such differences to concepts.

b. Researchers have disregarded the real purpose of the epistle, its narrative evolution, and its relation with the epistle *On Proportions*.

In the context of a reassessment of *Epistle* 5 and *Epistle* 6, the following concepts should be considered.

a. Harmony is not the same as its human-crafted and pragmatic realization called the art of harmony. Harmony is divine, its art is human.

b. Music is the most effective realization of divine Harmony, but does not coincide with it completely.

c. Music corresponds with heavenly divine music. Harmony corresponds with a mathematical regulating principle among opposite quantities and qualities; God crafted this principle.

d. Music is not the same as its human-crafted and pragmatic realization called the art of music.

e. The art of music is the most effective and exemplary (*mithāl*) kind of art of harmony.

f. The art of music corresponds with earthly music and has affinities with divine Music (heavenly music). While the art of music is intrinsically perfect, other arts become perfect, and consequently their products are as well, when transforming matter through harmonic proportions.

g. Harmonic proportions are also "appointed" as musical proportions since the art of music is based on them intrinsically, regardless of whether other crafts make use of them.

h. Melodies and rhythms are the artifacts of "music".

i. Music and Harmony belong, originally, to supernatural existence; sages have transmitted them to scholars, scholars to disciples, and masters to men.

j. *Munāsabāt* ("affinities") describe a relation of similarity among things rather than the identity of these things.

k. When referring to the art or science of music the term *nisba* (pl. *nisab*) should be interpreted carefully, since it could refer to ratios at the base of intervals (e.g., 5:4 which is the fourth) but also to "harmony" and to the harmonic proportions at the foundation of it.

l. The lexeme *ta'līf* means not just combining or fitting together but numerical relations; thus, when translated one could use the corresponding lexeme harmony, acknowledging that this suggests a numerical interpretation.

p. Greater consideration should be given to the Greek tradition when reading *Epistles* 5 and *Epistle* 6.

Appendix:
Frequency of the Lexeme laqaba *in the* Rasā'il Ikhwān al-Ṣafā'

Below is a report of the recurrence of the lexeme *laqaba* in the Epistles of the Brethren of Purity. The term appears mostly in the form of adjectives and verbs. The analysis of the recurrence shows that this root indicates that general, common expressions stand for more appropriate expressions or contents.

In the numerical references to the epistles, the critical Oxford University Press publication number (2010-2021) is followed by a slash (/) and the Roman number of the Epistle indicates its position in each of the four sections.

Page numbers refer to the Oxford edition and the slash (/) refers to Khayr al-Dīn al-Zirkalī's edition (Beirut 1928). In cases where one of the editions lacks references, three points are reported as ellipses (...).

Mathematics, Section I

• 1 time in *Risāla* 5/V, p. 5/157: the epistle is commonly known by the title *On Music* (*fī l-mūsīqī*), but it is rather about the art of harmony (*ṣanaʿat al-ta'līf*).

• 2 times in *Risāla* 11/XI (*fī qaṭīghūriās, On Categories*).

First time, p. 47 note/322: used to continue discussing a concept generally known (*laqqabū*) as "matter" (*hayūlā*) which identifies "those things preceding the existence" (*al-ashyā' al-mutaqaddima fī l-wujūd*), and "forms" (*ṣuwar*), as "those things succeeding in existence" (*al-ashyā' al-muta'akhkhira fī l-wujūd*).

Second time, p. 51/323: used to continue discussing a concept generally known (*laqqabū*) as "the comprehensive genre" (*al-jins al-shāmil*).

Natural Sciences, Section II

• 2 times in *Risāla* 16/II.

First time, p. 67/ ...: used to refer to the epistle that is named *On the Auscultation of Being* (*al-Risāla al-mulaqqaba bi-l-simāʿ al-kiyān*) after Aristotle's original treatise *Φυσικὴ ἀκρόασις* (*Physica*, or *Naturales Auscultationes*)

Second time, p. 67/19: the epistle is about the *Planets, the Constellations and the Four Elements* (*al-Risāla fī l-aflāk wa-l-kawākib wa-l-arkān al-arbaʿa*) and is named *On Heaven and World* (*al-Risāla al-mulaqqaba bi-l-samāʾ wa-l-ʿālam*) after Aristotle's original treatise *Περὶ οὐρανοῦ* (*De Caelo or De Caelo et Mundo*).

• 3 times in *Risāla* 17/III.

First time, p. 155/42: *mulaqqaba* is used to refer to an epistle that is named after Aristotle's original treatise *Περὶ οὐρανοῦ* (*De Caelo or De Caelo et Mundo*), *al-Risāla al-mulaqqaba bi-l-samāʾ wa-l-ʿālam* (see *supra*), dealing with celestial bodies (*al-ajsām al-falakiyya*).

Second time, p. 155/42: the epistle is about *Natural Bodies under the Sphere of the Moon* (*al-Ajsām al-ṭabīʿiyya allatī dūn falak al-qamar*) and is named *On Generation and Corruption* (*al-Risāla al-mulaqqaba bi-l-kawn wa-l-fasād*) after Aristotle's original treatise *Περὶ γενέσεως καὶ φθορᾶς* (*De Generatione et Corruptione*).

Third time, p. 183/48: here *mullaqaba* means "named after" Aristotle's Μετεωρολογικά (*Meteorologica* or *Meteora*) a compendium circulated under the title *al-Āthār al-ulwiyya* in Arabic.

• 2 times in *Risāla* 18/IV.

First time, p. 184-186/ …: here *mullaqaba* means "named after" Aristotle's treatise *Περὶ γενέσεως καὶ φθορᾶς* (*De Generatione et Corruptione*) compendium circulated under the title *al-Kawn wa-l-fasād*.

Second time, p. 186/50: the epistle is about *What Happens in the Atmosphere and the Transformations of the Air* (*ḥawādīth al-jaww wa-taghayyurāt al-hawāʾ*) and is named (*al-Risāla al-mulaqqaba bi-l-āthār al-ulwiyya*) after Aristotle's compendium of *Meteorology* known as *al-Āthār al-ulwiyya*.

• 1 time in *Risāla* 20/VI, p. 355/98: concerning the content of the ongoing epistle *On the Arts of Nature* (*al-ṣanāʾiʿ al-ṭabīʿiyya*), refers to an epistle generally known by the title *On Practical Arts* (*al-mulaqqaba bi-l-ṣanāʾiʿ al-ʿamaliyya*) and referring to *Epistle* 8/VIII.

• 1 time in *Risāla* 22/ VIII, p. … /150: referring to *Birāst al Ḥakīm* nicknamed Shāh Murād.

• 1 time in *Risāla* 29/XV, p. 7/367: naming the original epistle *On Knowledge of Death and Life* (*Risāla fī ḥikmat al-mawt wa-l-ḥayāt*) with the abridged title *On Knowledge of Death* (*al-mulaqqaba bi-l-ḥikma al-mawt*).

• 1 time in *Risāla* (no Oxford publication)/XVI, p. 380: naming the original epistle *On Pleasure, Pain, Anguish, Joy, Happiness, Sadness, Rest and Fatigue* (*al-Risāla māhiyyat al-ladhdha wa-l-alam wa-l-ghamm wa-l-surūr wa-l-farah̲ wa-l-ḥuzn wa-l-rāḥa wa-l-taʿab*) with the abridged title epistle *On the Pleasure and Pains* (*al-Risāla al-mulaqqaba bi-l-ladhdha wa-l-ālām*).

Psychology and Rational Sciences, Section III

• 1 time in *Risāla* 32b/II, p. 27/28: explaining that the five names of the days are named after numbers. In Arabic, as in Persian, the names of the days are literally translated as "day one", "day two" and so on.

• 1 time in *Risāla* 35/IV, p. … /46: naming the original epistle *On the Object of the Intellect* [*which are*] *Spiritual Forms* (*al-maʿqūlāt kulluhā ṣuwar rūḥāniyya*), with the abridged title "Epistle on Intellect and Intelligible" (*al-Risāla al-mulaqqaba bi-l-ʿaql wa-l-maʿqūlāt*).

• 1 time in *Risāla* (no Oxford publication)/ IX, p. 131: the original *Science of the Prophets* (*ʿIlm al-anbiyāʾ*) is commonly known as the *Science of Theological Objects* (*al-mulaqqab bi-l-ʿilm al-ilāhiyyāt*).

Theological Sciences, Section IV

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Abstract

Laura Tribuzio, *Restoring Harmony through the Propaedeutic Science of Music: A Reconsideration of the Brethren of Purity's Epistle on Music and Its Relation with the Epistle on Proportions*

In the fourth/tenth century, if a novice had wanted to approach the theoretical fundamentals of music, he would have been disappointed by studying the Brethren of Purity's epistle *On Music*. A major objective of the present article is to provide some basis for reassessing the Brethren's views on the art of music in the epistle that is purposely devoted to it. According to the Brethren, who faithfully follow the Greek definition of this art as a propaedeutic science, the subject of the epistle is to present music as the most perfect model (*mithāl*) to represent the art of harmony. For this reason, the epistle does not discuss specific music theoretical elements, but rather it aims to identify the methods (referred to as modalities or *kayfiyya*) through which the concept of harmony can be understood and reproduced by men. Additionally, it explores how the idea of divine harmony is expressed through mathematical principles, which are the foundation for both divine music and its human counterpart, the art of music. This reconsideration enables us to better appreciate the Brethren of Purity's attempt to reconceptualize the important distinction between the two dimensions of "harmony" and "music," the divine and the human, and, consequently, resolve some incon-

sistencies in the Greek literature on the subject. The present contribution highlights the intimate connection between *Epistle* 5 (*On Music*) and *Epistle* 6 (*On Proportions*) that deals with what we could today approximately refer to as rational numbers. Together they represent two aspects of the same propaedeutic art of harmony. The former is based on the qualitative aspects, the latter on the quantitative dimension.

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THE MATHEMATICAL ORDERS OF ARCHITECTURE: SEEING MADĪNAT AL-ZAHRĀʾ FROM THE PERSPECTIVE OF THE IKHWĀN AL-ṢAFĀʾ

Introduction

This study focuses on the applications of mathematics in the analysis of selected architectural features of Madīnat al-Zahrāʾ (Radiant City; Ville radieuse; fourth/tenth century) in the outskirts of Córdoba, with an emphasis on the ordering principles behind the design of the Salón Rico/Hall of Richness of the Umayyad caliph ʿAbd al-Raḥmān III (r. 299-350/912-61). To mediate this analysis via the mathematical knowledge of that epoch in the Islamicate milieu, I evoke some principal guiding leitmotifs from the epistles on arithmetic, geometry, and proportional ratios (*nisab*) of the Ikhwān al-Ṣafāʾ (Brethren of Purity), as these were set in their *Rasāʾil* (epistles) 1, 2, and 6 respectively. I also consider the applications of these mathematical subfields to the arts and crafts of construction techniques as embodied in the *Kitāb fī mā yaḥtāj ilayhi al-ṣāniʿ min aʿmāl al-handasa* and *Kitāb fī ʿamal al-misṭara wa-l-birkār wa-l-kūnyā* composed by Abū l-Wafāʾ al-Būzjānī (d. 388/998)[1].

Madīnat al-Zahrāʾ

In terms of a broad perspective on the locale and architectural setting analyzed here, Madīnat al-Zahrāʾ is a fortified palatine urban

1. I projected and constructed all the geometric figures included in the present article to illustrate the mathematical underpinnings of the architectural elements based on the classical technical sources from the Islamicate milieu that are evoked in the body of the text.

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complex in the western environs of Córdoba, situated at the foothills of Jabal al-ʿArus. It lasted as a settlement from 324/936 to 404/1013, when it was sacked and burnt by Berber troops. It contained ceremonial reception halls, a mosque and prayer spaces, government offices, gardens, a minting workshop, the Dār al-Jund (lit., soldiers' house) military barracks with its equestrian quarters, in addition to various residences and bathhouses. The construction materials included polychromatic stones, iron, marble, timber, and gold accents. It was organized in three large terraces surrounded by an external boundary wall. The upper locale was dedicated to the palace, the middle grounds contained the bureaucratic halls, the military barracks, equestrian quarters, and gardens, while the lower plateau was meant to accommodate the residences of commoners, and also included a souk and a mosque.

The Hall of Richness

The "Hall of Richness" (Salón Rico) of ʿAbd al-Raḥmān III was located in the central part of Madīnat al-Zahrāʾ, and served as one of the principal ceremonial reception spaces of the eastern assembly (*al-majlis al-sharqī*), which was also known as "the convivial" (*al-muʾnis*). Its design has a hypostyle shape, with a vestibule and a tripartite space; its naves were delimited by rows of double-tiered horseshoe arches, which also featured a central blind arch that demarcated a niche to house the seat of the caliph.

Epigraphic inscriptions were carved on the bases and pilasters of the structural elements of that space, and these carried the signatures of chief masons: Bard, Naṣr, Fattāh, Aflaḥ, Ṭāriq, as supervised by the master architect, Maslama b. ʿAbdallāh, and assisted by other builders and artisans from Baghdad, Damascus, Constantinople, and Carthage [2].

2. See, for example, A. Almagro, «Análisis Tipológico de la Arquitectura Residencial de Madinat al-Zahra», in *Al-Andalus und Europa: Zwischen Orient und Okzident*, ed. M. Müller-Wiener, Ch. Kothe, K.-H. Golzio, J. Gierlichs (Petersberg 2004), 117-24; M. A. Almansa, «Materiales e hipótesis para una interpretación del Salón de Abd al-Rahman al-Nasir», in *Madinat al-Zahara: El Salón de Abd al-Rahman III*, ed. A. Vallejo Triano (Córdoba 1995), 177-95; A. Vallejo Triano (ed.), *Madinat al-Zahra: El Salón de Abd al-Rahman III* (Córdoba 1995).

This initial description gives us a broad setting in which we can consider the architectural and surveying analytics of this site; this is especially true of the Hall of Richness[3].

Recent measurements were conducted by modern architects, archeologists, and surveyors, via geometrical matrices, and projected onto the Hall of Richness space to determine its design elements. In this regard, we should mention the studies of Francisco Javier Roldán-Medina who developed a geometric method of mensuration to scale premodern architectural edifices in general, and the inquiries of Felix Arnold, who studied the ordering principles of façades and the elevations of spatial volumes along with plan views. For example, Roldán-Medina used the base duodecimal arithmetic and geometrical constructions that are extracted from the diagonal of a square to analyze the double metric scale in the modulation of the sizes and proportions of the architectural structures[4]. Arnold disclosed the mathematical aspects that underpin the architectural structure of equilateral triangles for floor plan metrics, in addition to the squares and diagonals as and in measurements. He also showed that these metrics were applied to arcades, with a particular focus on the army barracks of Dār al-Jund, how the horseshoe arch reduced the height and width of the supporting columns in proportion to the scaling of the elevation, and how such parameters unified the volumetric space and not only its surfaces[5].

The layout of the Hall of Richness is rectangular in its plan view, with the interior arcades shaped in terms of a sequence of load-bearing horseshoe arches. Its external elevation features a five-bay arcade of a tessellation of decorative horseshoe arches on the façade.

3. Various sources give historical details and topographical descriptions as well as architectural particulars regarding Madīnat al-Zahrā'. See I. Arias, L. Balmaseda, Á. Franco, C. Papí, «Documentación, Inventario y Catalogación de los Materiales Procedentes de Medina Azahara (Córdoba) en el Museo Arqueológico Nacional», in *Boletín del Museo Arqueológico Nacional* 19 (2001), 88-127; D. F. Ruggles, *Madinat al-Zahra', Gardens, Landscape, and Vision in the Palaces of Islamic Spain* (University Park, PA 2000), 53-85; A. Vallejo Triano, «Madinat al-Zahra: The Triumph of the Islamic State», in *al-Andalus: The Art of Islamic Spain*, ed. J. D. Dodds (New York 1992), 27-39.

4. F. J. Roldán-Medina, «Method of Modulation and Sizing of Historic Architecture», in *Nexus Network Journal* 14 (2012): 539-53.

5. F. H. Arnold, «Mathematics and the Islamic Architecture of Córdoba», in *Arts: Multidisciplinary Digital Publishing Institute* 7 (2018): 1-15.

The interlaced patterns of ornamentation on these arcades were executed in marble for the columns, capitals, pavements, and revetments, while the wall engravings were accented by sculpted stucco (see figure 1).

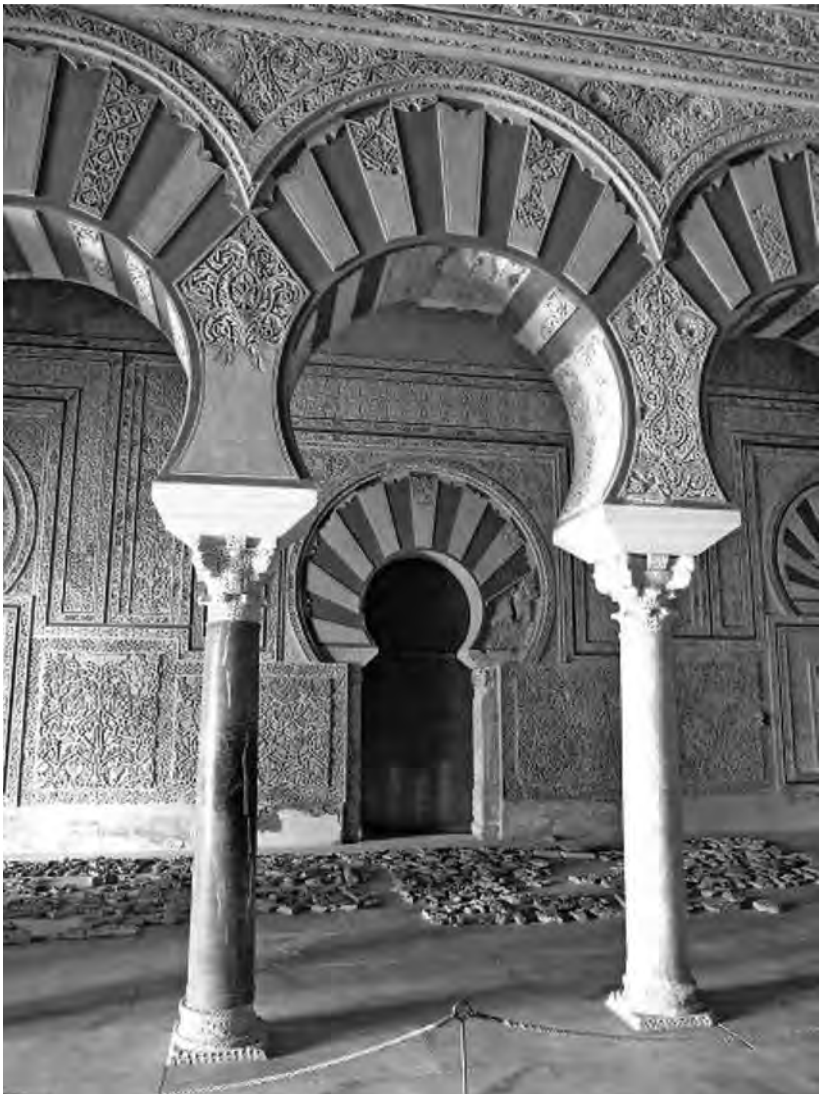


Fig. 1. Hall of Richness horseshoe arch. Image obtained through open access photography from Wikimedia Commons, February 2023.

Horseshoe Arch

Considering the case of the horseshoe arch as a structural *voussoir*, its architectural shape is determined by the mechanics of its load-bearing curvature, which carries the weight of the upper floor and conveys the stresses downward, stopping at its flanking alcoves. This describes a masonry technique of building a load-bearing arch without the need for a keystone. Similar structural features were used in the double-tiered horseshoe arches of the mosque of Córdoba; they also appear in the Baptistery of St. Jacob of Nisibis (Mār Yaʿqūb) in upper Mesopotamia, and as a rudimentary form in the Iberian Visigoth Santa Eulalia de Bóveda de Mera of Lugo[6]. Figure 2 shows the

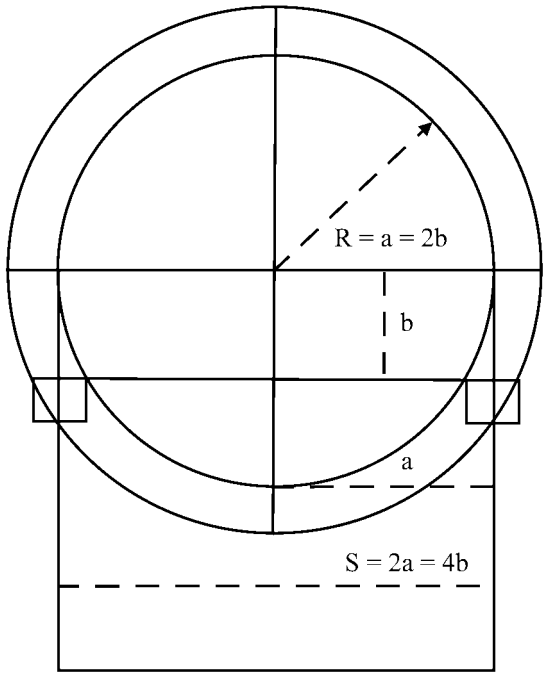


Fig. 2. Load-bearing structure of the horseshoe arch.

6. Enrique Jorge Montenegro Rúa et al., *Santa Eulalia de Bóveda* (Santiago de Compostela: Consellería de Cultura, Educación e Ordenación Universitaria, Drirección Xeral do Patrimonio Cultural, 2008).

generic geometric principles that determine the construction of the horseshoe arch and the mechanics of its load-bearing structural properties.

If the radius R of this horseshoe arch (as shown in figure 2) is equal to a given magnitude *a*, then *a* is half the distance between the respective axes of each of the columns supporting that horseshoe arch, and is therefore equal to *2b*, whereby *b* is the distance between the height of the center of the horseshoe arch and the top of the respective capitals of each of the two columns supporting that horseshoe arch. Following these guiding geometric constructions that inform the mechanics of the building technique and the statics of the curvilinear load distribution and weight bearing shape, we find the horseshoe arch in the Hall of Richness in a form that resembles what I depict in figure 3.

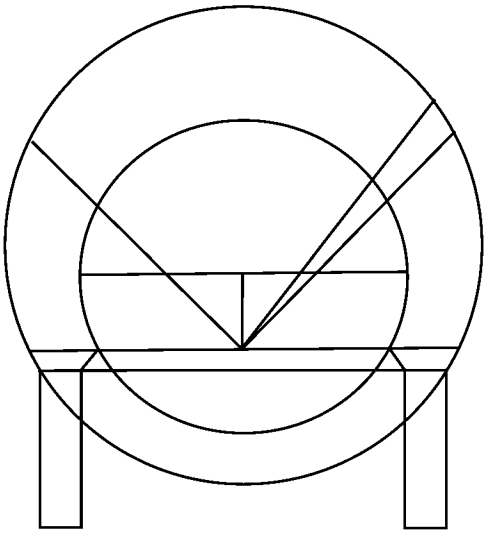


Fig. 3. Geometry of the horseshoe arch.

Mathematical Knowledge

Unlike the attempts to devise an extrinsic geometrical ordering principle through which this Hall of Richness can be surveyed, my aim is to show how the application of mathematical knowledge in its basic forms assists in analyzing the architectural features of this

space, the geometric principles that guided the mechanics of its construction, and the structural techniques of building it. This is mediated initially with imprecise measurements to determine the proportionality of the architectural features; I then focus on a mathematical analysis orientated by the epistles on arithmetic, geometry, and proportional ratios (*nisab*) of the Ikhwān al-Ṣafā'[7]. I also consider the application of these three mathematical subfields in guiding the construction techniques of the arts and crafts that are accounted for in the *Kitāb fī mā yaḥtāj ilayhi al-ṣāniʿ min aʿmāl al-handasa* (A manual concerning what the maker [builder or craftsman] needs from the works of geometry) and the *Kitāb fī ʿamal al-miṣṭara wa-l-birkār wa-l-kūnyā* (A manual on using the straightedge ruler, compass, and orthogonal triangular edge) as both were composed by Abū l-Wafā' al-Būzjānī[8].

Tracing designs in geometric compositions requires the use of a compass (*birkār*), a straightedge ruler (*miṣṭara*), and an orthogonal triangular edge (*al-kūnyā*; *al-muthallath al-qā'im al-zāwiya*; right triangle). Moreover, this necessitates an understanding of trigonometry to set the properties of triangulation. These basic geometric tools and artisanal equipment were combined with on-site construction techniques at the full scale of the architectural feature, and the handling of building materials, which required an understanding of the mechanics of their statics in load-bearing and weight-distribution. The use of straightedge rulers ensured the precise collinear alignments, while the compass (*birkār*) determined equidistance via its traced circularity, and the orthogonal triangular edge (*kūnyā*) secured a perpendicular projection and intersection. In a basic geometric construction, the perpendicular orthogonal projection can be determined by a straight line joining the two points of the intersection between two equal circles; this also set the distance between them as equal to their respective radii. Moreover, in the use of the compass we can trace two circles that are identical with respective equal radii (as shown in figure 4). If these two identical circles

7. *Epistles of the Brethren of Purity. On Arithmetic and Geometry: Epistles 1-2*, ed. N. El-Bizri (Oxford 2012); *Epistles of the Brethren of Purity. On Composition and the Arts: Epistles 6-8*, ed. N. El-Bizri and G. de Callataÿ (Oxford 2018).

8. Abū l-Wafā' al-Būzjānī, *Kitāb fī mā yaḥtāj ilayhi al-ṣāniʿ min aʿmāl al-handasa*, ed. S. A. ʿAlī (Baghdad 1979); Abū l-Wafā' al-Būzjānī, *Kitāb fī ʿamal al-miṣṭara wa-l-birkār wa-l-kūnyā*, ed. M. A. Abū Samra (Doha 2019).

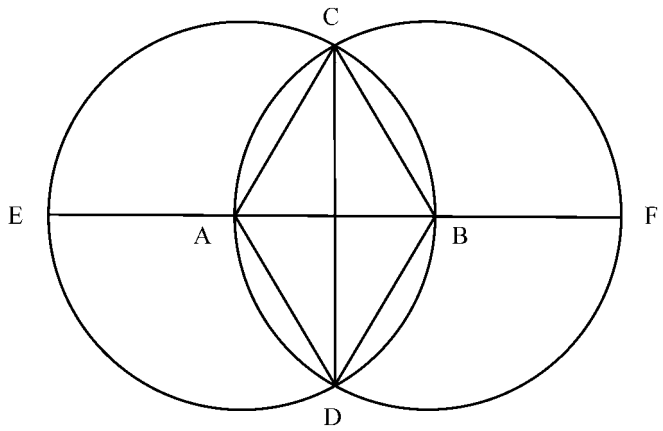


Fig. 4. Geometric construction using a compass, straight edge ruler, and triangular edge.

respectively have centers A and B, and are traced in such a way that their circumferences pass via their centers, then the line AB = μ is equal to the radius of each of these two circles. At the intersection of their circumferences, the two circles have a common chord CD that is perpendicular to their axes as they extend from E to F (CD ⊥ EF). Taking the triangles ACB and ADB, they are also equal in size and they describe two equilateral triangles.

This mode of mathematical knowledge, especially in geometry, and its various applications in generating forms, mainly in architecture and building techniques, was known to al-Būzjānī, and elaborated in his construction manuals. Al-Būzjānī's mathematical knowledge is more basic and practical in the applied arts and crafts of the building techniques than the more theoretical and didactic mathematics of the Ikhwān al-Ṣafā', as set out in the first two epistles on arithmetic and geometry of the *quadrivium* part of the *Rasā'il*. Their knowledge distills the basics in arithmetic and geometry from the oeuvres of their predecessors (among the mathematicians) and contemporaries. They build on this in specialized treatises on mathematics that stretch back to the times of the Banū Mūsā, Thābit b. Qurra, Ibrāhīm b. Sinān, and included figures like Abū Sahl Wayjan al-Qūhī, who studied conics (*makhrūṭāt*) in the Arabic Archimedean-Apollonian tradition, not simply on the Euclidean-Ptolemaic lineages. For example, al-Qūhī endeavored to study the properties of the perfect

geometric compass (*fi l-birkār al-tāmm*) with a view to tracing precise conic sections (namely, the circle [*qaṭʿ dāʾirī*], ellipse [*qaṭʿ nāqiṣ*], parabola [*qaṭʿ mukāfiʾ*], and hyperbola [*qaṭʿ zāʾid*]). This also relates to his studies in mechanics and on the construction of the astrolabe[9].

According to the Ikhwān al-Ṣafāʾ, geometry allowed the precise measurement of magnitudes (*maqādīr*) and distances (*abʿād*) whether in its physical sensible forms as a *handasa ḥissiyya* (as witnessed in architecture), which belonged to the practical crafts (*ṣanāʾiʿ ʿamaliyya*), or in its abstract intelligible modalities under the rubric of the *handasa ʿaqliyya*, which encompassed the theoretical arts (*ṣanāʾiʿ ʿilmiyya*).

The shift from the *handasa ḥissiyya* (sensible geometry) to *handasa ʿaqliyya* (intelligible geometry) corresponds with the abstraction of the forms of sensible entities and positing them as intelligible species (*εἶδος*; *eídos*) that are independent from their material sensory appearances. This is a transition from the sensible to the intelligible (*min al-maḥsūsāt ilā l-maʿqūlāt*), which describes an epistemic process of acquiring abstract knowledge from sensible entities by way of intellection. This fits with the doctrine of hylomorphism; namely, the entanglement of ὕλη (*húlē*) and μορφή (*morphḗ*), as the sensible composition (*tarkīb*) of the matter *hayūlā* (matter) with the *ṣūra* (form) of a given extension (i.e., spatial attributes). The forms of things are abstracted from their material substratum by way of imagination (*takhayyul*; *khayāl*) as it aids the workings of the intellect (*ʿaql*). This discloses the εἶδος (*eidos*) as the essence of a thing *qua* its quiddity (*māhiyya*). This also reflects the method of descriptive geometry in abstracting the form of existing things from their matter, and the process of depicting non-existent new potential entities by way of innovation in design, as for example with architecture or by imagining artworks. Geometry is a systematic process to access eidetic forms in an abstract mode of demonstration that transcends the materiality of sensible entities. This epistemic turn from the sensible to the intelligible underpins the determination of the forms of existing things by way of abstracting their formal fea-

9. J. Sesiano, «Note sur trois théorèmes de mécanique d'al-Quhi et leur conséquence», in *Centaurus* 22 (1979), 281–97; J. L. Berggren, «Abū Sahl al Kūhī's Treatise on the Construction of the Astrolabe with Proof», in *Physis* 31 (1994): 141–252.

tures from their material substrata through geometric imagining and postulation. In another sense, geometric constructions of formal configurations can guide the design by generating a designed shape as a form that is abstracted from matter, and then devising ways of bringing it from potentiality into actuality by an act of fabrication and making. This is the basis of architectural design, and how it becomes a practice of technical building with the crafts of production and construction.

For example, in this context the art of surveying (*misāḥa*) devises geometric procedures for measuring the physical features of existing architectural spaces by generating their formal scaffolding and quantifying them through the metrics of mensuration (in units of feet, arms, palms, fingers, etc.). This is based on an abstract mode of geometric reasoning that shifts from the sensible (*maḥsūs*) to the intelligible (*maʿqūl*), and determines the formal properties of existent entities as hypothetically removed in mathematical imaging from their matter. As for the transition from intellective geometrical knowledge to its sensory mode (*min al-maʿqūlāt ilā l-maḥsūsāt*), it is ultimately the basis for design in generating an architectonic built form or an artwork of the crafts. Architecture (*handasat al-miʿmār*) can be seen in this context as the locus par excellence for this movement between these two modalities of geometric knowledge in its intelligible and sensible manifestations. Similar aspects underpinned a fortiori the operational and procedural usages of geometry in the studies of astronomy, mechanics, and optics.

Ratios and Proportions

Based on the use of arithmetic (*ʿilm al-ʿadad*) and geometry (*ʿilm al-handasa*) in architecture (*handasat al-miʿmār*), the issue of proportionality (*nisab*) becomes fundamental. This is accomplished by assigning numerical values to quantify the scale and measuring of geometric forms. The combination of arithmetic with geometry generates the scaled conditions for designing the architectural form or describing the formal features of existing spaces. The determination of mathematical proportions guides the processes of architectural design and technical execution. The attributes of proportionality are posited in this regard under three types by way of quantity

(*kammiyya*), quality (*kayfiyya*), or a combinatorial composition (*murakkab*) of both. The Ikhwān al-Ṣafā' reflect the mathematical knowledge of their age in this regard by highlighting what mathematicians determined as the attributes of proportion and ratio in *Epistle* 6 of their proto-encyclopedic compendium. The mean (*tawassuṭ*) encompass the quantitative *arithmetic proportion* (ἀριθμητικὴ; *arithmetica*; *nisba ʿadadiyya*; *tawassuṭ ʿadadī*), the qualitative *geometrical proportion* (γεωμετρικὴ; *geometrica*; *nisba handasiyya*; *tawassuṭ handasī*), and their composite as a *harmonic musical proportion* (ἁρμονικὴ; *harmonica*; *nisba ta'līfiyya*; *tawassuṭ ta'līfī*)[10].

To further illustrate these properties, we evoke the following geometric construction (figure 5), that determines the derivation of the arithmetic, geometric, and harmonic means.

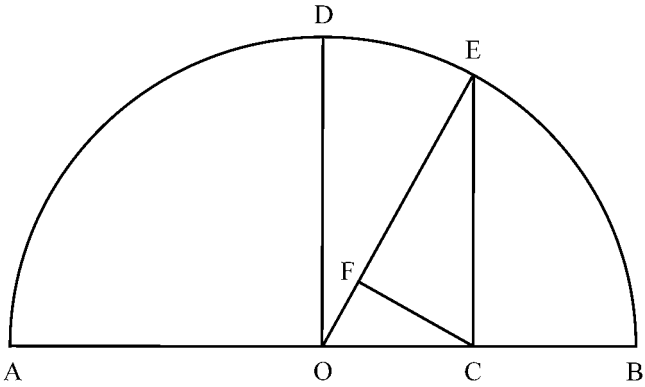


Fig. 5. Construction of the arithmetic, geometric, and harmonic means.

If we have a semicircle with a center O and a diameter AB (as shown in figure 5), and there is a point C at half the distance between O and B, then we project a perpendicular from O to intersect the perimeter of the semicircle at D (OD ⊥ AB), and project a perpendicular from C to intersect the perimeter of the semicircle at E (CE ⊥ AB), and project a perpendicular from C to intersect OE in F (CF ⊥ OE). Based on this construction, we obtain, geometrically, the following determinations of the means: the arithmetic mean *Am* = OD; the geometric mean *Gm* = CE; the harmonic

10. *Epistles, On Composition and the Arts: Epistles 6-8*, 19-21.

mean Hm = EF. Thus, if AC = a, CB = b, and $a > b$, then Am = OD = $\frac{a+b}{2}$; Gm = CE = $\sqrt{ab}$; Hm = EF = $\frac{2ab}{a+b}$.

This describes a principle in geometry that was known to the Ikhwān al-Ṣafā', and reflects their key sources for the theory of ratios and proportions as mediated via the Arabic mathematical adaptive reception of the Ἀριθμητικὴ εἰσαγωγή (*Madkhal ilā ʿilm al-ʿadad*; Introduction to arithmetic; *Introductionis arithmeticae*) of Nicomachus of Gerasa[11], and the Στοιχεῖα (*Kitāb Uqlīdis fī al-uṣūl*; *Elements*) of Euclid[12].

When considering ratios and proportions, the Arabic signifier is encompassed in a single term by the word *nisba*. However, a further implicit clarification is needed to determine the distinction and connection between a ratio (λόγος) and a proportion (ἀναλογία) as both are designated by the single Arabic appellation *nisba*. This notion figures in *Epistle* 6 of the Ikhwān al-Ṣafā', and it builds on what was originally articulated in chapter 21 of Book II of Nicomachus' (*Madkhal ilā ʿilm al-ʿadad*; *Introduction to Arithmetic*; *Introductionis arithmeticae*). Therein, it was stated that a *proportion* [ἀναλογία] is the combination of two or more *ratios* [λόγως]; while a *ratio* is the relation of two terms. The combination of ratios yields a proportion as an equality of two ratios, and a geometric example of this is set when the base of one triangle is twice the base of another triangle, whereby the former has twice the area of the latter with a ratio of 2:1; since both are commensurable by a common measure. Moreover, based on Definition 3 in Book V of Euclid's Στοιχεῖα (*Kitāb Uqlīdis fī l-uṣūl*; *Elements*): "a ratio [λόγος] is the qualitative relation [σχέσις] with reference to size [πηλικότης] between two homologous magnitudes. Proportion [ἀναλογία] is accordingly the likeness of ratios"[13].

The mathematical *milieu* of the predecessors and contemporaries of the Ikhwān al-Ṣafā' would have used geometry a fortiori for kinematic constructions and projections. Consequently, they introduced motion into geometry, which has its own ontological entailments

11. Nicomachus of Gerasa, *Introduction to Arithmetic*, trans. M. L. D'Ooge (New York 1926); M. J. Farhān, «Philosophy of Mathematics of Ikhwān al-Ṣafā'», in *Journal of Islamic Science* 15 (1999), 25-53.

12. Euclid, *Elements* (*Euclides opera omnia*), ed. J. L. Heiberg and H. Menge (Leipzig 1883-1916).

13. Euclid, *Elements*, Book V, Definitions 3, 6; Euclid, *The Thirteen Books of Euclid's Elements*, trans. Thomas Heath, 2nd ed. (Cambridge 1925).

that go beyond the Greek engagement with mathematics. This is the case given the Platonist bifurcation of the realm of archetypal universal immutable being from the mimetic mutable and apparent particulars of becoming. It is a distinction of the *hyletic* sensible from the *eidetic* intelligible; since motion pertains to the natural *cum* physical realm of the senses in the composition of matter and form, and not to the imaginal domain of intellection in thinking about abstracted forms as separate from matter. Using geometric kinematics, some dynamic rectangles with square roots can be constructed as such by way of projections, and the same applies to the determination of what came to known as the "golden ratio rectangle". Based on these geometric constructions, the dynamic rectangle and the golden ratio can assist in analyzing the horseshoe arch elevation in the Salón Rico; this applies to the study of the design of the arcade of façades and massing volumes of the inner court of the Alhambra as well.

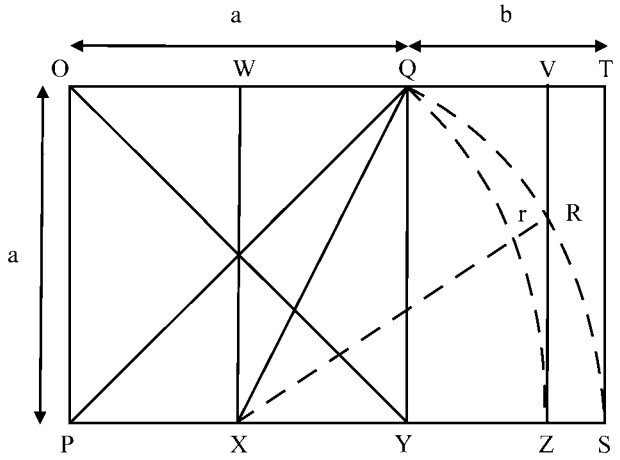


Fig. 6. Geometric construction of dynamic rectangles.

To generate dynamic rectangles that embed a series of roots and establish a golden ratio, we consider the geometric construction as shown in figure 6. If there is a square OPQY, and X is a midpoint on the side PY of the square OPQY, and we join X with Q and generate an arc with a radius *R* by rotating XQ clockwise, it intersects with the line extended along PXY in point S. If we join P with Q and generate an arc with a radius *r* by rotating PQ clockwise, it

intersects with line PS in point Z. The generated shape OPST is a golden rectangle, and this reflects an annotation via the equation: $\frac{a+b}{a} = \frac{a}{b} \cong \varphi = \frac{1+\sqrt{5}}{2} \cong 1.618\ldots$ Based on this, and by returning to the geometric construction of figure 5 earlier (regarding the arithmetic, geometric, and harmonic means), we refer to figure 7 in which the lines EC and CB act as the sides of the golden rectangle XBCE.

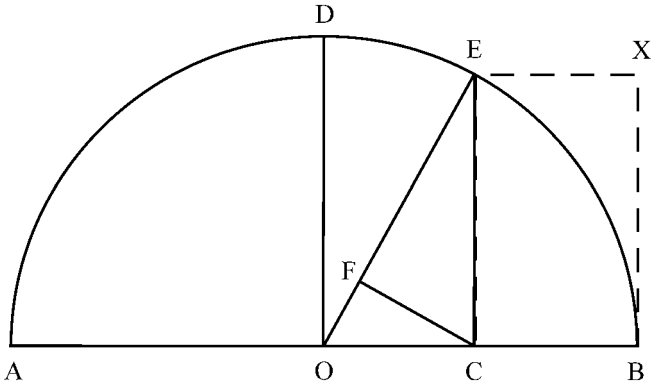


Fig. 7. Geometric derivation of the golden rectangle.

Moreover, and in order to generate a sequence of dynamic rectangles that are compressed, and that can act as proportional metrics for designing elevations, such as the proportional setting of the height of the various features of a façade, we can make the following geometric construction as shown in figure 8.

Let there be a square OPQR, and let there be an arc with a radius equal to OQ and that ends clockwise in point R. Let the line QP intersect with that arc at point *a*, then extend a line through *a* that is parallel to OP, so it intersects with PR in point S. We obtain in this the rectangle with sides QR and SR. Then let the line QS intersect with the arc at point *b*, and extend a line through *b* horizontally to intersect with PR in T, wherein we obtain a rectangle with sides QT and TR. Then let line QT intersect with the arc in *c*, and extend a line horizontally through *c* that intersects with PR in V, then we obtain a rectangle with sides QR and VR, and so forth. When unpacked, these sets of rectangles can give the shape of a sequence that is similar to what is shown in figure 9; namely, if the side of the original square has the value unit 1, then the sequence of rectangles

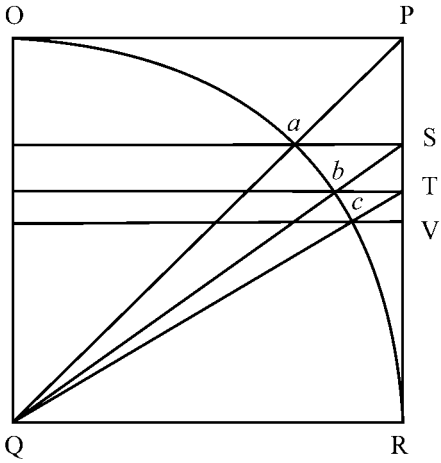


Fig. 8. Compressed dynamic rectangles.

will have their longer sides at the respective ascending values of: $\sqrt{2}$, $\sqrt{3}$, $\sqrt{4}$, $\sqrt{5}$, etc.

Using this accumulated geometric knowledge in that historical milieu, we analyze the horseshoe arch in the Hall of Richness according to what is shown in figure 10, which also discloses a relationship of rectangles that rest on an original square with its side having the value of a unit 1, and from which two rectangles are extracted with their longer sides having the respective values of $\sqrt{2}$, $\sqrt{3}$, and as shown on the right side of figure 10. The square with unit 1 corresponds with the height of the columns supporting the horseshoe arch and the distance between their axes as they also delimit the start of the circumference of the arch curvature, while

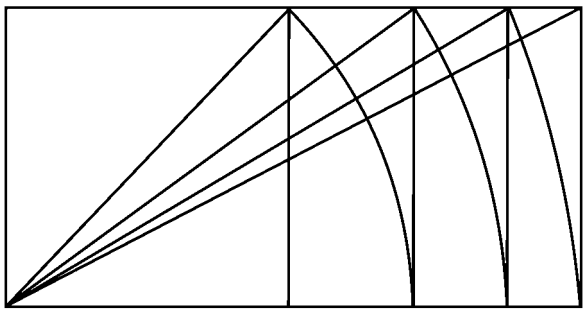


Fig. 9. Sequence of dynamic rectangles.

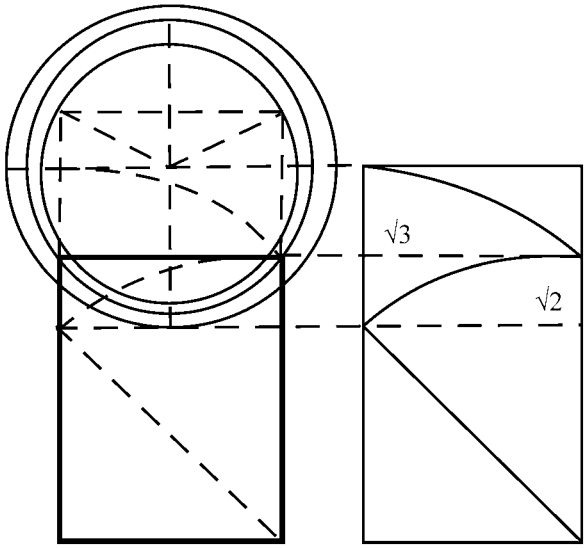


Fig. 10. Proportions of the horseshoe arch.

the rectangle with its longer side as $\sqrt{2}$ sets the point of convergence for the stucco decoration on the arch, and the rectangle with its longer side as $\sqrt{3}$ relates to the level of the main center of the concentric circles forming the upper parts of the arch.

Mathematized Paradigm

Based on the analysis set above, the invisible geometry that structures the formal properties of the visible architectural edifice reveals that a complex body of mathematical knowledge guided the processes of design. The elevational façade is interiorized within the opening of the courtyard, or in appearances within the inner spaces of the edifice. This is based on an interplay of the visible and invisible in a tapestry of architectural plan views and proportional elevations that guide the spatial ordering of the building and of its anthropometric embodiment. Such conditions in perception and architectural imagining also point to the unveiling of the seeming absence of the invisible behind the appearance of what is visible. This is a mode of revealing the hidden from behind the apparent

(*kashf al-bāṭin al-maḥjūb bi-l-ẓāhir*), which is akin to revealing truth in the mode of ἀλήθεια (*alétheia*). Such spatial and optical aspects have a material determination to the statics and mechanics of the construction techniques, and the distribution of load-bearing structural engineering elements. Moreover, they embody environmental attributes in modulating the flow of heat, fresh air, cooling, and the gradational handling of the intensities of natural light. They also carry religious, social, and cultural attributes in the hierarchy of spatial gradations that shift from the urban and public domains to the inner private domains of architectural sanctuaries. Add to this the decorative ornamental architectonic features that generate stylistic, aesthetic, visual, and plastic art perceptual embodied experiences. In all of this, the uniform symmetry is the parity of the parts of the whole to one another, whereby each fragment corresponds to its opposite portion, as in the human figure. The arms, feet, hands, and fingers, are symmetrical and proportional qualities in relation to one another, and their anthropometric attributes apportion the constituting components of the architectural design. The scale is modular in the manner the human proportions guide the establishment of architectural orders. What is built is measured via an embodied experience in visual perception and its underlying optics (the science that develops into unparalleled levels of precision and impact via the mathematized experimental physics in the *Kitāb al-manāẓir* (Book of optics)[14] of Ibn al-Haytham (Latinized as Alhazen; d. ca. 431/1040), a contemporary of the Ikhwān al-Ṣafā' in Basra. This resonates with what was noted in Book I, chapter 2 of *De architectura libri decem* (The Ten Books on Architecture)[15] of Marcus Vitruvius Pollio, who notes that architecture depends on order *qua* τάξις (*táxis*) and disposition *qua* διάθεσις (*diáthesis*), while relying in this on proportion *qua* εὐρυθμία (*erythmía*), which in turn generates symmetry, decorum, and distribution through a stewardship of economy *qua* οἰκονομία (*oikonomía*). In this context, the sense of proportion points

14. Ibn al-Haytham, *Kitāb al-manāẓir* I-III (direct vision) (Kuwait 1983); Ibn al-Haytham, *Kitāb al-manāẓir* IV-V (catoptrics) (Kuwait 2002); N. El-Bizri, «Alhazen's Theory of Vision», in *Micrologus* 29 (2021), 21-33; N. El-Bizri, «A Philosophical Perspective on Alhazen's *Optics*», in *Arabic Sciences and Philosophy* 15 (2005), 189-218.

15. Vitruvius, *Ten Books on Architecture*, ed. I. Rowland, T. N. Howe (Cambridge 1999).

to a commodious harmony between the several components of a building and shows how these constitute the whole in an ordered design. This points to the generation of geometrical forms via arithmetical ratios in harmonious rhythmic modular orders (such as the thickness and height of the columns, the capital with the abacus cymatium, echinus, annulets, necking, and architrave)[16].

The mathematical analysis that underpins the design of architecture can also be linked to a symbolic order that is akin to the accounts of the Ikhwān al-Ṣafā' regarding the proportional ratios (*nisab*) and their applications in the *quadrivium* of arithmetic, geometry, astronomy, and music. This has bearing on studying the structure of the human body via a Neo-Pythagorean take on the microcosm/macrocosm analogy (respectively, *Epistle* 26: *al-insān ʿālam ṣaghīr*, and *Epistle* 34: *al-ʿālam insān kabīr*)[17]. This cosmological doctrine correlates, approximately, with the symmetries of the Platonic geometry of each regular polyhedron, which is isomorphic with one of the four elements (*arkān*), to determine the manifestation of corporeal matter, along with their common half triangular constitutive congruent edges that make up their surfaces (the four-faced sharp *tetrahedron*, for the hot and dry fire; the six-faced steady cube, for the cold and dry earth; the eight-faced blunt *octahedron*, for the hot and moist air; the twenty-faced smooth *icosahedron*, for the cold and moist water). These resonate with the Hippocratic-Galenic psychosomatic proportional balances of the four humors (*ruṭūbāt*) and their associated temperaments, as affected by the four elements and seasons: *sanguine* (*damawī*; *sanguin*), as the hot and damp *blood*, with the corresponding air and spring, and the temperament of sociability and hysteria; *phlegmatic* (*balghamī*; *flegmat*), as the cold and damp *phlegm*, with the correlative water and winter, and the supportive and schizoid temper; *melancholic* (*sawdāwī*; *melanc*), as the cold and

16. Such orders also became vital for the Italian Renaissance, in their deliberations over proportionality in the architecture of classical Doric, Ionic, and Corinthian styles, as noted, for instance, in Andrea Palladio's *Quattro libri dell'architettura* (Four books of architecture), Sebastiano Serlio's *Sette libri dell'architettura* (Seven books of architecture), and Giacomo Barozzi da Vignola's *Regola delli cinque ordini d'architettura* (Canon of the five orders of architecture).

17. I studied this elsewhere in N. El-Bizri, «Microcosm and Macrocosm: A Tentative Encounter between Graeco-Arabic Philosophy and Phenomenology», in *Islamic Philosophy and Occidental Phenomenology on the Perennial Issue of the Microcosm and Macrocosm*, ed. A.-T. Tymieniecka (Dordrecht 2006), 3-23.

dry *black bile*, which corresponds with earth and autumn, and the dispositions of reclusiveness and depression; *choleric* (*ghaḍabī*; *coleric*), as the hot and dry *yellow bile*, which correlates with fire and summer, and the irritability as well as dominance in mood[18].

On the whole, mathematics was the groundwork for τέχνη (*tékhnē*) as a technical craft, ποίησις (*poíēsis*) as a mode of production, ἐπιστήμη (*epistḗmē*) in theoretical erudition, and φρόνησις (*phrónēsis*) in practical applications. Mathematics also becomes a basis for ontological reflection in the way it aids the exercise of reasoning and imagining in unveiling the reality behind appearance, while also offering a paradigm for epistemology in terms of the theoretical and practical knowledge being mathematized. This ultimately enshrines the mathematical order of architecture via a Neo-Pythagorean penchant in thinking that resonates with the Vitruvian perspective on architecture, albeit by judiciously rooting it in the Islamicate milieu, with its building technicity and artistic craft.

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ABSTRACT

Nader El-Bizri, *The Mathematical Orders of Architecture: Seeing Madīnat al-Zahrā' from the Perspective of the Ikhwān al-Ṣafā'*

This article offers a mathematical analysis of some of the architectural features of the Salón Rico (Hall of Richness) of Madīnat al-Zahrā' (Radiant City in the outskirts of Córdoba), with a specific focus on the design and proportionality of the horseshoe arch. This line of inquiry is guided by the mathematical knowledge of that epoch in the Islamicate milieu of the fourth/tenth century, particularly as embodied in the studies on arithmetic, geometry, and proportional ratios in the *Rasā'il Ikhwān al-Ṣafā'* (Epistles of the Brethren of Purity); it also considers the construction techniques in that context and its associated arts and crafts.

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Part IV

TWO NEWLY EDITED TEXTS ON MAGIC

Liana Saif – Charles Burnett

THE *BOOK ON ATTRACTING THE* RŪḤĀNIYYA *OF EVERY ANIMAL*: A PSEUDO-ARISTOTELIAN HERMETIC TEXT

The text edited and translated here is part of what is known as the pseudo-Aristotelian Hermetica. These are a group of texts surviving in Arabic that claim to record conversations between Aristotle and Alexander the Great. In these conversations, Aristotle instructs Alexander about the cosmos, the coming-to-be of everything in it, and astral magic – more precisely, talismanry, rituals for attracting the spiritual and planetary forces of the cosmos, the creation of amulets, and extensive astrological rules. The purpose of the instruction is to support Alexander's military career and personal life. Aristotle claims to have received this knowledge from the writings of Hermes.

The following is an edition and translation of a text that appears in manuscripts under the title *Kitāb istijlāb rūḥāniyyat al-bahā'im kullihā* (The book on attracting the *rūḥāniyya* of every animal). As revealed by the treatise itself, it forms a chapter of *Kitāb al-ustuwaṭṭās*, which is one of the major parts of the pseudo-Aristotelian Hermetica. This corpus also includes *Kitāb al-isṭimāṭīs, Kitāb al-isṭimākhīs, Kitāb al-hādhīṭūs, al-madīṭīs*, and two other treatises that are later productions, namely, *Dhakhīrat Iskandar* (The treasury of Alexander) and *al-Shuʿrā l-yamāniyya* or *Aḥkām ṭulūʿ al-shuʿrā l-yamāniyya* (The judgments of the rising of the southern Sirius)[1].

This edition is based on London, British Museum, Delhi Arabic 1946, although it also survives in Oxford, Bodleian, Arab d. 221, which is heavily damaged and disordered; only a few folios of the treatise survive and these are severely disfigured. The London manuscript was checked against the Oxford manuscript when possible. A

1. L. Saif, «Preliminary Study of the Pseudo-Aristotelian Hermetica: Texts, Context, and Doctrines», in *al-ʿUṣūr al-Wusṭā* 29 (2021), 22-36.

«Micrologus. Nature, Sciences and Medieval Societies» XXXIII (2025), pp. 393-420
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version of this treatise is found in some manuscripts of the fourth-/tenth-century *Rasā'il Ikhwān al-Ṣafā'* (The Epistles of the Brethren of Purity)[2] who were deeply influenced by the pseudo-Aristotelian Hermetica[3]. The edition has also been compared with a Latin translation surviving in one manuscript (Montpellier, Bibliothèque interuniversitaire, section de médecine, 277, fols 64ra-65rb) and added as an appendix below.

The Edition

Fol. 21v <0> بسم الله الرحمن الرحيم

<1> كتاب استجلاب روحانية البهائم كلها من قول هرمس تفسير ارسطاطاليس وهو الكتاب الموسوم بالمذاطيس.

لما قرأت هذا الكتاب وجدت فيه هذه الأربع خرز التي ذكرها هرمس وعظّم شأنها.

<2> قال ارسطاطاليس: «سألت أبا العلماء هرمس عن صيد هذه السباع والوحوش والطيور والهوام هل سبيل إلى صيدها وقتلها أم هل إليه وصول بحكمة لا كحيل العوام؟

<3> قال: ' نعم يا ارسطاطاليس وجدت في الكتاب المكنون في أسرار العلوم الخفية أن هادوس لما علّم ادمانوس علم طبائع الحيوان المتحركة وانبأه[4] بها في النيرنجات وسائر العلاج الذي تقدم ذكره في كتابنا هذا من قسمة منازل القمر على أن ادمانوس لا يعمل حيلة في أخذ هذا الحيوان إلا بحيلٍ مثل الشباك ورميها ونصب الفخاخ لها.

<4> فانبأه في ذلك بأسرار خفية من أسرار الحكمة اللطيفة /Fol. 22r/ ليصلوا بعضها إلى بعض.

<5> وعَلّمه ذلك ليكون أخذه لها ووصوله إليها وصولاً بحكمة لا برمي ولا نصب فخاخ ولا شباك كما تفعل العامة وصارت هذه النيرنجات على الحيوان كله.

<6> وأنت يا ارسطاطاليس جاذباً بروحانيتك التامة جميع أسرار العلوم الخفية اللطيفة كجذب شعاع الشمس نور العالم وقواه فلست تغفل عن شيء من العلوم الخفية والأسرار اللطيفة ولا أراك تدع منها شيئاً جليلاً ولا لطيفاً إلا أخذتها بروحانيتك.

<7> وأنا مبين عما سألت بيان الحق ومفسر لك السر الذي علمه هادوس لادمانوس في الوصول إلى أخذ هذا الوحوش والسباع والطيور بحيلة الحكمة.

2. On this, see now G. de Callataÿ, B. Halflants, S. Moureau, and J. Mattila, *The Epistles of the Brethren of Purity, On Magic, 2. An Arabic Critical Edition and English Translation of Epistle 52b and 52c* (Oxford forthcoming), which now replaces the previous, uncritical edition by al-Bustānī: *Rasā'il Ikhwān al-Ṣafā'*, ed. Buṭrus al-Bustānī (Beirut 1957), 4:431-78 (= *RIS*).

3. L. Saif, «A Study on Ikhwān al-Ṣafā''s Epistle on Magic, the Longer Version (52b)», in *Islamicate Occult Sciences: Theory and Practice*», ed. L. Saif, F. Yahya, and M. Melvin-Koushki (Leiden 2021), 167-68, 170, and 188-89.

4. In Delhi Arabic 1946: و ابناه بها. In Arab d. 221: وأنبأه.

<8> فافتح أذنك اسأل عما بدا لك أُخبرك وأَطِل الفكرة والنظر في الأمور الغامضة المنغلقة عليك فإني نظرت في علوم خمسة فبلَغْتُ منها مجال الفكر والعمل وأسرار الأعمال ثم أسرار أسرارها وعلل الأسرار ولست أكتمك شيئاً منها إذ أنت أهل لذلك.'» /Fol. 22v

<9> فشكر له ارسطاطاليس بذلك فقال له هرمس: «إذا أردت أن تأخذ هذه السباع والوحوش والطيور والهوام وتذل لك روحانيتها وتنساق إليك طبائعها من غير أن يصبك أذى أو ينالك مكروه ولا يستصعب عليك أخذه فاعملْ أربعة أخلاط فإنك تأخذ بها جميع الحيوان المتوحشة من قسمة النجوم السبعة. وأجمِع هذا الأخلاط على طبخها وحقيقتها فقد فسرتها لك وأفصحت وشرحتها من مكنون سرائرها فاحتفظ»

<10> تسمية الأخلاط: الخلط الأول يسمى باذيما للسباع وما جانسها. الخلط الثاني يسمى سموذيا لجميع الوحوش وأصنافها والخلط الثالث يسمى عموديا لجميع الطيور الوحشية والخلط الرابع يسمى درعوذيا لجميع الهوام.

<11> صنعة باذيما للسباع

<12> تأخذ من دم الفرس أربعة اواقي، من دم ضبعة اوقية أو من دماغه أربعة مثاقيل، ومن مرارة /Fol. 23r الظبي مثقالان، ومن مرارة السنور الأسود مثقال، ومن مرارة الغداف ومرارة النسر ومرارة العقاب ومرارة الديك من كل واحد مثقال، ومن شحم الخنازير ثلاثة مثاقيل، ومن دماغ الحمار أربعة مثاقيل، ومن دم الثعلب اوقية، ومن شحم الأرنب ودماغه من كل واحد أربعة مثاقيل.

<13> فتجمع الدماء في طنجير وترفعه على النار حتى يسخن. فإذا سخن طرحت عليه الأدمغة حتى يذوب. ثم اطرح عليه المراريركلها رطبة حتى تُخلَط.

<14> فإذا اختلط جميعه أخذت من اليبروج[5] القراح المسحوق أربعة مثاقيل، ومن النديوس[6] المرضوض عشرة مثاقيل، ومن البلادر ومن سلخ الحية المدقوق مثقالان، ومن الكبريت الأصفر والزرنيخ الأحمر من كل واحد خمسة مثاقيل. فإذا اختلط ذلك كله على النار فارفعه ودعه حتى يبرد فإذا برد فاجعله في زجاجة واخزنه واحفظ به وارفعه.

<15> فإذا أردت أخذ سبع من السباع الكراس[7] أو الفيلة أو الغيالم والدنيال[8] والفرشاب[9] والترماذ[10] والفربان[11] وما دون ذلك من السباع القاتلة /Fol. 23v المقسومة في قسمة النجوم السبعة فخذ رطلاً من لحم كلب أي الألوان كان فاطله من هذا الخلط الذي عملت – وهو الباذيمايورون – أربعة مثاقيل تجعله في مسعط وترفعه على النار حتى يذوب وتطليه عليه.

5. البروج MS.

6. Delhi Arabic 1946: النديوس, Arab d. 221: المنديوس.

7. According to *al-Muḥīṭ fī l-lugha* by al-Ṣāḥib b. ʿAbbād (d. ca. 385/995), *al-kiryās* is a type of lion with a large head.

8. In *Rasā'il Ikhwān al-Ṣafā'*, ed. al-Bustānī, 4:452: الرئبال referring to ferocious felines (lions) and canines (wolves).

9. Meaning unclear.

10. Meaning unclear.

11. Meaning unclear.

<16> ثم تأخذ من الخلط مثقالاً آخر تعزله معك. وتأخذ مجمرة فيها نار وتأتي مواضع هذه السباع أي السباع كان فتدخن بهذا المثقال واللحم معك في يدك وتقول عند ذلك

<17> «أخذت روحانية[12] كذا كذا» وسَمّ أي السباع أردت صيده باسمه أسداً كان أو فيل أو غيلم أو الدنيال أو غير ذلك مما تريده أو تقصده «بقوة ريح هذه الأرواح الروحانية وسقتها إلى نفسي سوق الشمال للسحاب أدعوك أدعوك أيتها الأرواح الروحانية المؤلفة فأجيبيني طائعة وانساقي إليّ ذليلة».

<18> فإنَّك إذا دخنت بذلك وتكلمت بهذا الكلام ذَلّ ذلك السبع الذي تريد أن يأتيك طائعاً ذليلاً من حيث كان. فإذا جاءك فألقِ ذلك اللحم فأنه لا يتملك نفسه حتى ينكلب عليه فيأكله فإذا أكله ذل للخضوع /Fol. 24r/ وصار مثل الرجل السكران وانقمعت روحانيته الخبيثة. فإن أُجِبت فَشُدّه بحبل وسقه صحيحاً حيث شئت وإن أردت فاذبحه على المكان وخذ أعضاءه[13] التي تريدها.

<19> صنعة السموذيا للوحش

<20> تأخذ من دم الكلب الأسود قدر خمس اواق، ومن دماغ الخنزير أربعة مثاقيل، ومن شحم الأرنب اوقية، ومن مرارة الإبل وشحمه من كل واحد مثقال، ومن دماغ النعامة أربعة مثاقيل.

<21> تجعل الدم في طنجير وتطرح عليه الشحم حتى يذوب ثم الدماغ ثم المرارة حتى يذوب ويختلط. ثم خذ من قرن الأيل المرضوض عشرة مثاقيل، ومن حافر حمار مرضوض مثقال، ومن اليبروج خمسة مثاقيل، ومن الكرفس الجبلي والفراسياليوس والسيساليوس[14] من كل واحد وزن أربعة مثاقيل. تسحق ذلك جميعاً وتطرحه فيه وتخلط ثم ترفعه في زجاجة مصونة.

<22> فإذا أردت أخذ وحش من الوحوش فخذ قدر /Fol. 24v/ اوقية من دم إنسان من الحجامة فاجعله في طنجير وسخنه على نار لينة ثم اطرح عليه من هذا الخلط أربعة مثاقيل حتى يذوب فيه. فإذا ذاب فيه فخذ حزمة من الكرفس الرطب فانقعه في ذلك الدم المذاب فيه هذا الخلط وارفعه على شيء نظيف حتى ينشف ذلك.

<23> ثم خذه بيدك وخذ مثقالاً من السموذيا ومجمرة فيها نار. فاذهب بهما إلى مكان ذلك الوحش الذي تريده فاطرح الدخنة على النار وتكلم بالكلام الأول الذي وصفت لك في باب السباع. وسمي الوحش الذي تريده واطرح الدخنة على النار فإنه لا يلبث حتى يأتيك.

<24> فألقِ إليه الكرفس الذي معك فإنه مبادر إليه يلتقفه. فإذا أكله تقيدت لك روحانيته وذلت لك طباعه خاضعة لا يملك من نفسه شيئاً. فإن شئت أن تأخذه وتسوقه معك وإن شئت أن تذبحه فاذبحه وخذ منه حاجتك.

12. روحانيته MS.

13. اعضاه MS.

14. Arab 221.d: القرسيليوس, RIS., 453 line 3, الفطراساليون, Latin «petroselion». The Arabic and Latin manuscripts show different variants of the transliteration of the Greek *petroselinon* = «parsley» (Marwān b. Janāh, no. 152). السيساليون RIS., 453 line 3, Latin «cecelion». The Arabic and Latin manuscripts show different variants of *sāsāliyūs* (from Greek *seseli*) = Massilian hartwort (Marwān b. Janāh, no. 420).

<25> صنعة العموديا للطيور الطائرة

<26> تأخذ من دم العقاب اوقية، ومن /Fol. 25r/ دماغ النسر ودماغ الصقر ومن شحم الكركى ومن شحم البط ودماغ الشاهين من كل واحد وزن خمسة مثاقيل، ومن مرارة النعامة[15] ومرارة البوم ومرارة الغراب من كل واحد مثقال. ويسخن الدم في طنجير ثم تطرح عليه الشحم ثم الدماغ[16] وثم المرارة حتى يختلط كله.

<27> فإذا اختلط كله فخذ من حب اليبروج المسحوق وحب الصنوبر المسحوق وزن خمسة مثاقيل، ومن السمسم والحنطة وحب الفرصاد من كل واحد مثقالين. تسحق ذلك جميعاً وتطرحه على ذلك الدم وتخلطه حتى يختلط فإذا اختلط به فارفعه حتى يبرد ثم ارفعه في زجاجة نظيفة.

<28> فإذا أردت العمل به وأخْذ طير من الطيور الوحشية فخذ كيلجة[17] سمسم ومن خلط الدواء وزن أربعة مثاقيل. فادفه في ماء الهندباء المدقوق قدر رطل من ذلك الماء فإذا ذاب فيه فاطرح فيه السمسم حتى يبتل فيه ويختلط به ثم ارفعه حتى يجف.

<29> فإذا جف فخذه معك ومن الخلط مثقال ومجمرة فيها نار ثم اذهب إلى مكان الطير الذي تريد. فتدخن فيه بذلك المثقال وتتكلم عليه بذلك الكلام الأول ويُسَم فيه الطير بعينه. فإنه لا يلبث أن يقع بين يديك فاطرح له السمسم حتى يلتقطه فإذا أكله تقيدت روحانيته وذل لك /Fol. 25v/ ولم يقدر على الطيران فخذه عند ذلك.

<30> وإن قصدت طيراً من الطيور التي تنهش اللحم فخذ عصفورة واذبحها وانتف ريشها وخذ من الخلط الذي هو الدواء العموديا أربعة مثاقيل فأذبها في مسعط حتى تذوب واطلها على تلك العصفورة. واحملها معك واطرحها له إذا رأيته حتى ينهشها[18]. فإذا أكلها تقيدت روحانيته وذُلت لك طبائعه فخذه عند ذلك واصنع به ما أحببت.

<31> صنعة الدرعوذيا للهوام

<32> «تأخذ من دم الأيل اربعة أواق، ومن دماغه وشحمه من كل واحد مثقالاً، ومن دماغ الأرنب مثقالين ومن أنفخة الظباء ومن أنفخة البقر الأهلية من كل واحد نصف مثقال، ومن قرن الأيل المسحوق مثقالاً، ومن شحم الفأرة مثقالين، ومن دماغ السنور الأسود مثقالاً، ومن شحم الأفعى مثقالاً.

<33> تجعل الدم في طنجير وترفعه على النار حتى يسخن ثم تطرح عليه الشحم ثم الدماغ والأنفخة ثم القرن حتى يختلط ذلك كله. فإذا اختلط ارفعه /Fol. 26r/ في زجاجة نظيفة وصنه.

<34> فإذا أردت أخذ شيئاً من الهوام الدابة وأي ضرب كان فخذ قدر اوقية من لبن إمرأة في مشربة نحاس وأذب فيه وزن مثقالين من هذا الخلط حتى يذوب فيه.

15. In Delhi Arabic 1946: النعامة. Arab d. 221: الهامة.

16. In Delhi Arabic: دماء (blood), but as confirmed by the recipe itself and in Arab 221.d, it should be دماغ (brain).

17. Unvowelled and undotted in Delhi Arabic. Baffioni, «Un esemplare arabo», 311, interprets this word as *kalīkha*. See n. 31 below.

18. تنهشتها MS.

<35> ثم خذ مثقالاً للدخنة ومجمرة فيها نار واذهب إلى المكان الذي فيه الهوام أيها أردت من الأفاعي أو العرند والضب والقنفذ والوبر وكل ضرب من الهوام الدابة التي تريدها. فدخن بذلك المثقال وتكلم بالكلام الأول وسمّ ذلك الضرب الذي تريد بعينه فإنه لا يلبث إلى أن يخرج إليك من حيث كان. فضع تلك المشربة بين يديه حتى يشربه وحين يشربه تتقيد روحانيته ويذل لك ويخضع. فخذه واصنع به ما بدا لك وخذ منه ما أحببت.

<36> فإن لم يكن ذلك من الهوام الذي يشرب اللبن مثل الجراد والعقرب والعظايات فخذها حين تخرج إليك برائحة الخلط الذي عملت لروحانيته فهي لا تضر مع تلك الرائحة شيء.

<37> قال /Fol. 26v/ ارسطاطاليس: «قلت لهرمس: 'أليس قد ذُكر أن في بعض هذه السباع وأرواثها وأبوالها وأعضائها سموماً مؤذية قاتلة تقتل بالرائحة؟' قال: ' نعم'. قلت: 'وكيف يحترز الرجل من ذلك إذا أراد أخذ هذه السباع؟' قال: 'جوده في الأخلاط التي وصفت لك'.» قال: «فقلت: 'وكيف تصنع؟'

<38> قال: 'تأخذ من الخلط الذي تستعمله في أي نوع من الذي تريده من السباع أو الوحوش أو الطير أو الهوام فتبدأ قبل كل شيء فتذيف الخلط الذي تريد استعماله من أي الأخلاط الأربعة وزن نصف مثقال بنصف أوقية دهن سمسم فيمتسح به ويمسح به على يديه ومنخريه ووجهه وفمه وساعديه وبطنه وقدميه وسائر بدنه مسحاً دقيقاً مستوياً حتى يعمه كله. ثم ينطق ويعمل ما وصفت لك. فإن ذلك يكون له حرزاً من كل شيء تتخوفه من غائلة للسموم وآذائها.'»

<39> قال ارسطاطاليس: «قلت لهرمس: 'هل وجدت في الكتاب المخزون ما قوة روحانية هذا الكلام /Fol. 27r/ الذي يتكلم به على روحانية الحيوان البهيمية التي لا تسمع شيئاً ولا تعقل وما معنى الكلام الذي وصفته في هذا الموضع لحيوان لا فهم له ولا عقل؟ ولقد كان الحكيم الأول وضع الكلام على نيرنجات العالم الأصغر لتركيب عقله وفهمه فما باله وصنع مثل ذلك للحيوان الذي لا فهم له ولا عقل.'

<40> قال هرمس: 'إن هذا الكلام لم يوضع لشيء مما ذكرت ولم يقسم على الفهم والعقل. وقد وُجد في الكتاب المكنون أن الجواهر لهذا الباب الذي وصفت لك مأخوذة من الروحانية الأولى المؤلفة. وأن هادوس الذي جمع القوى الروحانية والسماوية[19] وألف بينها وصور منها ادمانوس، صَوَّرَ هذه الحيوانات المتحركة على ما وصفت لك. أَخَذَ من قوى تلك الجواهر الروحانية ولطائفها هذا الكلام الذي قرنه بهذه الروحانيات المؤلفة في النيرنجات والسموم الذي وصفت لك ثم أخذ أيضاً من قوى الحيوان روحانيته هذه الأخلاط الأربعة التي وصفت /Fol. 27v/ لك تريد ما فيها وتآليفها الموصوفة. وأَخَذ من الجواهر هذه الروحانية المؤلفة بهذا الكلام الذي وصفت لك وقَرَنَ الكلام بالجواهر والأرواح ليكون معيناً لها ومقوياً ومفيداً ومحركاً. وجعل ذلك جزؤاً من النيرنج والعمل ولا قوة لكل واحد منها دون الآخر.

<41> وقد وُجِدَ في الكتاب المخزون أن جواهر الكلام وروحانيته إذا خرجت واتفقت مع جواهر هذه الأرواح وروحانيتها امتزجا جميعاً وقيدت الروحانية التي ضمتها إليها وقادتها إلى مقيدها التي وعيت إليه وعملت له. وحرك الكلام تلك الروحانية التي مازجته

19. Partially obscured by manuscript corruption.

حتى يسوقها إلى داعيها. وإنما وضع الكلام على الروحانية المستجيبة في أجسام الحيوان وفي جسم العالم الأصغر. وتلك الروحانية وفي ذاتها سامعة عاقلة. مما يدلك على أن هذا الكلام لم يوضع على العقل والفهم أن النيرنجات التي يعملها العالم الأصغر إنما يتكلم عليها من حيث لا يسمع الإنسان ولا يبصر ومن لم يسمع بشيء ولا يبصره ولا يحسه ولا يعقله /Fol. 28r. ولا يفهمه وإنما تصل إلى الروحانية الكامنة في جسمه أرواح تلك الأخلاط والكلام من حيث لا يعقله ولا يعرفه ولا يراه. ثم يتحرك ذلك قاطبة بالمعنى الذي عمل له من الحب والبغض والعقد والحل ونحو ذلك.

<42> وكذلك الحيوانات المتحركة أيضاً. إنما تتصل تلك الأرواح إلى روحانيتها المستجيبة فيها من حيث لا تفهمه ولا تعقله ولا ترى فيسوقها ذلك إلى ذلك المكان التي دعيت إليه ذليلة طائعة خاضعة قامعة لروحانيتها الأشد الخبيثة.

<43> وليست هذه النيرنجات المعمولة على العالم الأصغر بل شأن العالم الأصغر في ذلك أعجب لما فيه من تركيب العقل والفهم وقوتهما. ولو أن العالم الأصغر أبطل هذه النيرنجات بعقله وقطعها وحلها بفهمه كان حِرّياً لذلك لتمام تركيبه وكمال خلقته. وإن كان الإنسان الكامل التركيب والأجزاء لا يمكنه نقض ذلك وحله في إبطاله في فهمه وعقله ولا يملك لنفسه عند وقوع تلك الأرواح /Fol. 28v المعمولة عليه حتى ينقاد وينساق ويهتام لما عمل له من حب أو بغض أو حل أو عقد فكيف بالحيوان الناقصة التركيب والأجزاء والجوهر وكيف يقدر وصفها[20] على الإثبات والنقض.'»

<44> قال ارسطاطاليس: «قلت لهرمس: 'أيها الحكيم أرأيت هذه المثاقيل التي أعطاها هادوس لادمانوس وأمره أن يصنع الأعمال من النيرنجات وغيرها.' قال: 'كان المثقال اثنا عشر دانق وكان الدانق ثلاثين حبة شعير. فهذه الأوزان <التي> ينبغي عليها أن تؤخذ هذه الأخلاط فيما يطعم وتسقى ويُعمل به في جميع الأعمال'».

<45> قال ارسطاطاليس: «قلت لهرمس الحكيم: 'هل بقي شيء من صنعة النيرنجات وعمل الروحانية <و> أسرارها لم يدخل في كتابك هذا؟' قال: 'يا ارسطاطاليس نعم لا تزال تبحث عن الدقائق المستورة والخبايا حتى يجتذب شعاع الشمس بعدلٍ من الأسرار الخفية ما سَكَّن روحانيتك التي قد هاجت في جسمك ويقظت في قلبك فافهم. وقد بقي كتاب /Fol. 29r. يقال له الهاديطوس فيه علم الروحانيات وأعمالها النيرنجات من الأشجار والنباتات والعقاقير والجواهر. وفيه عللها والحكماء الذين عملوها.

<46> وهو الكتاب الذي ختم به هادوس علم الروحانية ونيرنجاتها وأعمالها وفيه نيرنجات الارفاق بالأشياء وهو أول علم أعطاه هادوس لادمانوس لعلمه. أراه أن تكون روحانيته تصيره مستيقظة قبعة بكل صنعة فاعمل على ما وصفت. وذلك أن ادمانوس إنما وصف الارفاق بالأعمال وصنعة الأيدي بها لم يرها معاينة فاحتاج مع الصفة إلى رفق التدبير وحسن الصنعة. فلما احتاج إلى ذلك أعطاه هادوس نيرنجات لرفق يده وحذقه وحسن صنعته. وليكن ذلك كافياً من الروية والتعليم وكان ذلك أول نيرنج عمل به ادمانوس.

<47> وقد وجدت في هذا الكتاب أيضاً أن الحكماء من ولد ادمانوس كانوا إذا أرادوا حكمة أيديهم ورفقهم وحسن صنعتهم الأشياء /Fol. 29v. عملوا هذه النيرنجات.

20. يصفها MS.

وكانت لهم مثل الطلسمات في ذلك وألبسوا عندها روحانية الرفق وصنعة اليد والحذق في الأشياء اللطيفة التي يحتاج الحكيم إلى صنعتها والعمل لها بيده.'»

<48> قال ارسطاطاليس: «قلت لهرمس: 'أيها الحكيم فأنا أسألك أن تفسر لي ذلك الكتاب أيضاً في كتاب مفرد لِأعرفه'. قال: 'نعم أيها الكامل الطبائع لم أسم لك الكتاب ولم أذكره لك وأنا أطوي علمه عنك.'»

<49> قال ارسطاطاليس: «قلت لهرمس: 'أيها الحكيم فهل لذلك من سر يحتاج العامل به إلى معرفته ليُلْحَق ذلك أيضاً في هذا الكتاب لتجتمع عامة أسراره'. قال: 'إن له جملاً من الأسرار أنا مبينها لك في هذا الكتاب على ما سألت. وهو أن يحترز العامل للنيرنجات أن لا يدق شيئاً من العقاقير في الشمس وعيون الناس وكلامهم. ولا يدق إلا بالليل ويحذر على الدواء عند شراءه وبُعد دقه من الشمس. ويدقه بالرفق ويكون الهاون مغطى بمنديل لئلا يرتفع الغبار منه ولئلا يجذب الهواء روحانيته ويبقى /Fol. 30r

<50> إذا أُسقي الشراب والطعام على ما أقول به من التحفظ والتحرز وحسن التقدير فيه لئلا تمسه الأيدي اللامسة ولا تتناوله العيون الناظرة. وتستعمل [21] في أمورك كلها الكتمان ولا تقولن لقائل « قد فعلت كذا وكذا لفلان» واحترز من الفال السوء من قوله «لا ولا يكون وليس ينفذ ولا يصلح» ومثل هذا ونحو هذا الكلام منك ومن غيرك فإن الفال السوء واضطراب القول في العمل مانع لروحانيته أن تتحرك بنفاذها.'»

<51> قال ارسطاطاليس: «قلت لهرمس: 'أيها الحكيم أرأيت هذه الدخن التي أمرت بها في هذا الحيوان أنهاراً يدخن بها أم ليلاً ؟' قال: 'بل يدخن بها ليلاً إن قدر على ذلك المكان فإن لم يقدر فدَخِّن في وجه الصبح قبل طلوع الشمس. ولا تعمل شيئاً من النيرنجات في الشمس ولا تدخن بشيء من الحيوان ولا أخذ أعضائها فيها. ولا يعمل بشيء من ذلك إلا كره وبطل.'»

<52> قال: «فقلت لهرمس: 'هل وجدت في /Fol. 30v ذلك الكتاب في أي حال يكون العمل بالنيرنج أقوى أعلى الريق أم على غيره ؟ ، قال: 'وجدت فيه أن العامل بالنيرنج لا يبالي في أي حال عمله ولا يضره التقديم والتأخير فيه إذا عمل ذلك على الحد الذي وصفت لك. فأما المعمول له وعليه فلا يطعمن من ذلك شيئاً ولا يشربه إلا على الريق فإن ذلك أنفذ فيه وأقوى لروحانيته.'»

<53> قال: «فقلت له 'فهل يطعم الرجل أو يسقى من ذلك شيئين مختلفين في وقت واحد كنحو المحبة لرجل والعداوة لآخر وعقد الشهوة أو حلها أو الإطلاق للعداوة أو نحو ذلك ؟' قال: 'لا ينبغي أن يطعم الرجل من ذلك ولا يسقى شيئان مختلفان في وقت واحد. وإن كان لا بد يفعل لا ينبغي على ما ذكرت ولكن تقدم أحدهما في وقت قبل الآخر فإن ذلك أبلغ للروحانية وأقوى لها وأصح لحركتها.'

<54> قال: 'وكل شيء من ذلك في نحو واحد فلا بأس أن يسقى الإنسان منه في شيئين مثل حل الشهوة وعقدها والعداوة وإبطالها /Fol. 31r وعقد السموم وحله وشبهه فلا بأس به ولا يضره ذلك. وإن كان شيئان مختلفان لإنسان واحد فلا.'

<55> قلت لهرمس: 'فهل يجب أن يطعم الرجل منه شيئاً في طعام أو شراب ويدخن له بخلاف ذلك ؟' قال: 'لا الدخنة ولا الطعام فإنه سواء في حركات الروحانية وهيجانها. ولا ينبغي أن يطعم الرجل شيئان مختلفان في وقت واحد.'»

21. يستعمل MS.

<56> قال ارسطاطاليس: «سألت هرمس: 'النيرنجات التي تعمل في الطعام والشراب من هذه الأعضاء التي وصفت هل تتعدى[22] على المعمول عليه أو الطعام أو الشراب بأذى حركة تلك الروحانية وهيجانها؟' قال: 'إن هذه النيرنجات التي وصفها الحكيم مأخوذة على استواء الطبيعة واعتدالها. وإذا دبرت على أوزانها الموصوفة واطعمت واسقيت في طعام أو شراب على حدها الموصوف لم تتعدى بأذى ولا ضرر وكانت ملائمة موافقة لروحانيته. فإن زيد في أوزانها ودبرت على غير حدها وجهتها الموصوفة /Fol. 31v/ التي وصفت لك أفرطت على الروحانيات في حركتها ونفذت بإفراطها عليها في الحركة منزلة الاعتدال والقصد. فإذا جاوزت منزلة الاعتدال والقصد أعقبت الأمراض والعلل والأوجاع المختلفة على قدر اصطكاكها واحتكاكها بالطبيعة التي تولد الأمراض.'»

<57> قال: «قلت: 'فبأي شيء تدفع تولد العلل من هذه الروحانيات إذا فرطت في حركاتها وهيجانها؟' قال هرمس: 'تدفع ذلك بأن تلين طبيعة صاحبها بالأدوية الموافقة لطبائعه بعد أن تتعرف طبيعته ومزاجه. فإذا فعل ذلك به سقي سقية أياماً متوالية كل يوم قدر نصف الأخلاط دم الإنسان بوزن مثقالين دهن اللوز. ويؤخذ مثقالاً من دماغ الأرانب واوقية من بول الحمار. فيسحق البول ثم يضاف فيه ذلك الدماغ ويُسقى سخناً على الريق فإنه يتقيأ كل شيء أكله ومازج طبائعه من روحانية النيرنج المعمول عليه من أي ضرب كان في قسمة النجوم المعمول ويخرج منه كل ذلك وتبقى طبائعه /Fol. 32r/ وتعتدل روحانيته وتستوي طبائعه المفسودة ويتصلح جزئه[23] المتولد منه دهان روحه.'» فهذا آخر ما ذكر الحكيم في كتاب الاستوطاس من الأسرار ونفائس الأعمال.

The Translation

<0> /fol. 21v/ In the name of God, the Merciful and Compassionate.

<1> The book on attracting the *rūḥāniyya* ('spiritual force') of every animal, <taken> from the speech of Hermes as interpreted by Aristotle. This is the book known as *al-Madhāṭīs*. When I read this book, I found it contains these four *khiraz*[24] that were mentioned and extolled by Hermes.

<2> Aristotle said: "I asked the father of scientists (*abā l-ʿulamā'*), Hermes, about hunting these predators, beasts, birds, and creeping animals if there were a means to hunt and kill them or a way to obtain this by wisdom (*ḥikma*) rather than the devices of the common people?"

22. تعدى MS.
23. Partially corrupted.
24. Literally «beads».

<3> He said: 'Yes, Aristotle. I have found in *al-Kitāb al-maknūn fī asrār al-ʿulūm al-khafiyya* (Hidden book on the secrets of the occult sciences) that, when Hādūs taught Admānūs the science of the natures of the moving animals and revealed to him the *nīranjs* and the other solutions (*al-ʿilāj*) which have been mentioned before in this our book regarding the lunar mansions[25], Admānūs had not been using methods to capture these animals other than casting nets and setting traps for them.

<4> Therefore, concerning this revealed to him hidden secrets <taken> from the subtle secrets of wisdom /fol. 22r/ in order for one to be joined to the other.

<5> He taught him this so that his capture of them and his obtaining them would be with methods drawn from wisdom without throwing <spears>, or setting traps, or casting nets as the common people do. So, these *nīranjs* apply to all animals.

<6> You, Aristotle, attract with your perfect *rūḥāniyya* all the secrets of the subtle occult sciences, the way the rays of the Sun attract the light of the world and its powers, and so you do not overlook anything belonging to the occult sciences and the subtle secrets and I never see you leaving anything profound or subtle without seizing it with your *rūḥāniyya*.

<7> I shall then truthfully clarify the matter about which you asked, and I shall explain to you the secret that Hādūs taught Admānūs for obtaining the capture of these beasts, predators, and birds by the method of wisdom.

<8> So, open your ears and ask about that which occurs to you and I shall tell you, and contemplate long and study these mysterious things (*al-umūr al-ghāmiḍa*) that are inaccessible to you. I have looked into the five sciences and reached a high level of understanding, practice, the secrets of operations, the secrets of their secrets, and the causes of the secrets; and I will not withhold from you any /fol. 22v/ of them, for you are qualified for this'".

<9> Aristotle was grateful for this, and so Hermes told him: "If you want to capture these predators, beasts, birds, and creeping animals, and subdue their *rūḥāniyyāt* so that their natures are led to you

25. This phrase refers to the *Kitāb al-ustuwaṭṭās* which contains magical operations related to the lunar mansions; see Paris, Bibliothèque nationale de France, arabe 2577, fols 24r–34r.

without any harm afflicting you or misfortune befalling you, finding no difficulty in capturing them, then make the four confections (*akhlāṭ*); for with them you will capture all wild animals that correspond to the seven planets. Pay attention then to the method of cooking these confections and their true nature. For I have explained them to you and revealed and interpreted their hidden secrets; so guard them well".

<10> The naming of the confections: The first confection is called Bādhīmā, for predators and what are of the same kind. The second confection is called Samūdhiyā, for all kinds of beasts. The third confection is called ʿAmūdiyā, for all wild birds. And the fourth confection is called Darʿūdhiyā, for all creeping animals".

<11> The making of Bādhīmā for predators.

<12> Take four ounces of horse blood, one ounce of hyena blood, or four *mithqāls* of its brain, two *mithqāls* of an antelope's gallbladder, one *mithqāl* of /fol. 23r/ a black cat's gallbladder, one *mithqāl* each of a raven's gallbladder, a vulture's (*nasr*) gallbladder, an eagle's (*ʿuqāb*) gallbladder, and a rooster's gallbladder, three *mithqāls* of pig fat, four *mithqāls* of donkey brain, one ounce of fox blood, and four *mithqāls* each of rabbit fat and brain.

<13> Combine the blood in a pot and place it over fire until it heats up. Once it is hot, throw in the brains until they melt. Then add all the fresh gallbladders until they mix in.

<14> Once all of this is combined, take four *mithqāls* of pure pulverized mandrake, ten *mithqāls* of pounded sandarac, two *mithqāls* each of marking nut and pulverized shed snakeskin, and five *mithqāls* of each of yellow sulphur and red arsenic. Once all of this is combined over a fire, remove it and leave it to cool. Once cooled, preserve it in a glass bottle, store it, guard it, and set it aside.

<15> When you want to capture one of the *kirās*[26] predators, elephants, tortoises, *dīnāl*, /fol. 23v/ *firshāb*[27], *tirmādh*[28], *firbān*[29], or any of the other killer predators divided among the seven planets, take a pound of dog meat of any color (kind), and smear it with four *mi-*

26. According to *al-Muḥīṭ fī l-lugha* by al-Ṣāḥib b. ʿAbbād (d. ca. 995), the *kiryās* is a type of lion with a large head.

27. Meaning unclear.

28. Meaning unclear.

29. Meaning unclear. Seven animals, related to the seven planets, have been mentioned.

thqāls of the confection that you have made; that is, Bādhīmāyūrūn. Place it in a pouring receptacle (*misʿaṭ*) and put it over the fire until it melts; then smear it [the confection] over it [the meat].

<16> Then take another *mithqāl* from the confection that you keep with you and take an incense burner with fire in it and go to the location of these beasts, whatever beast it is, and suffumigate with this *mithqāl* while holding the meat in your hand. Then you say:

<17> "I take the *rūḥāniyya* of such and such," naming the predator you seek to hunt, be it a lion, an elephant, a *ghaylam*[30], a *dīnāl*, or others that you seek or aim for, "by the power of the *odor* (*rīḥ*) *of* these spiritual vapors (*al-arwāḥ al-rūḥāniyya*), lead it to me the way the northern <winds> lead the clouds. I call upon you, O spiritual vapors that harmonize (*al-muʾallifa*), answer me obediently and be led to me subjugated".

<18> If you suffumigate with this and say these words, the predator that you want will be subjugated so that it comes to you obediently and abjectly, from wherever it is. When it approaches you, throw this piece of meat and it will not be able to control itself, pouncing on it and then devouring it. Once it eats it, it will be subjected into submission, /fol. 24r/ becoming like an inebriated person, and its pernicious *rūḥāniyya* will be subdued. If you like, tie it with a rope and lead it unharmed to any location you want and, if you wish, slaughter it on the spot and take those organs that you need".

<19> The making of Samūdhiyā for beasts.

<20> Take five ounces of the blood of a black dog, four *mithqāls* of a pig's brain, one ounce of rabbit fat, one *mithqāl* each from the gallbladder and fat of a camel, and four *mithqāls* of an ostrich's brain.

<21> Place the blood in a pot and throw the fat into it until it melts, then the brains, then the gallbladders, until they melt and combine. Then take ten *mithqāls* of pounded deer horn, one *mithqāl* of pounded donkey hoof, five *mithqāls* of mandrake; and of mountain celery, parsley and hartwort, the weight of four *mithqāls* each. Pulverize all of this and throw it into it and mix, then preserve it in a secure glass bottle.

<22> When you wish to capture one of the beasts, take the amount /fol. 24v/ of one ounce of human blood <obtained> from blood-let-

30. *Ghaylam* is not usually considered a predator per se; it means a male tortoise.

ting, place it in a pot and heat it on a gentle fire. Then throw into it four ounces of this confection until it melts in it. Once it melts, take a bunch of fresh celery and soak it in this blood in which the confection had melted and then place it on something clean until it dries.

<23> Hold it in your hand and take one *mithqāl* of the Samūdhiyā and an incense burner with fire in it. Go with both of them to the place of that beast you seek, and throw the suffumigation into the fire and say the previous words that I presented to you in the section on predators. Name the beast you want and throw the suffumigation into the fire; it will not hesitate to come to you.

<24> Throw the celery which is with you, for it will hurry towards it and snatch it. Once it eats it, its *rūḥāniyya* will be bound to you and its nature will be subjected into submission to you, no longer able to control itself. And, if you want, you may take it away and lead it with you, or, if you want, you may slaughter it. [In that case] slaughter it and take from it what you need.

<25> The making of ʿAmūdhiyā for birds of flight

<26> Take one ounce of eagle blood; and of vulture brain, hawk brain, crane fat, duck fat, falcon brain, five *mithqāls* each; and of the gallbladder of ostrich, owl, and crow one *mithqāl* each. Heat the blood in a pot, then add the fats to it, then the brains, then the gallbladders, until everything is combined.

<27> When all of this is combined, take five *mithqāls* of pulverized mandrake seeds and pulverized pine nuts, and two *mithqāls* each of sesame, barley, and mulberry seeds. Pulverize all this and add to the blood, mixing until all is combined. Once combined, remove it to cool; then preserve it in a clean glass bottle.

<28> When you want to work with it to capture a wild bird, take a *kaylaja*[31] of sesame and four *mithqāls* of the concocted medicine (*khalṭ al-dawāʾ*). Submerge it in the juice of pounded endives, in a pound of this juice. Once it dissolves in it, add to it the sesame until it is soaked and mixes with it.

<29> Then take it out to dry out. Once dried out, take it with you along with one *mithqāl* of the confection, and an incense burner with

31. A certain measure used in Iraq, consisting of two *manna* and seven-eighths of a مَنّ; the *menn* being two pounds, according to E. W. Lane, *Arabic-English Lexicon*, 8 parts (London 1863-93), s.v. For other values, see Walter Hinz, *Islamische Masse und Gewichte, umgerechnet ins metrische System*, Handbuch der Orientalistik erste Abteilung, Ergänzungsband I, Heft 1 (Leiden 1970), 40-41.

fire in it. Then go to the location of the bird you seek. Suffumigate with this *mithqāl* and say over it those first words and name the actual bird. It will immediately land in front of you; so throw to it the sesame seeds so it pecks at them. Once it eats it, its *rūḥāniyya* will be bound and subjected to you, /fol. 25v/ and, as a result, it will not be able to fly, so grab it at this point.

<30> If you are seeking one of the carnivorous birds, take a little bird, slaughter it, and pluck its feathers. Take four *mithqāls* of the confection that is the ʿAmūdiyā medicine and melt them in a pouring vessel until they dissolve. Smear the bird with it. Carry it with you and throw it to it when you see it so that it devours it. Once it eats it, its *rūḥāniyya* will be bound to you and its natures will be subdued. Take it at this point and do with it as you like.

<31> The making of Darʿūdhiyā for creeping animals.

<32> Take four ounces of a deer's blood and one *mithqāl* each from its brain and fat, two *mithqāls* of a rabbit's brain, half a *mithqāl* each of an antelope's rennet and that of domestic cows, one *mithqāl* of pulverized deer horn, two *mithqāls* of mouse fat, one *mithqāl* of a black cat's brain, and one *mithqāl* of snake fat.

<33> Place the blood in a pot and place it over the fire until it heats. Then throw the fat into it, then the brains, then the rennet, then the horn, until they are all combined. Once combined, preserve it /fol. 26r/ in a clean glass bottle and protect it.

<34> If you want to capture any kind of creeping animal, take the amount of one ounce of breast milk in a copper tankard and melt in it two *mithqāls* of this confection until it dissolves.

<35> Then take one *mithqāl* for suffumigation and an incense burner with fire in it and go to the location of the creeping animals, whichever ones you seek among snakes, *ʿarnid*[32], *ḍabb*[33], hedgehogs, hyraxes, or any type of creeping animals you wish. Suffumigate with this one *mithqāl* and say those first words. Name the actual type <of creeping animals> you want and it will not hesitate to come out for you from wherever it is. Place the tankard in front of it until it drinks from it. Once it drinks from it, its *rūḥāniyya* will be bound to you, and it will be subjugated and submissive. Take it and do with it as you please and take from it what you like.

32. Meaning unclear.
33. Spiney-tailed lizard.

<36> If it is not from the kind of creeping animals that drink milk, such as locusts, scorpions, and lizards, then seize it when it comes out to you by the odor of the confection that you have made for its *rūḥāniyya*. Nothing will be harmed by the odor".

<37> /fol. 26v/ Aristotle said: "I said to Hermes: 'Was it not mentioned that the feces, urine, and organs of some of these predators contain things that are harmful and lethal, killing by smell?' He said: 'Yes'. I said: 'How can someone protect himself from this, should he want to capture these predators?' He said: 'By a quality that is in the confections I have described to you'. He said: "So I said: 'How do you do [this]?'

<38> He said: 'Take some of the confection that you use for any type of predators, beasts, birds, and creeping animals you want. Before anything, you start by lacing[34] half an ounce of sesame oil with half a *mithqāl* of one of the four confections you want to use, and use it as a rub. Rub the hands, the nostrils, the face, the mouth, arms, belly, feet, and the rest of his[35] body, with a thin and even layer until fully covered. Then he says and does what I have described to you. This will act as a protection from everything you fear [that is] caused by the affliction of poisons and their harms'".

<39> Aristotle said: "I said to Hermes: 'Did you find in *al-Kitāb al-makhzūn* (The treasured book) something [that clarifies the nature of] the power of the *rūḥāniyya* of the words /fol. 27r/ that are said over the *rūḥāniyya* of brute animals that are not aware of anything nor understand anything, and the significance of the words you have mentioned in this location to an animal who lacks comprehension and intellect? The First Sage had assigned the words [uttered] over the *nīranjs* of the small world [man] due to the composition of his intellect and understanding. How is it that he assigned the same to the animal that has no comprehension or intellect?'

<40> Hermes said: 'These words are not assigned to any of the things you mentioned, and they are not related to comprehension or intellect. It is found in the *al-Kitāb al-maknūn* (The hidden book) that the substances in this chapter (*bāb*) that I have described to you

34. Delhi Arabic 1946 تذيف could be a corruption of تذيب, meaning «you melt», which corresponds to the Latin.

35. From this point onward the Arabic changes from the second person to third person.

are taken from the first harmonizing *rūḥāniyya*. It was Hādūs – who gathered the spiritual and celestial powers, harmonized them and from them formed Admānūs – who formed the images of these moving animals that I have described to you. He took these words from the powers of these *rūḥāniyya* substances and their subtle natures that he associated with these harmonizing *rūḥāniyyāt* in the *nīranjs* and poisons that I have described to you. Then he also took from the powers of the animals the *rūḥāniyya* of these four confections that I have described /fol. 27v / to you and that you seek for the things they contain and their described harmonizing effect. He took from the substances this *rūḥāniyya* that harmonizes with these words I have described to you. And he associated the words with the substances and vapors (*arwāḥ*) so that they would aid, strengthen, and reinforce them, and to instigate their action. He made this a part of the *nīranj* and the operation; no power to one without the other.

<41> I have found in *al-Kitāb al-makhzūn* (The treasured book) that, when the substances of words and their *rūḥāniyya* come forth and correspond with the substances of these vapors (*arwāḥ*) and their *rūḥāniyya*, they mix together and bind the *rūḥāniyya* which he [the operator] fixes to them, leading it to the place where it is to be held and for <the sake of that for> which it (the confection) is made. The words move this *rūḥāniyya* which is incorporated in it until it is delivered to its caller. In fact, these words were placed over the receptive *rūḥāniyya* in the bodies of animals and the body of the small world. This *rūḥāniyya*, in itself, is attentive and aware (*sāmiʿa ʿāqila*). That these words were not placed over intellect and comprehension is demonstrated by the [fact that] *nīranjs* made by the small world have words recited over them in a way that no one may hear or see them. [For] he who does not hear, see, sense, recognize, /fol. 28r/ or comprehend anything, the vapors of these confections reach the *rūḥāniyya* hidden in his body by words in a manner whereby they are not comprehended, known, or seen. Then it is moved altogether by the purpose for which it (the work) is made, such as love, hate, binding and releasing, etc.

<42> Likewise, these vapors also connect to the moving animals' receptive *rūḥāniyya* in a manner whereby they cannot be comprehended, understood, or seen. And so making them docile, subjugated, and obedient, it leads them to the place to which they were called, and subdues its strongest and nastiest *rūḥāniyya*.

<43> These are not *niranjs* made for the small world. However, what concerns the small world in this is much more wondrous due to the composition of his intellect, and his comprehension and the powers of them both. If it were the case that the small world can nullify these *nīranjs* with his intellect and break and dissolve them with his comprehension, it would befit him due to the completeness of his composition and perfection of his creation. Since the human being, perfect in his composition and in his parts, is unable to go against them and undo them by nullifying them (the *nīranjs*) with his comprehension and intellect and [he is] unable to control himself when these vapors /fol. 28v/ are cast upon him, so he is led, driven, and compelled towards that which was made for him, whether this is love, hate, releasing, or binding; then how is an animal who is deficient in composition, parts, and substance able to agree with or oppose them (the *nīranjs*)?'".

<44> Aristotle said: "I said to Hermes: 'O Sage, what about these *mithqāls* that Hādūs gave Admānūs and ordered him to use for operations such as *nīranjs* and other things?' He said: 'The *mithqāl* is 12 *dāniqs*, and the *dāniq* is 30 barley grains. These are the measurements that should be followed for such confections that are eaten, given as a drink, or used in all operations'"

<45> Aristotle said: "I asked Hermes the Sage: 'Does anything remain left out from this book of yours concerning the practice of *nīranjs*, the action of the *rūḥāniyya*, and their secrets?' He said: 'O Aristotle, yes. You still search for concealed subtle matters and hidden things until the rays of the Sun attract a range of hidden secrets enough to calm your *rūḥāniyya* that is excited in your body and awakened in your heart. So, comprehend! A book /fol. 29r/ known as *al-Hādīṭūs* exists which contains the knowledge of the *rūḥāniyyāt* and their operations, [namely] *nīranjs* from trees, plants, drugs, and precious stones. It also contains their causes and the sages who made them.

<46> This is the book with which Hādūs concluded the knowledge of the *rūḥāniyya*, its *nīranjs*, and actions, including *nīranjs* for dexterity (*irfāq*) with things, which is the first knowledge Hādūs gave Admānūs to learn. He showed him how an alert and comprehensively knowledgeable *rūḥāniyya* can take over him. So, do as I have described! To Admānūs dexterity in action and manual operations were described, for he did not know them by observation;

in addition to description, he needed [to obtain] dexterity (*rifq al-tadbīr*) and refined craftsmanship (*ḥusn al-ṣanʿa*). When he needed these, Hādūs gave him *nīranjs* for dexterity, skillfulness, and refined craftsmanship. Let this be enough elaboration and teaching. This was the first *nīranj* Admānūs made.

<47> I have also found in this book that for the sake of their practical knowledge (*ḥikmat aydīhim*), dexterity, and refined craftsmanship, the sages among the sons of Admānūs used to /fol. 29v/ make these *nīranjs*. They had similar talismans for this [purpose]. In this case, they take on the *rūḥāniyya* of dexterity, craftsmanship, and proficiency in subtle matters that the sage needs for his practice and manual operations'".

<48> Aristotle said: "I said to Hermes: 'O Sage, I then ask you to explain to me this book also in a separate book so that I would know it'. He said: 'Yes, you who are of a perfect nature, I never revealed the title of the book, I never mentioned it to you, and I have withheld this knowledge from you'".

<49> Aristotle said: "I said to Hermes: 'O Sage, is there, concerning this, a secret that the operator needs to know that we may also append to this book to complete its general secrets?' He said: 'There are a number of secrets that I shall reveal to you in this book as you have asked. That is, the operator of *nīranjs* ought to be careful not to pound any amount of drugs exposed to the sun and to the eyes of people and their chatter. They must only be pounded at night. He must be careful when buying the drug and to pound it away from the sun. He ought to pound gently while the mortar is covered by a handkerchief, lest dust rise from it and lest the air attract its *rūḥāniyya*, thus remaining there. /fol. 30r/

<50> So administer [the *nīranj*] as a drink or food according to the care, safety measurements, and good sense I have mentioned, so that no hand may touch it, and no curious eye may glance at it. Employ discretion in all your affairs and do not say to someone asking: "I did such and such a thing" and be cautious of bad omens resulting from him saying: "No, this will not happen, will not be effective, will not work" and such things and similar expressions spoken by you or others. Bad omens and disturbing [one's] action by speech hinders the *rūḥāniyya*'s efficaciousness'".

<51> Aristotle said: "I said to Hermes: 'O Sage, what about these suffumigations that you instructed me <to use> for these animals?

Do I suffumigate with them during the day or night?' He said: 'They must be suffumigated at night if possible in that location; otherwise, suffumigate with it early in the morning before sunrise. Do not make any *nīranj* under the sun and do not suffumigate with any animal substance or take any of their parts under it [the sun]. If such a thing takes place, it will surely become corrupt and ineffective.'"

<52> He said: "I said to Hermes: 'Did you find in /fol. 30v/ this book something about what renders the action of the *nīranj* stronger, whether it should be taken on an empty stomach or otherwise?' He said: 'I found in it that the maker of the *nīranj* is not affected either way and he is not hindered by early execution or delay if they are created under the conditions I have described to you. As for the person to whom and over whom the action is intended, he must only eat or drink any of it (the *nīranj*) on an empty stomach; for this is more efficacious and reinforces its *rūḥāniyya*'".

<53> He said: "And I said to him: 'Is it possible for a man to be given as a food or a drink two different things at the same time, for example one thing for gaining the love of a man and another for causing animosity towards another person, or binding desire and releasing it, or reconciliation of enemies and similar things?' He said: 'A man must not be fed or given two different things to drink at the same time. If one must, it must not be as you said. Rather, one must be taken before the other. This is more efficient and reinforcing for the *rūḥāniyya*, and better for its movement'.

<54> He said: 'This applies to everything of this nature. It is acceptable for a person to consume at the same time [concoctions] for two things such as [one for] releasing desire and [another for] binding it, for animosity and ending it, for binding poisons and release from them, and similar things. This would not harm him. If it were two different things[36] for one person, then no'.

<55> I said to Hermes: 'Is it possible to give a man something for one thing in food or drink and suffumigate him for the opposite thing?' He said: 'Neither suffumigation nor food, for they are even in the movements of the *rūḥāniyya* and its excitement. A man must not be fed two different things simultaneously'".

36. Two different purposes (e.g., love and wealth) rather than one state and its release (e.g., causing lust and removing it).

<56> Aristotle said: "I asked Hermes: 'Those *nīranjs* that are eaten or drunk, made from the organs you described, do they cause damage to the person over whom they are made, whether eaten or drunk, as a result of the movement of this *rūḥāniyya* and its agitation' He said: 'These *nīranjs* that were described by the Sage are devised on the basis of their even and balanced temperament. And if you prepare them according the aforementioned measurements and administer them in food or drink according to the aforementioned conditions, they will cause no damage or harm, and are, in fact, suitable for, and in harmony with, his *rūḥāniyya*. If the measurements are increased or prepared in conditions different from /fol. 31v/ how I described for you, the movement of the *rūḥāniyya* will become excessive and as a result of this excess in movement, it will overwhelm the state of balance and the purpose. If it exceeds the state of balance and the purpose then it will cause illness, afflictions, and various pains in accordance with the amount of its shaking and grinding, with the quality that generates illness'".

<57> He said: "I said: 'How do you prevent the generation of illness from these *rūḥāniyyāt* if their movement and agitation are excessive?' Hermes said: 'You prevent this by softening the nature of its bearer with medicines (*adwiya*) that correspond to his humors after you acquaint yourself with his nature and temperament. If this is done, he ought to be given to drink for consecutive days half the amount of the confection in human blood [mixed] with two *mithqāls* of almond oil. Take one *mithqāl* of a rabbit's brain and one ounce of a donkey's urine. The urine should be pounded (*fa yusḥaq al-bawl*), then that brain should be added, and administered hot on an empty stomach. He shall regurgitate everything he has eaten that got incorporated into his humors as a result of the *rūḥāniyya* of the *nīranj* made for him, regardless of the planet to which it belongs. Everything will be purged, his humors will be stabilized, (fol. 32r) his *rūḥāniyya* settled, his corrupt temperament restored, and that part from which the oil of his spirit (*duhān rūḥihi*) is generated will be repaired'".

This is the end of the secrets and the most precious of operations that the Sage has described in the *Kitāb al-ustuwaṭṭās*.

Appendix

The Latin Translation

For the sake of comparison, we include here a copy of the Latin text prepared by Charles Burnett and Antonella Sannino[37].

The Latin translation survives in only one known manuscript, Montpellier, Bibliothèque interuniversitaire, Section de Médecine, 277, fols 64ra-65rb. This manuscript includes numerous glosses, most of which are alternative translations of the Arabic text; these are retained in the footnotes. The Latin text appears to go back to a source which branched out into the extant *Kitāb al-istijlāb* on one side, and the text in the *Ikhwān al-Ṣafā'* on the other.

Montpellier, 277, fol. 64ra

<0> In Christi nomine Amen.

<1> Incipit liber secundum Hermetem de quatuor confectionibus ad omnia genera animalium capienda.

<2> Dixit Aristoas. Vidistine, Hermes (Hermetem MS), hec animalia silvatica, scilicet lupos et aves, qualiter possunt capi hec predicta cum (tamen MS) pervenitur ad ea per aliquam scientiam, non sicut per ingenia universitatis vulgi, nec sicut est venatio eorum.

<3> Dixit *Hermes*: O Aristoa, inveni in libro Thexaurizato[38] ex secretis scientiarum occultarum, quod Arod, id est Gabriel, dum do-

37. The first edition, and study, of this text was made by A. Sannino in «Ermete mago e alchimista nelle biblioteche di Guglielmo d'Alvernia e Ruggero Bacone», in *Studi Medievali* 3a serie, 41 (2000), 180-89. C. Baffioni identified the original Arabic and has made a thorough comparison (without edition) between the Latin text and the relevant section in the Ikhwān al-Ṣafā', *Letter 52b*; see «Un esemplare arabo de *Liber de quattuor confectionibus*,» in *Hermetism from Late Antiquity to Humanism: La tradizione ermetica dal mondo tardo-antico all'Umanesimo*, ed. P. Lucentini, I. Parri, and V. Perrone Compagni (Turnhout 2003), 295-313. The full edition of the Latin text, with extensive notes comparing it with the relevant portions of the *Kitāb al-istijlāb* and the Ikhwān al-Ṣafā' can be found in Charles Burnett and Liana Saif, «The Aping of Culinary Recipes in Magical Texts: The Case of the *Flos Naturarum* and the *Kitāb al-istijlāb* (*Liber de quatuor confectionibus*)», in *The Recipe from the XIIth to the XVIIth Century, Europe, Islam, Far East*, ed. Bruno Laurioux and Agostino Paravicini Bagliani (Florence 2023), 117-48.

38. This reading («treasured, stored in a treasury») implies *makhzūn*, which is the reading in the *Ikhwān*, rather than *maknūn* («hidden»). The two titles appear

ceret Ismenum, id est Adam, scientiam naturarum animalium, et eum quasi spiritu prophetie imbueret in anatigit et ceteris curationibus, scivit quod Ismenus nesciebat aliquod ingenium in captione horum animalium ferarum nisi per venationem et preparationem laqueorum <4> ostenditque in hoc secreta occulta ex secretis subtilioris scientie quibus iungerentur ad invicem. <5> Et hoc opere docuit eum captionem eorum qualiter perveniret ad ea, non per venationem, iacullationem vel laqueorum preparationem quemadmodum facit vulgus, et per hoc (hos MS) fuit secretum entrezigit[39] super animalia.

<6> Et tu, Aristoa, attrahis per spiritum tuum universalem superiorem et universa secreta scientiarum occultarum ac naturalium[40] per subtilitatem tuam, quemadmodum radii Solis lumen mundi et eius fortitudines. Non tradis oblivioni nec negligis aliquid ex secretis occultis et subtilibus nullumque dimittis ingenium[41] neque subtilitatem quam non attrahas per spiritum tuum. <7> Et iam ergo propalabo tibi quod interrogasti me et exponam tibi in ipsis secretis que docuit Aroth Ysmenum in captione ferarum, scilicet luporum et avium, per ingenium scientiæ. <8> Age, ergo, interroga de hoc quod tibi incipit apparere et narrabo tibi. Fac ergo prolixam cogitationem tuam et scientiam et aspectum in rebus profundis et suspensis[42], quia in manu mea sunt claves futurorum et absconditorum. Apud me est hospitium cogitationis et aspectus ac secreta secretorum, nihilque ex eis tibi celabo.

<9> Cumque volueris capere hec, scilicet lupos et aves et cetera animalia, ut inclinentur tibi spiritus eorum et ingeratur ad te natura eorum (earum MS) absque impedimento, fiant quatuor confectiones quibus accipies universa animalia silvatica ex divisione septem planetarum.

<10> Confectio prima vocatur bēmie, /fol. 64rb/ ad universa luporum genera. Secunda vocatur sadimen[43], ad universa ferarum agmina. Tertia vocatur gagmie[44], ad universas aves indomesticas. Quarta dicitur dargadie seu dagargie, ad omnia reptilia seu repentia.

to be interchangeable (cf. <39> and <41> above); see De Callataÿ et al., *The Epistles of the Brethren of Purity, Epistle 52b and 52c.*

39. «alibi anatigit».

40. «naturalium» could be a misreading of اللطيفة (*al-laṭīfa*: «subtle») as الطبيعية (*al-ṭabīʿiyya*: «natural»).

41. جليلاً (*jalīlan*: «profound») was read as حيلاً (*ḥiyalan*, «ingenium»).

42. منغلقة (*munghalaqa*, «closed, incomprehensible») has been read as متعلقة (*mutʿalliqa*, «hanging» = *suspensis*).

43. «in alio libro inveni 'cendie'».

44. «alibi 'gumediē'».

<11> Confectio prima que dicitur bēmie ad omnia luporum *genera capienda*.

<12> Accipe de sanguine equi quatuor uncias et ex sepo lupe unum et ex cerebro eius quatuor mercales et ex felle duos et ex felle catti nigri unum mercal et ex felle corvi totius nigri et ex felle vulturis et ex felle aquile et ex felle arietis albrica[45] et ex cerebro asini quatuor mercales et ex sanguine vulpis unciam unam[46] et ex sanguine et ex sepo porcorum quinque mercales vel tres et ex sepo leporis et ex cerebro eius amborum ana duos mercales.

<13> Colliges sanguinem et pones super ignem ut calescat, et cum calefactum fuerit, proice desuper cerebra donec liquefiant. Similiter, pone sepum donec liquefiat. Deinde omnes felles. Lini omnes donec misceantur. <14> Et cum commixta fuerint universa, accipias de aliabroth, id est de mandragora[47], trita septem[48] mercales, et de piretro trito octo mercales et de abbalador vel abellaor[49] et ex corio serpentis trito[50] et ex sulfure croceo et ex vermilione, de omnibus ana duos mercales. Teres universa hec in mortario optime et tantarizabis et pone in vase super ignem et miscebis donec commisceantur, et cum commixta fuerint hec universa, serva ea donec frigescant, et cum frigida fuerint, serva eam in vase vitreo novo.

<15> Et cum volueris lupos aut leones capere et cetera animalia que interficiunt, res de illis si que sunt divisa secundum divisionem septem planetarum, accipe carnem cuiuscumque coloris fuerit et sit recens et unge de hac confectione, que est bēmie, cum pondere quatuor mercalorum, ponesque eam in aliquo vase donec /fol. 64va/ liquefiat, et unge eam desuper.

<16> Post hec accipe bēmie unum mercalem et turibulum vel quodcumque vas in quo possit ignis deferri cum prunis, et ibis ad locum horum animalium qualiacumque volueris, et subfumigabis locum eodem mercali, et sit caro in manu tua et dicatur oratio communius: <17> "Accepi spiritum illius et illius", et nominabis quem

45. «et alibi inveni 'ex felle galli'».
46. «inveni quoque in alio libro 'ex cerebro vulpis'».
47. «et dicitur alarchilulica».
48. «alibi .ij.» (*supra*: «.4.»)
49. «ciberadul, i.e., confectio anacard<i>, albelador i.e., anacardus indus et api<um> montanum, petroselinum maced<onicum>».
50. «et in alio libro inveni 'ex alabador .10. mercales, ex corio serpentis trito .ii. mercales'».

volueris lupum, "per virtutem horum spirituum spiritualium et adducant ipsum ad me quemadmodum adducit ventus septentrionalis nubes. Oro te, O spiritus, qui lates in illo et in illo corpore per virtutem horum spirituum concordantium, obaudite obaudientes et ducamini ad me inclinati et subiecti'. <18> Et cum subfumigaveris cum hoc et loquutus fueris per hec verba, non differet (diferret MS) neque faciet moram ipse lupus quem volueris et veniet tibi obediens et subiectus ex quocumque loco fuerit. Cumque venerit ad te, da ei sepum quod vis, et non poterit se abstinere quin more canis[51] devoret illud. Cum vero comederit, subicietur tibi et humiliabitur et accedet sicut ebrius et sedabitur spiritus eius callidus (calidus MS). Tunc, quodcumque volueris, fiet, ut decolles vel liges eum cum fune. Tanta enim est vis phisica in omnibus.

<19> Confectio secunda que dicitur sadimen ad universa ferarum agmina capienda.

<20> Accipe de sanguine canis nigri sex[52] uncias et ex sanguine muris quinque et ex cerebro porci quatuor mercales et ex sepe leporis unam unciam et ex felle corvi[53] et eius sepo ana unum mercale, ex cerebro alhemath, id est bufonis, quatuor mercales.

<21> Et pones sanguinem in sartagine. Post hec pone super eum sepum donec solvatur; deinde cerebra; post felles. Cumque fuerint liquefacta et commixta, accipe cornu cervi tritum octo mercales, de ungula asini silvatici trita unum mercale, ex granis mandragore unum mercale et apio montano parte[54], ex petroselion et cecelion ana quinque mercales. Teres universa hec et proicies in ea donec commisceantur. Deinde servabis in vase vitreo.

<22> Cumque volueris capere aliquod animal silvaticum, accipe unciam de sanguine hominis et pones eum in sartagine, siccabisque super ignem. Post proicies super eum de hac confectione pondus quinque mercalium donec solvantur in eo. Cumque solutum /fol. 64vb/ fuerit, accipe fasciculum apii viridis et madefac in eodem san-

51. The translator evidently was influenced by the root of the verb *ankalaba* to retain «dog» (= *kalb*) in his translation.

52. «alibi legi .v.».

53. Probably «cervi» which corresponds to MS Arab 221.d *al-ayyil* («deer») in place of *al-ibil* («camels»).

54. «parte» may be a relic of the beginning of a transliteration of the Arabic *al-fiṭrāsālīūn* («parsley»).

guine in quo est sadmie[55]. Post hec serva aliquo modo donec bibat ipsum sanguinem.

<23> Post, accipe eum et cum ea in manu tua pondus unius mercalis de cermidie et turibulum in quo sit ignis, et vade ad locum ferarum quas volueris et proice subfumigationem in igne, orationem prefatam dicendo, que in capitulo confectionis prime iam exposita est, et easdem feras nominando nec fiet mora quin veniant ad te. <24> Tunc proice apium quod habes tecum donec comedant, cumque comederint, attrahetur spiritus eius et humiliabitur ac subicietur tibi, venietque obediens, nihil dominans ex se.

<25> Confectio tertia que dicitur gagmie ad universas aves indomesticas capiendas.

<26> Accipe de sanguine vulturis unciam unam, ex sanguine etiam aquile unam, ex cerebro vulturis, ex cerebro <s>acer, id est crestelle, ex cerebro assei[56] ana pondus duorum denariorum m(ercalis)[57], ex sepo alculta et ex sepo alteu ana quinque m(ercales), ex felle bubonis, ex felle albemach, ex felle alcuedes, id est corvi, ana unum m(ercale), ex sepo abeurchia gruis, ex sepo albanach, id est anatis, ana quinque merchales[58]. Post hec calefacies sanguinem in vase, deinde proicies super eum sepum, post sepum cerebrum, postea felles, quousque misceantur omnia.

<27> Cumque commixta fuerint, accipe ex granis mandragore tritis et ex granis pini tritis ana quinque mercales et de acincon, id est albiliulem, quod est semen album in modum seminis lini formatum, et tritico et ex granis alfirsad, id est more, ana[59] duos mercales. Tere hec omnia. Deinde proicies ea super sanguinem donec misceantur. Post hec serva donec frigescant et ponas in vase vitreo albo mundo.

<28> Cumque per hanc confectionem operari volueris, accipe quandam mensuram seminis eiusdem et ex alauamidic pondus octo[60]

55. «alibi est cermidie».

56. assei > *ash-shāhi* («falcon»).

57. «me.» *supra* «denariorum».

58. The Latin combines two translations of «crane fat, duck fat and falcon brain, five *mithqāls* each», using different transliterations in each: «ex sepo alculta (*al-kurkī*) et ex sepo alteu (*al-baṭṭ*) ana .v. m(ercales)» and «ex sepo abeurchia, gruis, ex sepo albanach, id est anatis, ana .v. merchales».

59. «ana .i. ī ore» MS. There may be confusion between «.i.» = «one» and «i.» = «id est», identifying *firsād* with mulberry (*mora*).

60. «alibi quatuor».

m<ercalium> et solve eum in suco albūdabe[61] triti (trito MS) qui sucus sit pondus libre cumque soluta fuerit in hoc suco predicta confectio, colabis eam et prohicies in ea tunc semen accincem quousque misceatur.

<29> Post hec serva eum donec siccetur, et cum siccatum fuerit, accipe tecum de aluamudie unum m<ercale> et turibulum in quo sit ignis. Post hec vade ad locum avium quas volueris et subfumigabis cum eodem /fol. 65ra/ m<ercali> et loqueris per prima verba nominando easdem aves nominatim. Et nullas moras facient cadendi ante manus tuas. Tunc proicies eis acincen donec comedant eum cumque comederint, mutabitur spiritus eorum et humiliabitur et non poterunt inde volare.

<30> Set si fuerint aves que comedant carnes, accipies eliganfor[62], que est avis minima, et decollabis et depennabis et purgabis. Accipiesque ex almudie quatuor m<ercales> et solves ea in aliquo vase, cumque soluta fuerint, unge predictam avem cum ea. Post hec deferas eam tecum et proicias ad aves cum venerint ad te per semetipsas. Tunc commutabitur spiritus eius et veniet tibi obediens[63]. Tanta enim est phisica virtus in eis.

<31> Confectio quarta que dicitur dargadie ad omnia repentia sive reptilia capienda.

<32> Accipe de sanguine cervi quatuor uncias et ex cerebro eius et leporis duas, et ex sepo eius unum m(ercale) et coagulatum[64] leporis, id est lac coagulatum, ana dimidium m(ercale) et ex cornu cervi trito unum mercale et ex sepo muris forē duos m(ercales) et ex cerebro nigri catti unum m(ercale).

<33> Pones sanguinem in vase, ponesque eum super ignem donec calescat. Post proicies super sepum et cerebra, postea coagula, deinde cornu, donec misceantur. Cumque commixta fuerint, servabis ea in vase vitreo mundo.

<34> Cumque volueris capere ex repentibus agrestibus, cuiusmodi fuerint, accipe ex lacte mulieris quantitatem unius uncie in vase eneo, et solve in eo pondus unius mercalis ex confectione hac, donec misceatur et solvatur in eo.

61. albūdabe < *al-hindabā'* (*via* alhundabe?) («endives»).
62. «alibi acsor» (read: «asfor»).
63. The Latin reads طائعاً («obedient») for طبائعه («its natures»).
64. «alibi inveni 'coagulatum capreolli et melius est adhibere ex coagulatis caprarum domesticarum'».

<35> Post hec accipe ex eo unum mercale et turibulum cum igne et vade ad locum repentium que volueris ex viperis aut ericiis vel que volueris ex repentibus et accipe[65] ex eo unum mercale et loquere per prima verba, nominando ipsum genus quod volueris capere et non faciet moram quin veniat ad te. Pone itaque potionem coram ea quousque potet eam. Cumque potaverit eam, tunc convertetur spiritus eius ad te. Accipe tunc eum et fac de eo quod volueris.

<36> Et si impossibile[66] est tibi hoc ex repentibus que non potant lac, ut locuste, scorpiones, subfumigabis serpentes quousque exeant ad te, quia non venient ad te nisi odor confectionis illius quam fecisti educat /fol. 65rb/ spiritus eorum et nihil impediant in eodem odore.

<37> Dixit Aristoas: Numquid narrasti mihi in quibusdam magisteriorum et eorum instrumentis et capitulis seu ramis esse eorum circa venena impedientia que interficiunt per odorem?' Dixit: 'Ita'. Dixit Aristoas: 'Qualiter ergo fiet ut caveat sibi homo ab eis, cum voluerit capere hos lupos?' Dixit: 'Custodia est in confectione quam predixi.

<38> Accipiet de confectione qua utitur et ex quacumque voluerit specie de lupis vel animalibus vel serpentibus, incipietque et comedet aliquid[67] et solvet aliquid ex confectione eadem quam voluerit ex qualicumque harum confectionum pondus quatuor mercalorum cum pondere dimidie uncie ex ungento acincen. Post extergat de ea super manus suas ac nares ac faciem, brachia quoque ac ventrem suum, necnon et cubitos extersione subtili et equali. Deinde eat et faciat secundum quod dixi, quia hoc erit tutamen de omni re.

…

<44> Dixit Aristoas Hermeti: Numquid <vidisti> hos mercales quos in libro tuo narrasti quanti ponderis sunt? Et dixit: Erant mercales quos dixit Arod Ismeno et precepit ut operaretur per eos duodecim danic et erat danic pondus triginta granorum ordei. Oportet ergo ut secundum hec pondera accipiantur hec confectiones in omni quod datur ad comedendum et potandum, et operare per ea universa postea.

Explicit liber Hermetis de quatuor confectionibus ad omnia genera animalium capienda.

65. The Latin read *fa-khudh* («and take») for *fa-dakhkhin* («and suffumigate»).

66. The Latin probably read *lam yumkin* («it is impossible») for *lam yakun* («it is not»).

67. The Latin evidently read *fa-ya'kulu shay'* («and he eats something») instead of *qabla kull shay'* («before anything») (Baffioni, «Un esemplare arabo», 310).

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Abstract

Liana Saif – Charles Burnett, *The* Book on Attracting the *Rūḥāniyya* of Every Animal: *A Pseudo-Aristotelian Hermetic Text*

The *Book on Attracting the* rūḥāniyya *of Every Animal* is a text which purports to be Aristotle's questions to Hermes concerning dominating wild animals solely through the attraction of the spirit (*rūḥāniyya*). Hermes, in turn, imparts the wisdom of Hādūs, the creator and teacher of Adam. The text belongs to the corpus of Pseudo-Aristotelian Hermetica, and was excerpted from this corpus into the last letter ("On Magic") of the *Epistles of the Brethren of Purity*. This article provides a critical edition and translation of the fullest version of the text, and its partial Latin translation as an appendix.

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AN ARABIC VERSION OF QUSṬĀ B. LŪQĀ'S *DE PHYSICIS LIGATURIS*?

The edition of what was until not long ago referred to as the "Epistle on Magic of the Ikhwān al-Ṣafā'" is now about to be completed as part of the *Epistles of the Brethren of Purity* series at Oxford University Press in association with the Institute of Ismaili Studies. The road was longer and more tortuous than expected. The comparison of manuscripts revealed that there are in fact not one but three different versions of this epistle. The edition of "52a," the shortest of these three versions, was published in 2011[1]. That of "52b" and "52c," both much longer than 52a, will be published shortly as part of the same series[2]. Additionally, we must confess that the material at hand was not easy to deal with. The three mutually exclusive versions are very different from each other in both form and content. Moreover, the content is heterogeneous in the extreme. It has become increasingly clear to us as the edition of these texts progressed that, in spite of the fact that they all claim to be the Epistles of the Ikhwān al-Ṣafā', in all likelihood neither of these versions should be regarded as part of the Brethren's original corpus.

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This heterogeneous content and intricate manuscript tradition are perhaps nowhere more perceptible than in 52b, which the present contribution is exclusively concerned with. After some overall observations about version 52b and its transmission in manuscripts, we focus on one particular section concerned with the power of imagination (*wahm*) and its use by physicians from Greece and India. They are said to have used it to help cure some illnesses, generally by means of spells attached to, or rather suspended from, parts of the body. We argue that this part of the text is, if not the Arabic original, an early testimony in the tradition of the *De Physicis Ligaturis*, a work attributed to the Christian physician Qusṭā b. Lūqā (d. 300/912) and which, thus far, was only known through its Latin translation, presumably by Constantine the African (d. before 491-2/1098-9).

Perhaps the most characteristic feature of Epistle 52b is its appearance; it looks like a clumsy collage in which a large quantity of sources, acknowledged as such or not, alternates in striking contrast with typically Ikhwān-styled passages claiming to express the core of the Brethren's doctrine on the human soul and its aspiration to salvation in the hereafter. From one end of this approximately 50,000-word treatise to the other, the reader is expected to jump between these two registers, passing abruptly (and usually without a clear reason) from, for example, the exposition of a multitude of technical astrological notions, such as the pivots, the quadrants of the sphere, the ninths, and other indicators "according to the sages of India", to the Ikhwān's purported assumption that the "science of calculation" (*ʿilm al-ḥisāb*) and the "science of the stars" (*ʿilm al-nujūm*, here sometimes also referred to as *najāma*, a word that does not exist in the Ikhwān's vocabulary) are the two most essential disciplines for the soul's ascension to "the upper site" (*al-maḥall al-aʿlā*).

The other most evident characteristic of 52b is its intricate manuscript tradition. Indeed, while all our witnesses agree with one another relatively well on the first part of the treatise, they clearly divide into two groups for the second part, with wholly divergent versions that one must regard, again, as mutually exclusive. Of the nine manuscripts provided by the Institute of Ismaili Studies for the establishment of this edition, six belong to what we refer to as "Group A". This group includes the oldest known manuscript of the *Rasāʾil Ikhwān al-Ṣafāʾ*, namely, MS Istanbul, Süleymaniye Kütüphanesi, Atif Efendi 1681 (dated 577/1182), as well as other ancient copies from

the seventh/thirteenth and the beginning of the eighth/fourteenth century[3]. "Group B" consists of the other three manuscripts, among which is the quite old and authoritative MS Paris, Bibliothèque nationale de France, Arabe 6.647-6.648 (dated 675/1277). The uncritical edition of Beirut of 1957, whose text was also collated for the new edition, also belongs to this second group. The two traditions begin seriously to diverge on the occasion of a long and detailed description of the twenty-eight lunar mansions (*manāzil al-qamar*) and the choices (*ikhtiyārāt*) to be made according to the good or bad influence of each mansion; this is a typical example of catarchic astrology. From the middle of the first mansion, instead of providing the same descriptions as the other group, the manuscripts of Group B follow, literally, the passage on lunar mansions from *Kitāb al-ustūṭās* (or *Kitāb al-ustawaṭṭās*), one of the intriguing members of the corpus usually referred to as the Pseudo-Aristotelian Hermetica and whose texts, context, and doctrines are discussed by Liana Saif in a recent and most valuable article[4]. Then, from immediately after the passage on lunar mansions, the two groups further diverge from one another by presenting versions that no longer have anything in common, other than a few concluding lines at the very end. Thus, whereas Group B continues with other parts of the Pseudo-Aristotelian Hermetica corpus (plus an Ikhwān-styled narrative meant to illustrate the power of the "*nīranj* of Mars"), Group A focuses instead on the concept of imagination (*wahm*), which is retained here as a specific category of magic used for medical purposes.

It is to this section, thus a portion of the text only attested in part of our manuscripts and absent from the Beirut edition, that we now turn our attention.

Based on the classical theory of the balance of temperaments in the human body, the section includes the following statement in the beginning.

> Know, my brother, that as long as the temperament (*mizāj*) of the body is well-balanced, its system regular, its nature straight, the actions of the soul will similarly appear regular, as it should be. Yet, when the temperament is corrupt, the actions of the souls are hindered…. Because of this, in young

3. For a list of these manuscripts, see below.

4. L. Saif, «A Preliminary Study of the Pseudo-Aristotelian Hermetica: Texts, Context, and Doctrines», in *al-ʿUṣūr al-Wusṭā* 29 (2021): 20-80.

people and women the soul and its faculties are deficient and weak, in accordance with the deficiency of their bodies. The same holds true for the nations whose temperaments are dominated by corrupt mixtures, be this the result of the intensity of heat and dryness or from coldness and wetness, as with the Zanj and the Slavs[5].

On the face of it, we might easily assume that these lines were penned by the author/compiler of this version of the Epistle on Magic, but a comparison with *De Physicis Ligaturis* (On Physical Ligatures), the extant translation into Latin of a presumably lost Arabic treatise attributed to the Christian physician Qusṭā b. Lūqā, suggests that this is probably not the case.

The first lines of the Latin treatise of the edition of the text provided in 2006 by Roberto Casazza[6] are here translated into English for the sake of convenience:

> You have asked, my dearest son, about spells, adjuration, and the suspending [of things] from the neck, whether these can be useful and whether one can find them in the books of the Greeks in the same manner as one finds them in the books of the Indians. To this query I will attempt to respond succinctly in this epistle. As seems to have been agreed on by all the ancients, I say, the complexion of the body follows the power of the soul. If this [power] is equally temperate, the action of the body will also be perfect

5. Translations here and throughout this article are ours unless otherwise noted.

6. R. Casazza, «El *De Phisicis Ligaturis* de Costa Ben Luca: un tratado poco conocido sobre el uso de encantamientos y amuletos con fines terapéuticos», in *Patristica et Mediaevalia* 17 (2006): 87-113. Casazza's edition is primarily based on MS London, British Library, Additional 22719 (twelfth century), complemented with the variants provided by MS Paris, Bibliothèque nationale de France, lat. 7337 (fourteenth century) and MS Montpellier, 277 (fourteenth/fifteenth century). A previous edition, essentially based on the British Library copy, was provided in J. Wilcox and J. M. Riddle, «Qusṭā ibn Lūqā's Physical Ligatures and the Recognition of the Placebo Effect, with an Edition and Translation», in *Medieval Encounters* 1.1 (Jan. 1995): 1-50. A new edition presenting the text as found in MS Orléans, Médiathèque municipale, 301 (an early copy not used in previous editions), has just come out in B. Long, «Decoding the *De Physicis ligaturis*: Text, Translation, Attribution», in *Journal of Medieval Latin* 32 (2022): 241-76. Long was apparently unaware of Casazza's study. For our quotations of the Latin in the present contribution, we follow Casazza's edition, but indicate significant variants as provided by Long in brackets. On this treatise, see also Ch. Burnett, «Physics before the 'Physics': Early Translations from Arabic of Texts Concerning Nature in MSS British Library, Additional 22719 and Cotton Galba E IV», in *Medioevo* 27 (2002): 53-109.

in the same way, but if the former is intemperate, the latter will be imperfect. This is the reason, since it appears that the powers of the action of the soul are very imperfect in children, old people, and women, the complexion of their bodies also proves to be imperfect. This imperfection also affects the inhabitants of intemperate regions, such as Ethiopia for its heat and Scotland for its coldness[7].

The same theory, the same structure of phrases, and almost the same words in our Epistle on Magic appear here, except that the Zanj and the Slavs have been replaced by Ethiopia and Scotland, that are more intelligible for readers from regions north of the Mediterranean. Here we proceed with our textual comparison and examine the next lines in our texts. A translation of the Arabic reads:

The sage Plato said:

One needs the healthiness of the temperament, since by the healthiness of the temperament [comes] the purity of reflection and the sincerity of imagination. [This is] because reflection is needed to study the sciences and to mandate [reflection] toward the knowable and imagination toward the sensible and the comprehensible[8].

The Latin reads:

Therefore, Plato said:

When a man's mind is certain, just from the intention of his mind, that something is going to be useful to him, this thing will be helpful to the body even if it is not naturally helpful. For example, if someone is confident that a spell will be useful to him, it will be helpful to him, whatever it is made

7. *De Phys. Lig.*, ed. Casazza, lines 1-13: «Quesivisti, fili karissime, de incantatione, adiuratione, colli suspensione, siquid possunt (Long: possent) prodesse et si inveniri in libris graecorum haec qualiter (Long: *add.* in) indorum est libris invenire. Cui questioni compendiose in hac epistola conor (Long: cogor) respondere. Omnes, inquam, antiqui in hoc esse videntur concordati, corporis complexionem animae sequi virtutem. Quae si sit aequaliter temperata actio quoque corporis (Long: *om.* corporis) aeque erit perfecta. Si autem praecedens fuerit intemperata et subsequens erit imperfecta. Unde quia virtutes actionis animae in pueris, senibus et mulieribus imperfectae plurimum esse videntur, complexio quoque corporis eorum imperfecta esse comprobatur. Et haec imperfectio similiter contingit habitatoribus intemperatae regionis, ut pote caliditatis Ethiopiae et frigiditatis Scotiae».

8. See p. 441.

of. Indeed, if, as we say, the complexion of the body follows the power of the soul, it must necessarily be so[9].

Here it is curious to observe that in both versions Plato's authority is invoked in the same place, even though the quotation ascribed to him differs in substance. Where the Latin has something that inevitably reminds us of the "placebo effect", and indeed, which may have been derived from an idea present in one of Plato's dialogues[10], the Arabic departs significantly from this idea to evoke, in general terms, the importance of a healthy temperament, the respective powers of reflection (*fikr*) and imagination (*wahm*), and the necessary purity and sincerity – two most-beloved notions for the Ikhwān, by the way – that go with them. Clearly, our two texts do not agree with each other in all respects.

Let us further proceed with our exploration of the whole text to see if we can better determine the relationship between the two versions; we restrict ourselves to a few examples to illustrate the various cases we have come across.

We start with the case in which a literal, or almost literal, parallel can be observed. The Epistle on Magic contains the description of a wide variety of spells designed to be suspended from parts of the human body for medical purposes and which are said to derive from Galen (with explicit reference to the *Book of Simple Medicines* and the *Commentary on Hippocrates's Book of Mixtures*), "Aristotle" (with reference to the *Book of Stones*), the "Greek sages" or the "Indian sages." Most of these descriptions exactly match the Latin version, or there are only minor divergences that could have resulted from the vagaries of the transmission. Here, for instance, is a passage dealing with what, according to 52b, "the Indians" and "some physicians" have reported:

9. *De Phys. Lig.*, ed. Casazza, lines 13-18: «Inde (Long: Vnde) Plato: «Cum», inquit, «mens humana rem aliquam licet naturaliter non iuvantem, sibi prodesse certificat ex (Long: hec) sola mentis intentione, corpus res illa iuvat». Verbi gratia: Si quis incantationem sibi prodesse confidat, a (Long: *om.* a) qualicumque sit, eum tamen adiuvat (Long: iuuat). Si enim, ut diximus, complexio corporis virtutem sequatur (Long: sequitur) animae, necesse est taliter rem (Long: rem taliter) se habere».

10. See Plato, *Charmides*, 115e.

The Indians say that when a woman is carrying something related to the elephant mixed with honey, she will never become pregnant. The evidence for this, they say, is that when you suspend to a tree something that comes from the elephant, that tree will not bear any fruit that year. Some physicians have reported that when you suspend the right leg of a turtle to someone with gout, it will be useful to him. If the ailment is in the left leg, then it is the turtle's left leg which, when suspended to it, will be useful to him. Likewise, the front legs for the hands with gout. The peony root and pyrethrum are useful against epilepsy in young people when they are suspended to someone having it. One of these two will be satisfactory when it is suspended to him. If the hair of a black dog in which there is no white is suspended to him, it is useful against epilepsy[11].

The Indians say that the elephant's droppings mixed with honey and placed in the woman's vulva will prevent her from conceiving. This is attested to by the fact that, when suspended from trees, [this mix] will not permit them to bear fruit. Aaron said: "When they are mixed with a horse's milk, tied in stag leather and suspended from a woman's navel, the droppings of elephants will prevent her from conceiving". Some physicians say that a tortoise's right foot is helpful when it is suspended to the right foot of someone with gout, and the same holds true for the left [foot] with the left, and also for the hands. Likewise, when a peony root is suspended to the neck, it is useful for children with epilepsy, and the same holds true for pyrethrum. It is also the case with the hair of an entirely black dog[12].

As we see, the examples are the same, and they are given in the same order. In one place, the Latin version provides a further example, with explicit reference to Aaron. This Aaron, whose name never appears in 52b, can probably be identified with Aaron of Alexandria, the early first-/seventh-century physician who wrote a medical trea-

11. See p. 481-83.

12. *De Phys. Lig.*, ed. Casazza, lines 122-31: «Indi dicunt stercus elefantinum cum melle mistum (Long: mixtum) et in vulva mulieris positum numquam permittit concipere. Testatur hoc quia arbori suspensum non fructificare permittit. Aaron dixit: "Stercus elefantinum cum lacte caballino mistum (Long: mixtum) et corio cervino ligatum et umbilico mulieris (Long: mulieri) suspensum non concipere permittit". Quidam medici dicunt pedem testudinis dextrum, pedi podagrici dextro suspensum (Long: dextrum pedi podagrici), iuvare. Sinistro sinistrum similiter. Idem et in manibus. Item, peoniae radix (Long: radix pionie) in collo, pueris valet epilempticis, similiter piretrum. Idem facit pilus nigri ex toto (Long: ex toto nigri) canis».

tise called *Pandectae*[13]. The fact that this example is lacking in 52b shows that the source for the Latin version cannot be 52b or, in any case, not 52b alone.

In other places, we find that the two versions match in content, but that the formulation is substantially different. We often notice a certain tendency in the Latin version to present, in an abridged form, what the Arabic version states in greater detail, as in the following passage about the four humors according to Galen's *Commentary* on Hippocrates's book.

He whose temperament is dominated by yellow bile will be irascible. Also, when man is the subject of an intense or frequent wrath, this will prompt maladies resulting from yellow bile to gather together in his body.… From black bile comes firmness, composure, serenity, [the fact of] doing something after examining it and its outcomes, and [after] exercising reflection on it. From blood come cheerfulness and composure. Phlegm does not bring other actions than forgetfulness, stupidity, and negligence. In view of this, it is right, when the physician strengthens the imagination of the ill person and favorably disposes him to the nature of the remedy through spells, incantations, suspending [of hearts], and the like, that this be … someone in whom choleric complexion prevails will become hot-tempered from it, and in the other way round, the choleric [humor] often increases in those who are often angry… Likewise, Galen says: "The intellect and knowledge in the soul will increase from a choleric complexion, continence and studiousness from melancholy, while walks and pleasure [will increase] from a sanguine complexion. Phlegm is not useful to the power of the soul, save in the first alteration of tastes. It is established, therefore, that if a physician helps the complexion of the soul in some manner by way of a spell, an adjuration, or by suspending [something] to the neck, this will be also helpful to the complexion of the body"[14].

13. On this author, see Ch. Riggs, *The Oxford Handbook of Roman Egypt* (Oxford 2012), 311-12.

14. *De Phys. Lig.*, ed. Casazza, lines 34-36 and 38-44: «Cui colerica complexio dominatur, fit inde iracundus, et econverso, in saepe irascentibus, colera augmentatur.… Item Galienus: "Intellectus et scientia in anima ex complexione augmentatur colerica, continentia et studiositas ex melancolia (Long: melancolica), deambulatio vero et delectatio ex complexione sanguinea. Flegma nichil adiuvat virtutem animae nisi in prima gustatorum mutatione". Constat ergo quia si medicus animae complexionem quoquomodo adiuverit incantatione, adiuratione sive colli suspensione, corporis quoque complexionem adiutam esse».

[done] through the actions of [the imagination], since the temperament is modified in accordance with the alteration of the faculties of the soul and with the favorable disposition of [this soul] toward a thing without [using] the thing[15].

Among the differences between the two versions, one is especially worthy of note. At the end of the passage, when the Latin speaks of the manner in which a physician may intervene by using spells, it is only a question of strengthening the patient's temperament. By contrast, in 52b, what is at stake is not so much the strengthening of the patient's temperament as the strengthening of his power of imagination. The spells do not work on the patient's body directly, but act on its imagination, which itself prepares the body to accept the treatment. Once again, just as we noticed with the quotation from Plato, the Arabic version provides us with a reference to imagination (*wahm*) that is not found as such in the Latin version. There, indeed, the word *wahm* corresponds to various Latin words throughout the text. Sometimes, the translator writes *animae intentio*, sometimes *animae complexio*, and sometimes it is not written at all. But this *wahm* seems to have been a key concept from our compilator/author of Epistle 52b, since we read the following, about one page before the first of the quotations above, in what looks like a bridge passage composed by the compiler himself.

May God make you, and all of our Brethren, attain the grace of His existence! Since we have reported the modality of magic, auspices, omens, the making of talismans, the study of the quiddity of the spiritualities that populate the Earth, that take care of the development of newborn [beings] and are appointed for the preservation of the creation, let us now report some examples of imagination (*wahm*), the quiddity of spells and incantations, and their properties, God Most High willing[16].

15. See p. 447-49.
16. Forthcoming in our edition of Epistle 52b (see note 2 above).

So it appears that discussing the power of man's imagination was part of the compiler's plan (insofar as we can speak of a plan for a work so heterogeneous) and that illustrating the issue with medical examples might have been the very reason the compiler had such extensive recourse to Qusṭā b. Lūqā's treatise in the following pages.

Interestingly, we observe at this point that the two other versions of the Epistle on Magic, namely 52a and 52c, also concern *wahm*. We could also add that the three versions mention the Indians in this context. This, however, does not imply that we can find some kind of continuity between these versions since they treat the issue in a very different manner. The writer of 52a only mentions in passing the ability of a particular group of Indians to use their power of imagination (*bi-awhāmi-him*) to see "very extraordinary things that most people deny"[17]. In 52c, a chapter is indeed devoted to "imagination and resolve" (*wahm wa-himma*)[18] but, even if that section also depends on an anonymous source, it is clear from the content that it cannot be the same as the one we are concerned with here. In fact, the title of the Epistle on Magic, as it appears in most manuscripts, irrespective of the version used, actually includes the notion of imagination along with spells, incantations, divination, omens, auspices, and the evil eye. This fact may easily explain why all these sub-categories of magic are also discussed, or at least mentioned, in all three versions without necessarily implying a continuity between the three known versions of the epistle, nor a common tradition[19]. In all likelihood, the presence of *wahm* in the title of the *risāla* may be what prompted the compiler of 52b to include a section on it.

In another passage, for which we have not found a counterpart in Latin, the text of Epistle 52b defines *wahm* as "a faculty that takes the meanings of sensible beings and returns with them to the soul, as [to] its affectionate counselor (*nāṣiḥ*)"[20]. This definition is followed

17. Epistle 52a, ed. de Callataÿ and Halflants, 97.

18. Forthcoming edition. We thank Janne Mattila for providing us with this reference.

19. The hypothesis of such a continuity was recently put forward, in our eyes too hastily, in L. Saif, «A Study on Ikhwān al-Ṣafā''s Epistle on Magic, the Longer Version (52b)», in *Islamicate Occult Sciences in Theory and Practice*, ed. L. Saif, F. Leoni, M. Melvin-Koushki, and F. Yahya (Leiden 2021), 168.

20. See p. 443.

by an example of how this affectionate counselor may actually work to influence people, depending on the balance or imbalance of their temperament. Thus, we are told of someone who is served an excellent meal but, after eating it, is warned that the food contains poison. Taking this information at face value, he whose intellect is weak will fall ill, and may even die, whereas the man of sound and healthy intellect will immediately sniff out the lie[21]. These elements are not found in the Latin *De Physicis Ligaturis*, but they may certainly help to explain why the compiler of 52b decided to turn to Qusṭā b. Lūqā's treatise and its wide variety of examples of the "placebo effect" to illustrate the power of the imagination and how the power of autosuggestion can be strengthened by a suitably qualified physician.

It remains to elucidate the relation between our text and the Arabic original of the *De Physicis Ligaturis*. We have observed numerous differences with the Latin version in terms of structure and in the choice of examples. But we also have a great number of examples for which, as we have seen, a close comparison of the Latin and the Arabic equivalent is now possible. As our two versions make clear, the examples were taken from Greek authorities first and so it happens that many of them also came down to us in the original Greek[22]. In the introduction to his edition of the *De Physicis Ligaturis*, Roberto Casazza acknowledged that "the failure to preserve the original Arabic is the main obstacle to the study of the relationship between the quoted sources and the text itself"[23]. Although 52b cannot be taken as the original version, it nevertheless makes it possible, for the first time, to compare these quoted sources in three languages: Greek, Arabic, and Latin.

Here we limit ourselves to a single example. The text includes a quotation from Dioscorides which, in the Greek original, reads as follows: "There is another kind of spider, which builds a dense white

21. See p. 443-45.

22. The location of most original Greek sources has been provided by Wilcox and Riddle in the footnotes to their English translation of the Latin version («Qusṭā ibn Lūqā's Physical Ligatures», 40-48).

23. Casazza, «El De *Phisicis Ligaturis*», 96: «El principal obstáculo para el estudio de la relación entre las fuentes citadas y el texto mismo del De phisicis ligaturis es la no preservación de la versión original».

web. It is said that if you tie it in a pouch and attach it to your arm, it will protect you from quartan fever"[24].

The Latin text is very close to the Greek: "The same (= Dioscorides) [said]: 'There is a species of spider with a compactly knitted and white web which, if one suspends it on the shoulder, protects from the quartan fever'"[25].

By contrast, in Epistle 52b, the text is longer, and not as clear as what we find in the Greek and the Latin versions, with a strange hint at the "drachma" (*dirham*) which we do not understand:

> It has been reported that there is a kind of spider whose white web is as dense as the tight garment like the drachma, and [which] is found on the walls (*ḥīṭān*)[26]; when it is tied in leather and suspended to the upper arm, it prevents quartan fever[27].

Let us conclude by briefly recapitulating the main points of this study. At the end of Epistle 52b is a text that bears important similarities to the *De physicis ligaturis* attributed to Qusṭā b. Lūqā, a treatise of which only the Latin version has reached us so far. However, the Arabic text as we have it also contains several notable differences from the Latin text, and therefore cannot be considered the direct source of the Latin. More probably, they have a common source. It is tempting to assume that this common source is the Arabic text of the work attributed to Qusṭā b. Lūqā. Yet, if this were the case, how could we explain that the compiler of 52b does not mention a name or title at the beginning of the section, whereas he cites Plato, Aristotle, Galen, Socrates, and the Greek and Indian physicians in this same section? More research is needed to clarify this issue. At this stage we can only point out that we now possess two versions, one in Arabic and one in Latin, of the same textual tradition. Although the

24. Dioscorides, *Materia medica*, 2. 63 (ed. Wellmann, 1:141): ἔστι δὲ καὶ ἕτερον εἶδος ἀράχνης, κατασκευάζον τὸν ὑμένα λευκόν, πυκνόν, δ' ἱστορεῖται ἐνδεόμενον εἰς κυστίδα καὶ περιαπτόμενον βραχίονι τεταρταικὰς περιόδους θεραπεύειν·

25. *De Phys. Lig.*, ed. Casazza, lines 102-4: «Idem: "Species est telae araneae (Long: add. idem) spisse textae et candidae, quam si armo suspenderis a quartanis defendit"».

26. Charles Burnett kindly suggested to us, informally, that *ḥīṭān* could be a transcription of the Greek χιτών (tunic, clothes) – a plausible hypothesis in our eyes.

27. See p. 471-73.

Arabic version is earlier than the Latin, the latter may well be closer to the original, as it appears to be a translation in its own right. This does not seem to be the case for the Arabic version.

Edition of the Arabic Version

The text appears in seven manuscripts, as the end section of Epistle 52b (Group A), of the *Rasā'il Ikhwān al-Ṣafā'*.

س = "Sotheby", lot 27 of the auction "Arts of the Islamic world" held in London on 26 April 2017 (sale L17220), which recently re-appeared on the market at Oriental Art Auctions (ART3004459) in Hattemerbroek, Netherlands, end of volume 2 (no foliation), dated 683/1284[28].

ا = Istanbul, Süleymaniye Kütüphanesi, Esad Efendi 3638, fols. 300a-302a, dated ca. 686/1287.

ق = Istanbul, Millet Kütüphanesi, Feyzullah 2131, fols. 167a-169a, dated 704/1305.

ر = Paris, Bibliothèque nationale de France, arabe 2303, fols. 525b-528a, dated 1020/1611.

ع and ²ع = Istanbul, Süleymaniye Kütüphanesi, Atif Efendi 1681, respectively fols. 576a-578a and 579a-581b dated 577/1182.

خ = Oxford, Bodleian Library, Laud Or. 260, fols. 270b-272a, dated 967/1560.

غ = Oxford, Bodleian Library, Marsh 189, fols. 345b-347b, undated.

Manuscript Atif Efendi 1681 contains two versions of this short section, called ع and ²ع, the first being abridged in many places.

For a more thorough study of the links between the witnesses and an attempt to reconstruct a *stemma codicum*, based on the whole of Epistle 52b, we refer the reader to the work of Bruno Halflants in G. de Callataÿ and B. Halflants (eds.) *The Epistles of the Brethren of Purity, On Magic*. 1, pp. 70-78, and of Godefroid de Callataÿ in

28. Unfortunately, س contains two long lacunae in the text edited here. These lacunae are, in all likelihood, not real lacunae, but only pages that were not photographed when the pictures were taken before the manuscript was sold at Sotheby's auction in 2017. We have not been able to get the missing pictures.

G. de Callataÿ, B. Halflants, and S. Moureau, *The Epistles of the Brethren of Purity, On Magic. 2*, forthcoming. For the specific passage edited here, there is a clear and recognizable proximity between manuscripts س, ا, ق, ر and ²ع. Likewise, خ and غ are similar in many passages, although we also observe numerous peculiarities in both these manuscripts. Manuscripts س, ع, ²ع, خ and غ contain lacunae that do not overlap.

When editing the text, preference has usually been given to the readings of manuscript س, except when the other manuscripts of this family agreed against it. Indeed, while ع and ²ع are older, ع contains too many lacunae, and the version in ²ع contains more personal variant readings than the one in س. Where س is lacunary, we preferred to follow manuscript ر, which contains a reliable text of the entire Epistle 52b, although the copy at our disposal was difficult to read.

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Chapter

Know, my brother, that in their books on the soul the sages have written about what distinguishes it in terms of faculties—we have mentioned some of these [faculties] in the present epistle and elsewhere in [our] books—and [what distinguishes] every faculty in terms of works and actions, as well as what distinguishes every spirituality in what we have reported before this chapter.

Since the actions of man resemble those of the Moon and [since] the Moon, when it resides in its mansions, has faculties and actions that oppose one another, similarly the soul also has numerous actions that stem from opposing faculties, and this depends on the temperament, and on the way the balance is maintained or upset.

Know, my brother, that the sphere of the Moon is for the Moon a body in which its actions and works are manifested, and that it is for it a tool from which and in which are manifested the faculties that are visible from it. Likewise, the body is a sphere for the soul, and a tool for

فصل

اعلم يا أخي أن الحكماء قد وضعوا فيما وضعوا من كتبهم في النفس ما يختص بها من القوى ما قد ذكرنا بعضه في رسالتنا وفي غيرها من الكتب ما يختص بكل قوة من الأعمال والأفعال مثل ما يختص بكل روحانية مما ذكرناها قبل هذا الفصل.

ولما كان الإنسان مشاكلا أفعاله للقمر والقمر إذا نزل في منازله فله قوى 5
وأفعال متضادة كذلك للنفس أيضا أفعال كثيرة تصدر عن قوى متضادة وذلك بحسب المزاج وما يكون من الاعتدال والخروج عن الاعتدال.

واعلم يا أخي أن فلك القمر جسد للقمر يظهر أفعاله وأعماله فيه وهو أداة له يظهر منه وفيه ما يبدو عنه من قواه. كذلك الجسم هو فلك للنفس وأداة

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1 يا أخي *ر ع*^{2} *خ ع* : أيها الأخ *ا ق*؛ *زادت* ايدك الله وايانا بروح منه *ا خ* | الحكماء *ا ق ع*^{2} *خ ع* : العلماء *ر*؛ *زادت* الاوايل *خ* | وضعوا^{1} *ق ع*^{2} *خ ع* : وضعو *ا*؛ وصفوا *ر* | فيما *ا ق ر خ* : *سقطت من ع*^{2} *ع* | وضعوا^{2} *ق ر* : وضعو *ا*؛ *سقطت من ع*^{2} *ع*؛ وضعوه *خ* | من كتبهم *ا ق ر ع*^{2} (*أصلح من وكتب في في الحاشية*) *خ* : *سقطت من ع* | في *ر ع*^{2} *خ* : *سقطت من ا ق ع* النفس *ر ع*^{2} *خ* : *سقطت من ا ق*؛ للنفس *ع* | ما *ا ق ر ع* : وما *ع*^{2} *خ* **2** من^{1} *ا ق ر ع*^{2} *خ* : في *ع* | ما^{1} *ا ق ر ع*^{2} *خ* : *سقطت من ع* | قد ... بعضه *ا ق ر ع*^{2} : ذكرنا *خ*؛ *سقطت من ع* | في رسالتنا *ا ق ر خ* : في رسايلنا *ع*^{2}؛ *سقطت من ع*؛ *زادت* هذه *ر*؛ *زادت* في هذه *خ* وفي ... الكتب *ا ق ر ع*^{2} *خ* : *سقطت من ع* | ما^{2} *ا ق ع*^{2} : مما *ر*؛ وما *خ ع* **3** بكل^{1} ... من *ا ق ر ع*^{2} : كل *خ*؛ بكل قوة *ع* | الأعمال والأفعال *ا ق ر ع* : الأفعال والأعمال *ع*^{2}؛ *سقطت من خ* | مثل ... يختص^{2} *ا ق ر ع*^{2} *ع* : *سقطت من خ* | بكل^{2} *ا ر ع*^{2} *ع* : لكل *ق*؛ *سقطت من خ* | ذكرناها ... 4 قبل *ا ق ر ع*^{2} *ع* : ذكرنا باهل *خ* **4** الفصل *ق ر ع*^{2} *خ ع* : الفضل *ا* **5** مشاكلا *ر ع*^{2} *خ ع* : يشاكل *ا ق*؛ *زادت* القمر في *ر* | أفعاله ... والقمر *ا ع*^{2} : أفعال القمر والقمر *ق*؛ افعاله والقمر *ر*؛ بافعاله القمر *خ*؛ افعاله للقمر *ع* | فله *ا ق ر ع*^{2} *ع* : *سقطت من خ* قوى *ر ع*^{2} *خ ع* : قوة *ا ق*؛ *زادت* مختلفة *خ* **6** للنفس *ا ر ع*^{2} *ع* : النفس *ق خ* | أيضا *زادت* لها *ق خ* | كثيرة *ق ر ع*^{2} *خ ع* : كثير *ا* | تصدر *ا ق ر ع*^{2} *ع* : ويصدر *خ* | قوى *ا ق ر خ ع* : قوة *ع*^{2} **7** وذلك *ا ق ر خ* : *سقطت من ع*^{2} *ع* | من *ا ق ع*^{2} *ع* : معنه؟ من *ر*؛ منه *خ* عن *ق ر ع*^{2} *خ ع* : *سقطت من ا* **8** يا أخي *ر ع*^{2} *خ ع* : *سقطت من ا ق* | للقمر *ر ع*^{2} *ع* : للقنمر *ا*؛ القمر *ق*؛ اله *خ* | أفعاله وأعماله *ا ق ع*^{2} *ع* : اعماله وافعاله *ر خ* | فيه *ق ر ع*^{2} *ع* : *سقطت من ا خ* | أداة ... 9 وفيه *ا ر* : *سقطت من ق*؛ أداة له يظهر منه *ع*^{2}؛ دايرة له يظهر فيه ومنه *خ*؛ له أداة *ع* **9** ما يبدو *ا ر* : ما يبدوا *ق خ*؛ ويبدوا *ع*^{2}؛ *سقطت من ع* | عنه ... قواه *ا ق ع*^{2} *خ* : عنه من ؟ *ر*؛ *سقطت من ع* | الجسم *ق ر ع*^{2} *خ ع* : الحسر *ا* | فلك *ق ر ع*^{2} *خ ع* : الفلك *ا* | للنفس *ع*^{2} *ع* : النفس *ا ق ر*؛ القمر *خ* | وأداة *ا ع*^{2} *ع* : واذا *ق ر*؛ واذاة *خ*

it, and it manifests the actions and works of [the soul], and its faculties circulate in the zodiacal signs of [that sphere]. We have previously mentioned the locations of the signs in the body. The Sun brings them about and exerts its influence upon them. Likewise, the soul circulates through the faculty of the Sun in the whole of it. The soul is in the body like the king, and the body is a sphere for [the soul], and it is like the Sun. For the particular soul, the body, from its head to its lowest part is a unique sphere and a unique kingdom which this [particular soul] does not share with anything else and no one but it takes charge of its rulership. Likewise, what [extends] from the highest of the all-encompassing sphere to what is below the sphere of the Moon is a kingdom for the universal soul, which rules everything it contains through the desire of the intellectual faculties and the divine volition and whatever is within it. These are only assigned faculties and appointed angels, and each one has a determined place.

Know, my brother, that as long as the temperament of the body is well-balanced, its system regular, its natures straight, the actions of the soul will similarly appear regular, as it should be. But, when the

لها وبه ومنه يظهر أفعالها وأعمالها وفي بروجه تسري قواها. وقد ذكرنا فيما تقدم من مواضع البروج من الجسد وأن الشمس تحلها كلها وتوثر فيها. كذلك النفس تسري بقوة الشمس فيها كلها. والنفس في الجسم كالملك والجسم فلك لها وهو كالشمس. فالجسم للنفس الجزئية من رأسه الى أسفله فلك واحد ومملكة واحدة لا يشركها فيه غيرها ولا يتولى تدبيره سواها. وكذلك من أعلى الفلك المحيط إلى ما دون فلك القمر مملكة للنفس الكلية وهي المدبرة لجميع ما فيه بمراد القوى العقلية والمشيئة الإلهية وجميع ما فيه. فإنما هي قوى مستخلفة وملائكة موكلة ولكل منهم مقام معلوم.

واعلم يا أخي أنه ما دام مزاج البدن معتدلا ونظامه مستويا وطبائعه مستقيمة تكون أفعال النفس كذلك تظهر مستوية كما ينبغي. فإذا كان

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10 وبه / ق ر $ع^2$: به خ؛ *سقطت من* ع | يظهر / ق ر $ع^2$ خ : تظهَر ع | أفعالها ر $ع^2$ خ ع : فعلها / ق | بروجه تسري $ع^2$ خ ع : برجه تسترى / ؛ برجه تسرى ق؛ برجه ؟ ر | ذكرنا / ق ر $ع^2$ ع : ذكر خ **11** من[1] / ر خ ع : *سقطت من* ق $ع^2$ | من[2] ق ر خ : في / $ع^2$ ع | وأن الشمس / ق ر خ : *سقطت من* ع؛ *زادت* والكواكب ر | تحلها ق ر $ع^2$ خ : يحلها / ع وتوثر فيها $ع^2$ ع : وتوتر فيها / ق خ؛ *سقطت من* ر **12** كذلك / ق ر $ع^2$ ع : وكذلك خ تسري / ق $ع^2$ ع : ؟ ر خ | والنفس ... الجسم / ق ع : *سقطت من* ر $ع^2$ خ | كالملك ... **13** كالشمس / ق : *سقطت من* ر $ع^2$ خ ع **13** فالجسم / ق : والجسم ر $ع^2$ خ؛ *سقطت من* ع للنفس الجزئية / ق ر : في النفس الجزوية $ع^2$؛ والنفس الجزوية خ؛ الجُزويّ تسرِي ع | من ... الى *زادت* فلكه / | أسفله ... **14** فلك / ق $ع^2$ خ ع : ؟ ؟ ر **14** ومملكة ق ر $ع^2$ خ ع : مملكه / يشركها / ق ر $ع^2$ خ : يشتركها ع | فيه / ق ر $ع^2$ ع : فيها خ | ولا / ق ر $ع^2$ خ : *سقطت من* ع | يتولى تدبيره / ق $ع^2$: يتولى بتدبيره ر؛ بتدبيره خ؛ *سقطت من* ع | سواها / ق ر $ع^2$ خ : *سقطت من* ع | وكذلك / ق ر $ع^2$ ع : كذلك خ **15** أعلى / ق ر $ع^2$ ع : اعلا خ الفلك ر $ع^2$ ع : فلك / ق خ | المحيط ... مملكة *زادت* واحدة خ | للنفس / ق ر خ ع : النفس $ع^2$ **16** بمراد ... فيه[2] ر : *سقطت من* / ق $ع^2$؛ بمواد القوة العقلية والمشية الإلهية ما هو فيه خ؛ *مبدأ فراغ في* ع | فإنما هي ر $ع^2$: وانما / ؛ وانما هي ق؛ قافر خ **17** ولكل ق ر : لكل / ؛ فلكل $ع^2$؛ وما خ | منهم *زادت* الاله خ **18** يا أخي ر $ع^2$ خ : أيها الأخ / ؛ *سقطت من* ق؛ *زادت* ايدك الله بروح منه / ؛ *زادت* وايانا خ | أنه / ق ر $ع^2$ خ : *نهاية الفراغ في* ع | ما ... ونظامه / ق ر $ع^2$ خ : ومَتَى ما كان نِظامُ الجَسَد ع | مستويا ... **19** مستقيمة / ق ر $ع^2$: مستوي وطبايعه معتدلة خ؛ مُستَقِيماً ع **19** تكون $ع^2$: يكون / ق ر؛ كانت خ ع | أفعال ... كذلك / ق ر $ع^2$ خ : النَّفسُ ع | تظهر $ع^2$: يظهر / ق ر خ؛ *سقطت من* ع | مستوية ... ينبغي / ق ر $ع^2$ خ : مُستَقِيمةً ع | فإذا / ق ر $ع^2$: اذا خ؛ ومتى ع | كان ... **20** المزاج / ق ر $ع^2$ خ : ما فسَد ع

temperament is corrupt, the actions of the souls are hindered. Likewise for the arts: when one's tool is regular, one has the capability, through it, to ascertain one's practices and to excellently perform one's actions. When it is disturbed and corrupt, it hinders one from good practices and the mastered arts, and the reason is in the instrument, not in the artist. Likewise for the soul: when the temperament of the body is corrupt, its actions are hindered, the faculties that circulate in it become weaker due to the weakness of the constitution and [to] its distance from the well-balanced proportion. Because of this, in young people and women the soul and its faculties are deficient and weak, in accordance with the deficiency of their bodies. The same holds true for the nations whose temperaments are dominated by corrupt mixtures, be this resulting from the intensity of heat and dryness or from coldness and humidity, as with the Zanj and the Slavs.

The sage Plato said: "One needs the healthiness of the temperament, since by the healthiness of the temperament is the purity of reflection and the sincerity of imagination. [This is] because reflection is needed to study the sciences and to direct [reflection] toward the knowable and [to direct] imagination toward the sensible and the comprehensible."

المزاج مفسودا تعوقت أفعال النفس. كذلك الصنائع إذا كانت أداته مستوية قدر بها على إتقان أعماله وتجويد أفعاله. وإذا كانت مضطربة فاسدة عوقته عن الأعمال الحسنة والصنائع المتقنة فصارت العلة في الآلة لا في الصانع. كذلك النفس إذا فسد مزاج الجسد تعوقت أفعالها وضعفت قواها السارية فيها لضعف البنية وبعده من النسبة المعتدلة. ومن أجل ذلك صارت النفس وقواها في الصبيان والنساء ناقصة ضعيفة بحسب نقصان أجسامهم. وكذلك في الأمم الغالبة في أمزجتهم الأخلاط الفاسدة إما من شدة الحر واليبس أو البرد والرطوبة مثل الزنج والصقالبة.

وقد قال الحكيم أفلاطن: "إنه قد يحتاج إلى صلاح المزاج فإنه بصلاح المزاج يكون صفاء الفكر وصدق الوهم لأنه يحتاج الفكر في استقراء العلوم وإرساله نحو المعلوم والوهم نحو المحسوس والمفهوم."

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20 مفسودا / ق ر خ : فاسدا ع^2؛ الجَسَدُ ع | تعوقت / ق ع^2 : تفرقت ر؛ لعوقب خ؛ فسَد ع أفعال النفس / ق ر ع^2 خ : جَرَيان النَّفسِ ع؛ *زادت* والمثال خ؛ *زادت* فيه ع | كذلك الصنائع / ق ر : في ذلك الصانع ع^2؛ في ذلك الضابع خ؛ *مبدأ فراغ في ع* | إذا / ر خ : واذا ق ع^2 | أداته / ق ر ع^2 : *سقطت من* خ **21** بها / ق ر ع^2 : رب.قا خ | إتقان / ق ر ع^2 : اتفاق خ | وإذا / ق ر ع^2 : وان خ | كانت *زادت* افعاله / ق | مضطربة / ق ر ع^2 : مضرة خ | فاسدة *زادت* فهي من قبل اداته / ق | عوقته ق ر ع^2 : عوقبه / خ **22** المتقنة ... الآلة / ق ر ع^2 : *سقطت من* خ | لا / ر ع^2 : *سقطت من* ق خ | في^2 ... 23 الجسد / ق ر ع^2 : *سقطت من* خ **23** تعوقت / ق ر ع^2 : يعوقب خ | السارية فيها / ق ر ع^2 : الشايرة فيه خ **24** وبعده / ق ع^2 : وبعدها ر؛ ومن بعده خ | من ... صارت *زادت* قوى خ | وقواها / ق ر ع^2 : *سقطت من* خ **25** والنساء ر ع^2 خ : *سقطت من* / ق | ناقصة ضعيفة ر ع^2 خ : ضعيفة ناقصة / ق | بحسب / ق ر ع^2 : بج.ت خ | نقصان ق ر ع^2 خ : نقسان / | الأمم ر خ : الامر / ق؛ الأمر ع^2 **26** الغالبة ر : القالب /؛ الغالب ق ع^2 خ | في / ق ر ع^2 : *سقطت من* خ | أمزجتهم / ق ع^2 خ : امز.بتهم ر؛ *زادت* من / ق | إما من / ق ر ع^2 : واما في خ | أو ... 27 والرطوبة ر ع^2 : او البرد واليبس /؛ او البرد الرطوبة ق؛ والبرودة والرطوبة خ **27** الزنج والصقالبة / ر ع^2 : الزبح والصافله ق؛ الريح والصقاله خ؛ *نهاية الفراغ في ع* **28** وقد قال ق ر ع^2 خ : وقال / ع | الحكيم / ق ع^2 ع : حكيم ر؛ *سقطت من* خ | أفلاطن / ق ر ع^2 : أفلاطُون خ ع | إنه ... يحتاج *زادت* الانسان خ | صلاح / ق ر خ ع : إصلاح ع^2 | فإنه / ق ر ع^2 : *سقطت من* خ؛ فإن ع بصلاح ... 29 يكون / ق ر ع^2 ع : *سقطت من* خ **29** صفاء / ق ر ع^2 خ : صَلاحُ ع وصدق الوهم / ق ر ع^2 خ : *مبدأ فراغ في ع* | لأنه / ق ر ع^2 : لا خ | يحتاج *زادت* الى ر خ الفكر^2 / ر ع^2 : للفكر ق : الفهم خ | في استقراء / ق ر ع^2 : *سقطت من* خ | العلوم ق ر ع^2 خ : ؟ / | وإرساله / ق ر ع^2 : وارسله خ **30** نحو^1 ... والمفهوم / ق ر ع^2 خ : *بعد هذه القراءة ابتدأت* غ : *نهاية الفراغ في ع* : *زادت* والمفهوم / : *زادت* فصل غ

Know that imagination is a faculty that takes the meanings of the sensible beings and that returns with them to the soul, as [to] its affectionate counselor. In those [meanings] the soul finds tranquility and acceptance. If the temperament is well-balanced, [this faculty] will convey to the soul the meanings of things as they are, no more no less. If the temperament is corrupt, [this faculty] will convey falsehood to the soul: it will lie to it and will deceive it, and the soul will give credence to it. This is the corrupt imagination and the bad imagination resulting in a variety of afflictions and maladies.

Know, my brother, that the body follows the soul, being ill as a result of [the soul's] malady and healthy as a result of [the soul's] health. Imagination is what spontaneously invests it with its malady when [the soul] is afraid of it, [when] the fear of what it imagines is mixed up with its faculty, and [when] it gives credence to what it imagines. An example of this is a man to whom a good food is served, and who eats it. As soon as he has finished eating it, a man comes to him, looking to him like his affectionate counselor. Expressing sadness and sorrow at

واعلم أن الوهم قوة تأخذ معاني المحسوسات وترجع بها إلى النفس كالناصح الشفيق. فتجد النفس السكون إليها والقبول منها. فإن كان المزاج معتدلا أدت إلى النفس معاني الأشياء بما هي به بلا زيادة ولا نقصان. وإن كان المزاج فاسدا أدت إلى النفس الباطل وكذبتها وخدعتها وصدقتها النفس. وهو الوهم الفاسد والتخيل الرديء ويكون به ضرب من الأسقام والأمراض. 35

واعلم يا أخي أن البدن تابع للنفس يمرض بمرضها ويصح بصحتها. والوهم الداخل عليها من ذاتها بمرضها إذا خافت منه ومازج قوتها الخوف مما تخيلته وصدقت ما توهمته. والمثال في ذلك رجل قدم إليه طعام طيب فأكل منه. فلما فرغ من أكله أتاه رجل شبه الناصح له والمشفق عليه وآراه الحزن والأسف وقال

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31 واعلم *ا ق ر ع*^{2} *خ ع* : اعلم *غ* | الوهم قوة *ر ع*^{2} *ع* : للوهم قوة *ا ق* : للوهم قوى *خ غ* النفس *ا ق ر خ غ* : النفوس *ع*^{2} *ع* | كالناصح *زادت لها ع* **32** النفس *ا ق ر ع*^{2} *خ ع* : *سقطت من غ* | والقبول منها *ر ع*^{2} *خ غ* : والقبول *ا ق* : *سقطت من ع* | المزاج *ا ق ر ع*^{2} *غ ع* : *سقطت من خ* **33** أدت *ا ق ر ع*^{2} *غ ع* : ادي *خ* | بما ... به *ا ق خ* : بما هي عليه *ر ع*^{2} : بما هي فيه *غ* : *سقطت من ع* | بلا *ا ق ر ع*^{2} *خ ع* : بغير *غ* **34** فاسدا *ا ق ر ع*^{2} *خ غ* : باطِلاً *ع* | أدت *ا ق ر ع*^{2} : دبى *خ* : اذت *غ* : كان *ع* | إلى النفس *ا ق ر ع*^{2} *خ غ* : الأمر بالضِّدّ *ع* | الباطل *ا ق ر ع*^{2} *خ غ* : *مبدأ فراغ في ع* | وكذبتها *ا ق ر ع*^{2} : بدتيها *خ* : وكذبها *غ* | وخدعتها *ا ر ع*^{2} *خ غ* : *سقطت من ق* | وصدقتها *ق ر ع*^{2} *خ غ* : وصدّقها *ا* النفس^2 ... الوهم *ر ع*^{2} *خ غ* : *سقطت من ا ق* : *زادت* الباطل *ر* **35** الفاسد *ر ع*^{2} *خ غ* : *سقطت من ا ق* | والتخيل *ر ع*^{2} *خ* : *سقطت من ا ق* : وبختيل *غ* | الرديء ويكون *ر ع*^{2} *خ غ* : *سقطت من ا ق* | به ضرب *ر ع*^{2} *غ* : *سقطت من ا ق* : منه ضروب *خ* | من *ر ع*^{2} *خ غ* : *سقطت من ا ق* | والأمراض *ا ر ع*^{2} : *سقطت من ق* : والاعمال *خ* : والاعلال *غ* : *نهاية الفراغ في ع* **36** واعلم *ا ق ر ع*^{2} *خ ع* : اعلم *غ* | يا أخي *ر ع*^{2} *خ غ ع* : *سقطت من ا ق* | للنفس *ق ر ع*^{2} *خ ع* : النفس *ا غ* | يمرض *ا ق ر ع*^{2} *خ ع* : نمرض *غ* **37** بمرضها *ا ق ر خ غ* : *سقطت من ع*^{2} : *مبدأ فراغ في ع* | إذا *ا ق ر ع*^{2} *خ* : *سقطت من غ* | خافت *ق ر ع*^{2} *خ غ* : خاف؟ *ا* | ومازج *ا ق ر ع*^{2} : ومازجت *خ غ* | قوتها الخوف *ا ق ع*^{2} *خ غ* : ؟ ؟ *ر* **38** وصدقت *ر ع*^{2} *خ* : فصدقت *ا ق* : وصادفت *غ* | توهمته *ا ق ع*^{2} *خ* : توهمه *ر* : توقت *غ* : *نهاية الفراغ في ع* | والمثال *ا ق ر ع*^{2} *خ غ* : والمِثَلُ *ع* | في ذلك *ا ق ر ع*^{2} *غ ع* : *سقطت من خ* | إليه *ا ق ر ع*^{2} *خ ع* : *بعد هذه القراءة ابتدأت س* : له *غ* | طعام طيب *س ا ق ر ع*^{2} *ع* : طعاما طيبا *خ غ* **39** أتاه *س ا ق ر ع*^{2} *غ ع* : إياه واتاه *خ* | شبه الناصح *س ا ق* : شبه ناصح *ر خ غ* : مثل الناصح *ع*^{2} : مِثلَ النّاصِح *ع* | له *س ا ق ر ع*^{2} *خ* : لما *غ* : *سقطت من ع* والمشفق *س ق ع*^{2} : او المشفق *ا* : ومشفق *ر* : الشفق *خ* : لمشفق *غ* : *سقطت من ع* | عليه *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | وآراه *س ر ع*^{2} : فاراه *ا ق خ غ* : *سقطت من ع* | الحزن *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | والأسف *س ا ق ر ع*^{2} *خ* : ه؟ *غ* : *سقطت من ع*

him, [the man] tells him: "This food that you have eaten contains a lethal poison." If he who receives this information is of a weak intellect, he will take that imagination for granted. His soul will fall ill and his body will follow it, and possibly end up dying that instant or catching some illness. Were the matter as was stated to him, by doing so [this man] would not do anything but what he did, spontaneously, to himself through this imagination, as the poem states: "Enemies do not attain an ignorant person as much as the ignorant person attains himself." Were [the man's] reflective faculty healthy enough to say to that imagination, after pondering the statement [of the pseudo-counselor]: "What is the evidence for what you have said, namely, that the food I have eaten contains a lethal poison? And in which respect is there any harm in this?", he would see [that man's] lie, as we previously stated by saying that the body follows the soul. Galen reported in the Commentary on Hippocrates's *Book on Mixtures* that the action of the

40 له إن هذا الطعام الذي أكلته فيه سم قاتل. فإن كان المخبر بذلك قليل العقل
قبل ذلك الوهم فمرضت نفسه وتبعها جسده وربما زاد به ذلك حتى يموت
للوقت أو يحدث به علة ما. فلو كان الأمر على ما قيل له ما فعل به إلا ما
فعله بنفسه بذلك الوهم كما قيل شعر: ''لا يبلغ الأعداء من جاهل ما يبلغ
الجاهل من نفسه.'' ولو كانت قوته المفكرة سالمة حتى يقول لذلك الوهم بعد
45 افتكاره في قوله: ما الدليل على قولك أن الطعام الذي أكلته فيه سم قاتل؟ وفي
أي شيء كان منه أذى؟ رأى كذبه كما قدمنا من القول أن البدن تابع لأمر
النفس. وقد ذكر جالينوس في تفسير كتاب بقراط في الأخلاط أن فعل مزاج

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40 هذا *س ا ق ر ع*^{2} *ع* : *سقطت من خ غ* | الذي *س ق ر ع*^{2} *خ غ ع* : ؟*ا* | أكلته *س ا ق ر ع*^{2} *خ ع* : هـ؟ *غ* | قاتل *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | المخبر *س ا ق ر ع*^{2} *خ غ* : المختَبَرُ *ع* **41** قبل *س ا ر ع*^{2} *خ ع* : وقل *ق* : قتل *غ* | الوهم *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | فمرضت *س ا ر ع*^{2} *خ غ ع* : *نمرضت ق* | وتبعها *س ر ع*^{2} *ع* : ومعها *ا ق* : فتبعها *خ* : فيتعها *غ* | وربما *س ا ق ر ع*^{2} *خ ع* : ؟مازاد *غ* | زاد ... يموت *س ر ع*^{2} : زاد به ذلك فيموت *ا ق* : راقه ذلك حتى يموت *خ* : ذلك به يموت *غ* : مات *ع* **42** للوقت أو *س ا ق ر ع*^{2} *خ غ* : *مبدأ فراغ في ع* | يحدث *س ا ق ع*^{2} *غ* : تحدث *ر خ* | ما^{1} *س ا ق ر ع*^{2} *خ* : *سقطت من غ* | فلو *س ر* : ولو *ا ق خ غ* : وإذ *ع*^{2} | قيل *س ا ر ع*^{2} *خ غ* : هل *ق* | به^{2} *س ا ق ر ع*^{2} : *سقطت من خ غ* : *زادت* العدو *ا ق* | إلا *س ا ر خ غ* : *سقطت من ق ع*^{2} ما^{4} *س ا ق ر ع*^{2} : مثل *خ غ* **43** فعله *س ا ق ر ع*^{2} *خ* : فعل *غ* | بنفسه *س ا ق ر ع*^{2} *خ غ* : *نهاية الفراغ في ع* | كما ... شعر *س ر* : كما قيل *ا ع*^{2} : كما قال قيل في الامثال *ق* : وقل قيل المثل *خ* : وقد قيل *غ* : ولهذا قال *ع* | لا *س ا ق ر ع* : لن *ع*^{2} : ما *خ غ* | يبلغ الأعداء *س ا ع*^{2} *ع* : بلع الاعدا *ق* : يبلغ العداء *ر خ غ* | يبلغ^{2} *س ر ع*^{2} *خ غ ع* : يبلغه *ا* : بلع *ق* **44** ولو ... سالمة *ا ق ر خ* : ولو كانت قوته المفكرة *س* : ولو كان قوي الفكرة سالما *ع*^{2} (*أصلح في الحاشية وكتب* ولو كانت فكرته قوية سالمة) : ولو كانت قوته الفكرية؟ سالمة *غ* : *مبدأ فراغ في ع* يقول *س ا ق ع*^{2} : تقول *ر خ غ* | لذلك *س ا ق ر ع*^{2} *غ* : *سقطت من خ* | الوهم *زادت* له *ر* **45** افتكاره *س ر ع*^{2} *خ غ* : ؟*ا* : أفكاره *ق* | في ... على *زادت صحة ا ق* | قولك *س ا ق ر ع*^{2} *خ* : ذلك *غ* | سم *س ا ق ع*^{2} *خ غ* : *سقطت من ر* **46** كان *ق ر ع*^{2} *خ غ* : *سقطت من س ا* | أذى *س* : اذا *ا ق* : فاذا *ر خ غ* : إذاً *ع*^{2} | رأى *س ر ع*^{2} *خ غ* : لبان *ا ق* : *زادت* له *ق* | كذبه *س ا ق ر ع*^{2} *غ* : لذبه *خ* : *زادت* انحلّ ذلك الوهم وسلم من فعله *ر* : *زادت* ان حل من نفسه ذلك الوهم *خ* | كما *س ا ق ع*^{2} *غ* : لما *ر* : *سقطت من خ* | قدمنا *س ا ق غ* : ؟ *ر* : قد بينا *ع*^{2} : وسلم *خ* | من *س ا ق ر ع*^{2} *غ* : منه *خ* | القول ... 47 النفس *س ا ق ر ع*^{2} *غ* : *سقطت من خ* **47** تفسير *س ا ق ر ع*^{2} : *سقطت من خ غ* | أن ... 48 في^{1} *س ا ق ر ع*^{2} *غ* : *سقطت من خ*

temperament of the mixtures in the soul is equivalent to the action of the natural dispositions of the soul in the mixtures. To comment on this: he whose temperament is dominated by yellow bile will be irascible. Also: When man is the subject of an intense or frequent wrath, it will prompt maladies resulting from yellow biles to gather together in his body. [Galen] said that the natural dispositions of the soul follow the temperament of the body, and for this reason he said that those whose nature is yellow [bile], in case it prevails in the body without [causing] damage, [this] will make the arrangement good. This man is good-minded, has a sincere ability to reflect, a sharp sense of scrutiny, a good recollection, a penetrating insight, is endowed with bravery and wrath, is successful, brave, and swift in his actions. From black bile come firmness, composure, serenity, [the ability to] do something after examining it and its outcomes and [after] reflecting on it. From blood come cheerfulness and relaxedness. Phlegm does not bring actions other than forgetfulness, stupidity, and negligence. In view of this, it is right, when the physician strengthens the imagination of the ill person and favorably disposes him to the nature of the remedy

الأخلاط في النفس مساو لفعل أخلاق النفس في الأخلاط. وتفسير ذلك أن من كان مزاجه الغالب عليه المرة الصفراء فإنه يكون غضوبا. وأيضا فإن
50 الإنسان متى غضب غضبا شديدا أو متواترا اجتمع من ذلك في بدنه الأمراض من المرار الأصفر. وقال إن أخلاق النفس تابعة لمزاج البدن ومن ذلك قال إن أصحاب طبيعة الصفراء إذا كانت غالبة على الجسد من غير إضرار به إنه يحسن التدبير. كان ذلك الإنسان جيد الخاطر صادق الفكر حاد النظر جيد الحفظ ثاقب الرأي ذا جرأة وغضب حسن العاقبة جريء سريع في أعماله.
55 ومن المرة السوداء يكون الثبات والرزانة والطمأنينة وفعل الشيء بعد النظر فيه وفي عواقبه وإعمال الفكر فيه. ومن الدم يكون الانبساط والاسترسال. والبلغم فليس من أفعاله إلا النسيان والبله والغفلة. فقد صح بهذا الاعتبار أن الطبيب

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48 النفس[1] *س ا ق ر غ* : التفسير ع[2] : *سقطت من خ* | مساو *س ا ر ع*[2] *غ* : مسار *ق* : *سقطت من خ* | لفعل *س ا ق ر ع*[2] *غ* : *سقطت من خ* | أخلاق *ا ق ر ع*[2] : احلام *س* : *سقطت من خ* : اخلاط *غ* | النفس[2] *س ا ق ر ع*[2] *غ* : *سقطت من خ* | في الأخلاط *ا ق ر ع*[2] *غ* : والاخلاط *س* : *سقطت من خ* | وتفسير *س ا ر ع*[2] *خ* : تفسير *ق* : *مبدأ فراغ في غ* ذلك *ا ق ر ع*[2] *خ* : *سقطت من س* **49** من *س ا ق ر ع*[2] : *سقطت من خ* | فإنه *ر ع*[2] *خ* : *سقطت من س* : انه *ا ق* | غضوبا *س ا ر ع*[2] *خ* : عضوبا *ق* **50** أو متواترا *س ر خ* : ام متواترا *ا ق* : *سقطت من ع*[2] | الأمراض ... 51 المرار *س ا ق ع*[2] : من الامراض *ر* : المرار *خ* **51** الأصفر *س ا ق ر ع*[2] *خ* : *نهاية الفراغ في ع* | إن[1] *س ا ق ع*[2] *ع* : *سقطت من ر* : أيضا *خ* | النفس *س ق ر ع*[2] *خ ع* : ؟ *ا* | ومن ... قال *س ا ق ر ع*[2] *خ* : *مبدأ فراغ في ع* | إن[2] *ا ق ع*[2] *خ* : *سقطت من س ر* **52** أصحاب طبيعة *س ا ر* : اصحاب الطبيعة *ق* : طبيعة أصحاب ع[2] : صاحب طبيعة *خ* | إنه *س ر ع*[2] : ان *ا ق* : *سقطت من خ* **53** يحسن *س ا ق ع*[2] : حسن *ر خ* **54** الحفظ *س ر ع*[2] *خ* : الفكر والحفظ *ا ق* | ثاقب *ر ع*[2] *خ* : ثابت *س ا* : ناهب *ق* | ذا جرأة *س ر* : ذاكره *ا ع*[2] : والمذاكره *ق* : داحره؟ *خ* | وغضب *س ا ر ع*[2] *خ* : عضوب *ق* | جريء *س ا ق ع*[2] : جريا *ر* : حري *خ* | سريع *س ا ق ع*[2] *خ* : سريعا *ر* **55** ومن ... يكون *س ا ر ع*[2] *خ* : *سقطت من ق* | الثبات ... والطمأنينة *س ا ر ع*[2] : *سقطت من ق* : السبات والدراية والاطمانينية *خ* | وفعل ... النظر *س ا ر ع*[2] *خ* : *سقطت من ق* | فيه ... 56 وفي *س ر ع*[2] : في *ا ق* : فيه *خ* **56** وإعمال *س ا ق ر ع*[2] : واستعمال *خ* | الفكر *س ا ق ع*[2] *خ* : الراى *ر* | ومن *س ق ر خ* : وعن *ا ع*[2] : *زادت* قلبة *ر* | والبلغم *س ا ر خ* : واما البلغم *ق ع*[2] **57** من *س ا ق ر خ* : في ع[2] | إلا *س ا ر ع*[2] : *سقطت من ق* : *مبدأ فراغ في خ* | والغفلة *س ا ق ر ع*[2] : *نهاية الفراغ في غ* | فقد ... بهذا *س ا ق ر ع*[2] *غ* : *نهاية الفراغ في ع* | الاعتبار *س ا ر ع*[2] *غ* : *سقطت من ق* : وقد قال الحكيم ع | أن ... 58 قوى *زادت* المزاج الجيد نفعه ع

through spells, incantations, the suspending [of hearts] and the like, that this be [done] through the actions of [the imagination], since the temperament is modified in accordance with the modification of the faculties of the soul and with the favorable disposition of [this soul] toward a thing without [using] the thing.

Know, my brother, that spells and incantations are a trickery and a deception for the soul, in such a way that imagination is modified and moves on from the fear of the illness to serenity, to the hope of vitality, and then to the use of genuine medical therapy. This will be more rapid for the deliverance of the sick person. Know that, when the imagination of the ill person is strengthened by the fear of the illness and the despair of life, this will be a cause for his death. Galen said: "There are people who imagine that, if they fall ill, they will die, and that is the way it happens. There are people who, when they fall ill,

إذا قوى وهم المريض وميله إلى طبيعة الدواء بالرقى والعزائم والتعاليق وما شاكل ذلك كان ذلك بأفعاله إذا تغير المزاج بحسب تغير قوى النفس وميلها إلى شيء دون الشيء. 60

واعلم يا أخي بأن الرقى والعزائم حيلة وخدعة للنفس حتى يتغير الوهم ويخرج من حد الخوف من العلة إلى الطمأنينة ورجاء العافية ثم استعمال العلاج الطبي على حقائقه. كان ذلك أسرع إلى خلاص المريض. واعلم أنه إذا قوي وهم العليل بالخوف من العلة والإياس من الحياة كان ذلك سببا لموته. وقد قال جالينوس: "إن من الناس من يتوهم أنه إذا اعتل مات فيكون ذلك كذلك. 65

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58 وهم *س ا ق ر ع*^{2} *غ* : *مبدأ فراغ في ع* | المريض *ا ق ع*^{2} *غ* : العليل *س ر* : *نهاية الفراغ في خ* | وميله *س ا ق ر ع*^{2} : ومسله *خ* : وميله؟ *غ* | إلى طبيعة *س ا ر ع*^{2} : *سقطت من ق* : طبيعة *خ* : الى مبع؟ *غ* | الدواء بالرقى *س ا ر ع*^{2} *خ غ* : الرويا وبالوحى *ق* | والتعاليق *س ر ع*^{2} *خ غ* : والتعاويـد *ا ق* **59** كان ذلك *ا ق* : كان *س ر* : *سقطت مـن ع*^{2} : وكان ذلك *خ غ* بأفعاله *س ا ق ر ع*^{2} *خ* : بافعا *غ* | إذا *زادت* كان *ر* | تغير^{2} *س ع*^{2} *خ غ* : *سقطت من ا ق ر* | وميلها *س ا ق ر غ* : *سقطت من ع*^{2} : ومنعها *خ* | إلى ... 60 دون *س ا ق ر خ غ* : إلى سدورسي *ع*^{2} **60** الشيء *س ر خ غ* : شي *ا ق* : *سقطت من ع*^{2} **61** يا أخي *س ر ع*^{2} *خ غ* : أيها الأخ ايدك الله بروح منه *ا* : أيها الأخ *ق* | بأن *س ر ع*^{2} *غ* : ان *ا ق خ* | الرقى *س ا ق ر ع*^{2} : الرقا *خ غ* | حيلة *س ا ر ع*^{2} *خ غ* : *سقطت من ق* | وخدعة *س ا ق ر ع*^{2} *خ* : وحد. *غ* | يتغير *س ا ق ع*^{2} *خ غ* : تغير *ر* | ويخرج *س ا ق ع*^{2} : وتخرج *ر خ غ* **62** حد *س ا ق ع*^{2} : *سقطت من ر خ غ* | إلى *ا ق ر ع*^{2} *خ* : *سقطت من س* : *مبدأ فراغ في غ* | الطمأنينة *س ا ع*^{2} *خ* : الطماينه *ق ر* | ثم *زادت* إن *ع*^{2} (*أصلح في الحاشية وكتب* إذا) | استعمال *ا ق ر ع*^{2} *خ* : استعجال *س* | العلاج *س ا ق ر ع*^{2} : الصلاح *خ* | الطبي *س ا ر ع*^{2} *خ* : الطبع *ق* **63** حقائقه *ا ق ر ع*^{2} *خ* : حقايه *س* | كان ذلك *س ا ق ع*^{2} *خ* : *سقطت من ر* | خلاص *س ا ق ر ع*^{2} : صلاح حال *خ* | المريض *س ا ق ر ع*^{2} *خ* : *نهاية الفراغ في ع* | واعلم *زادت* يا اخي *س* | قوي ... 64 بالخوف *س ا ق ر ع*^{2} *خ* : فزع العليل *ع* **64** من العلة *س ا ق ر ع*^{2} *خ ع* : *نهاية الفراغ في غ* | والإياس *س ا ق ع*^{2} : والياس *ر خ* : والباس *غ* : *سقطت من ع* | من^{2} *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | الحياة *ا ق ر خ غ* : الحيوة *س* : الحيوة *ع*^{2} : *سقطت من ع* كان ... لموته *س ا ق ر ع*^{2} *خ غ* : مات بالوهم واذا رجا العلة برئ سريعا *ع* | وقد *س ا ق ر ع*^{2} : كما *خ غ* : *سقطت من ع* | قال ... 65 من^{1} *س ا ق ر ع*^{2} *خ غ* : ومن *ع* **65** أنه إذا *س ا ق ر ع*^{2} *خ غ* : ان طَعامَه مُضِرٌّ فيمرَض ومِنهم مَن يعتقِد السّلامةَ فيسلُم *ع* | اعتل *س ا ق ر ع*^{2} *خ غ* : *مبدأ فراغ في ع*

conceive in their souls that [this] will not cause them damage and that they will recover swiftly, and they tell themselves that, and that is the way it happens. There are people who imagine that, when eating such a food, they will fall ill, and that is the way it happens. There are people who are sick and imagine that, when eating something, it will provide vitality, and they conceive that in themselves, and this is the way it happens. Likewise, we find a lot of people who live in a most salutary existence and a most delicious life, in safety and serenity, yet they imagine the opposite of this, and feel fear in themselves. This will be a cause for the disturbance of their lives and for the termination of the pleasure and joy which they experience. There are people who have the most intense concerns and tribulations, and who conceive a prompt relief and exit from [the situation] in which they are, and they are delighted and overjoyed and are not afraid of [the situation] they are in.

ومن الناس من إذا اعتل تصوره في نفسه أنه لا يضره فيبرأ سريعا ويحدث نفسه بذلك فيكون كذلك. ومن الناس من يتوهم أن طعاما إذا أكله اعتل فيكون كذلك. ومن الناس من يكون في علة فيتوهم أنه إذا أكل شيئا ما كان به العافية ويتصور ذلك في نفسه فيكون كذلك. وكذلك نجد كثيرا من الناس يكونون في أهنأ عيش وألذ حياة في أمن وطمأنينة فيتوهمون ضد ذلك ويشعرون 70
أنفسهم الخوف فيكون ذلك سببا لتنغيص عيشهم وزوال ما هم فيه من السرور والفرح. ومنهم من يكون في أشد الكرب والبلاء فيتصور الراحة مما هو فيه والخروج منه سريعا فيطرب ويفرح ولا يهوله ما هو فيه. ومن الناس من يكون

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66 ومن ... من *س ا ق ع*^{2} : *مبدأ فراغ في ر* : *سقطت من خ غ* | إذا *س ا ق ع*^{2} *غ* : *سقطت من خ* | تصوره *س ا ق ع*^{2} *خ* : تصور *غ* | أنه *س ا ق ع*^{2} : انها *خ غ* | يضره *س ا ق ع*^{2} : تضره *خ* : تضرة *غ* | فيبرأ *س ا ق ع*^{2} : وانه برا *خ* : وانه يرى *غ* | سريعا ... 67 فيكون[1] *زادت* ذلك *س* **67** كذلك *س ا ق ع*^{2} *خ غ* : *نهاية الفراغ في ر* | ومن ... 68 كذلك *س ا ر ع*^{2} *خ* : *سقطت من ق غ* **68** يكون *س ا ق ر ع*^{2} *خ* : فيكون *غ* | أكل شيئا : اكل شيا *س ا ق ر خ* : أكل شيا ع^2 : كان سنيا *غ* | ما ... 69 العافية *س ا ع*^{2} : ما كان به العاقبه *ق* : كان به العاقبة *ر* : كانت العاقبة *خ* : مافان العافيه *غ* : *زادت* فيه *خ* **69** ويتصور *ا ق ر* : وتصور *س ع*^{2} : وجود *خ* : وصور *غ* | ذلك ... نفسه *زادت* ويجد؟ ثربابه؟ *ر* : *زادت* وحومانه *خ* : *زادت* وضدها به *غ* فيكون *زادت* ذلك *غ* | وكذلك *س ر ع*^{2} *خ* : ولذلك *ا ق غ* | نجد *س ا ق ر خ غ* : تجد ع^2 **70** يكونون *س ا ق ر ع*^{2} : *سقطت من خ غ* | حياة *ا ق ر خ غ* : حيوة *س ع*^{2} | في^2 *س ع*^{2} *خ غ* : *سقطت من ا ق* : به؟ *ر* | أمن *س ر ع*^{2} : وامن *ا ق* : امان *خ غ* | وطمأنينة *س ا ق ر ع*^{2} *خ* : و؟ *غ* | فيتوهمون *س ا ق ر ع*^{2} : فيتوهم *خ غ* | ضد *س ا ع*^{2} : *سقطت من ق ر خ غ* | ويشعرون *س ا ق ع*^{2} : ويستشعرون *ر* : ويشعرننسه؟ *خ* : و؟ *غ* **71** أنفسهم *س ا ق ع*^{2} : لانفسهم *ر* : *سقطت من خ* : نفسهم *غ* | سببا *س ا ق ر ع*^{2} : *سقطت من خ* : سينا *غ* لتنغيص *س ا ق ر ع*^{2} *خ* : لتبعيض *غ* | عيشهم *س ا ق ر ع*^{2} : عيسه *خ غ* | ما هم *س ا ق ر ع*^{2} : مما هو *خ غ* | من *س ا ق ر ع*^{2} : *سقطت من خ غ* **72** من *س ق ر ع*^{2} *خ غ* : *سقطت من ا* | فيتصور *س ا ق ر ع*^{2} *خ* : فتصور *غ* | الراحة *س ا ق ر ع*^{2} : *سقطت من خ* : الراقة *غ* | مما ... 73 والخروج *س ا ق ر ع*^{2} *غ* : *سقطت من خ* **73** منه *س ا ق ر ع*^{2} : *سقطت من خ* : مما *غ* | سريعا ... ولا *س ا ق ر ع*^{2} *غ* : *سقطت من خ* | يهوله *س ا ق ر ع*^{2} : *سقطت من خ غ* | ما *س ا ق ر ع*^{2} : وما *خ* : *سقطت من غ* | هو *س ا ق ر ع*^{2} : يكون *خ غ* ومن *س ا ق ر ع*^{2} : من *خ غ* | الناس *زادت* ومنهم *خ* | من *س ا ق ر ع*^{2} *خ* : *سقطت من غ*

There are people who are continuously depressed, sad and regretful about what is vanishing, and who reflect on what death is. They continuously imagine what causes them grief and sadness. Others do the opposite of this."

Galen said: "It is necessary to strengthen the imagination of the ill person only by what is beneficial for his body, and by taking care that this does not lead him to abandon the treatment and the use of the remedy, by relying on spells and contenting himself with them, [thus,] leaving out the treatment. In that way the off-balanced nature would prevail, and the illness would occur in the soul because the intellect has stopped [being used], so that it would necessitate another training, which would be more difficult and more tiring."

He also said: "When it has been imprinted in the patient's imagination that, by using this remedy and by being patient with this treatment, he will be patient for his recovery, vitality and safety, [then] his soul will be able to use this remedy and to be patient with the treatment and with the distaste of the remedy because of the vitality and safety he is hoping for."

دائما ذا كآبة وحزن وأسف على ما فات وافتكار في ما موات فهو دائما يتوهم ما يغمه ويحزنه. وآخر بالضد من ذلك.''

وقد قال جالينوس: ''لا ينبغي أن يقوى وهم العليل إلا بما يكون فيه المنفعة لبدنه حذرا من أن يحمله ذلك على ترك العلاج واستعمال الدواء اعتمادا على الرقى واكتفاء بها عن المعالجة. فيكون بذلك غلبة الطبيعة الخارجة عن الاعتدال وتصير العلة في النفس بزوال العقل فتحتاج إلى رياضة أخرى هي أصعب وأتعب.

وقال أيضا إنه إذا انطبع في وهم العليل أنه باستعمال هذا الدواء والصبر على هذا العلاج هو صابر إلى الإفاقة والعافية والسلامة قويت نفسه على استعمال هذا الدواء والصبر على العلاج وكراهية الدواء لما يرجوه من العافية والسلامة.

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74 دائما[1] *س ق ر ع*[2] *خ غ* : *سقطت من ا* | ذا كآبة *س ا ر ع*[2] : ذا كاابه *ق* : اذا كاابه؟ *خ* : اذا كابة *غ* | ما فات *س ا ق ر ع*[2] : فات *خ* : مافاته *غ* | موات *س ا ق ر ع*[2] *خ* : تموات *غ* **75** ما *ا ق ر ع*[2] : بما *س* : مايغه؟ *خ غ* | يغمه *س ا ق ر ع*[2] : *سقطت من خ* : نعية *غ* بالضد ... 76 قال *س ا ق* : بالضد قال *ر* : بالضد من ذلك قال *ع*[2] : بضد ذلك وقال *خ غ* **76** المنفعة ... 77 حذرا *س ا ق ر ع*[2] : المنفعه بدنه وحدرا *خ* : منفعة بدنه وزرا؟ *غ* **77** يحمله *ا ق ر ع*[2] *غ* : تحمله *س* : يحتمله *خ* | ذلك ... ترك *س ر ع*[2] *خ غ* : على ذلك ترجّى *ا ق* | اعتمادا *س ا ر خ غ* : واعتمادا *ق ع*[2] **78** الرقى *س ا ق ر ع*[2] : الرقا *خ* : الرمن *غ* | غلبة *س ا ر ع*[2] *غ* : علة *ق خ* | عن[2] *س ا ق ر خ غ* : من *ع*[2] **79** في النفس *س ا ق ر* : *سقطت من ع*[2] : بالنفس *خ* : النفس *غ* | فتحتاج *س ا ق* : فيحتاج *ر ع*[2] : وتحتاج *خ* : تحتاج *غ* | إلى *س ا ق ر ع*[2] *خ* : لما *غ* | أصعب ... 80 وأتعب *ا ق ع*[2] *خ غ* : اتعب واصعب *س ر* **81** وقال *س ا ق ر ع*[2] *غ* : فقال *خ* | أيضا ... إذا *س ا* : انه اذا *ق خ* : أيضا اذا *ر* : أيضا إذا *ع*[2] : أيضا *غ* باستعمال *س ا ق ر ع*[2] *غ* : اذا استعمل *خ* | الدواء *س ا ق ر ع*[2] *خ* : الرقا *غ* | والصبر *س ق ر ع*[2] *خ غ* : الصبر *ا* **82** على[1] ... العلاج *س ا ق ع*[2] *غ* : على العلاج *ر* : عليه *خ* | هو *س ا ق ر* (*في الحاشية*) *ع*[2] : *سقطت من خ* : لمون؟ *غ* | صابر *س ا ق ر* (*في الحاشية*) : صاير *ع*[2] : صابرا *خ غ* | الإفاقة *س ر* (*في الحاشية*) *ع*[2] *غ* : الاستقامة *ا ق* : الافاقة *خ* | والعافية والسلامة *س ا ع*[2] *خ* : والعاقبة والسلامة *ق* : والسلامة والعافية *ر* (*في الحاشية*) : والعافية والسلام *غ* قويت ... 83 استعمال *في الحاشية ر* **83** هذا *ا ق ر* (*في الحاشية*) *ع*[2] : *سقطت من س خ غ* الدواء والصبر *س ا ق ر* (*في الحاشية*) *ع*[2] : ذلك وصبرت *خ غ* | على *في الحاشية ر* : *زادت* الم *خ* : *زادت* الم الجوع *غ* | العلاج *في الحاشية ر* | وكراهية *س ا ق ر ع*[2] *غ* : وكراهيته *خ* | الدواء[2] *س ق ر ع*[2] *خ غ* : الداء *ا* | لما *ا ق ر ع*[2] *خ غ* : ولما *س* **84** والسلامة *س ا ق ر ع*[2] *خ* : والسلاقة *غ* : *نهاية الفراغ في ع*

Galen reported: "A friend of mine was complaining about the fact that one of his wives had bewitched him, that he found a weakness of passion in his soul and was not capable of having an erection. I informed him that this was without foundation, yet he did not give credence to it since he was convinced in his soul by that imagination. I left him until he forgot that. Then, I brought him a book in which I said: "Whoever is blocked from women should take the gallbladder of a black crow and blend it with sesame oil and grease his genitals and his hips with it. That way this [issue] will come to an end." I said in the book: "This spell also unties this blocking." I wrote it for him. He did that, and this [case of] imagination was untied, and he was freed from that."

وذكر جالينوس أن صديقا لي شكا إلي أن امراة من نسائه قد سحرته وأنه 85
يجد في نفسه ضعفا عن الشهوة وأنه لا يقوى على الإنعاظ. فأخبرته أن ذلك
مما لا أصل له فلم يصدقه لما قد تحققه في نفسه من ذلك الوهم. فتركته حتى
نسي ذلك. ثم أتيته بكتاب قلت فيه إن من كان معقودا من النساء فليأخذ
مرارة غراب أسود فيخلطها بدهن السمسم ويدهن بها مذاكيره وخواصره فإنه
يزول عنه ما به من ذلك. وقلت في الكتاب: ''وهذه الرقية أيضا تحل ذلك 90
العقد،'' وكتبتها له ففعل فانحل ذلك الوهم وسلم من ذلك.

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85 وذكر *س ا ر ع*^{2} : قال *ق ع* : وقال *خ غ* | جالينوس أن *س ا ق ر ع*^{2} *ع* : شكا في *خ* : شكى الى *غ* | صديقا *س ا ق ر ع*^{2} : صديق *خ* : يصديق *غ* : *سقطت من ع* : *زادت* إنّ رَجُلاً مِن أصدِقاءي ذكَر لي بأنّ امرَأتَه سحَرَته فقُلتُ إنّ هذا الشَّيء لا يكون فلم يقبَلْ قَولي فتركته مُدّةً طَويلةً ثمّ عُدتُ إليه لما نَسِيَ فقُلتُ له إنّ مَن أخَذ مَرارةَ غُرابٍ أسوَدَ فيخلِطُها بدُهن السِّمسِم ويَدَّهِن بها مَذاكِيرَه فيخَلُّ عَقدُه وقُلتُ له هذه الرُّقيةُ أيضاً تُحُلُّ ذلك وكتَبتُ له رُقيةً ففعَل ذلك فبَرِئَ وتوهّم أنّه صَحيحٌ *ع* | لي ... إلي *س ع*^{2} : لي شكا *ا ق* : لي شكى الىّ *ر* : *سقطت من خ غ* : *مبدأ فراغ في ع* | أن^{2} *زادت لم غ* | من ... سحرته *س ا ق ع*^{2} : من لسابه قد سحرته *ر* : عقدت *خ* : *سقطت من غ* | وأنه ... 86 وأنه *س ا ق ر ع*^{2} *غ* : شهوته عن الجماع فانه *خ* **86** الإنعاظ *س ا ر غ* : الاتعاط *ق* : إنعاظه *ع*^{2} : الاتعاظ *خ* : *زادت* وتحريك الشهوة *خ غ* | فأخبرته *س ا ق ر ع*^{2} : فاخر به *خ* : فاخرته *غ* **87** مما *س ا ق ر ع*^{2} : *سقطت من خ غ* | يصدقه *س ا ق ر ع*^{2} *خ* : يصيدم *غ* | تحققه *س ا ق ر ع*^{2} : يحقق *خ غ* **88** ذلك *س ع*^{2} *خ غ* : *سقطت من ا ق* : ؟ *ر* أتيته *س ا ق ر ع*^{2} *خ* : ابتيـة *غ* | إن *ق ر خ غ* : انـه *س ا* : أنه *ع*^{2} | من^{1} *ا ق ر ع*^{2} : *سقطت من س خ غ* | من^{2} *س ا ق ر ع*^{2} : عن *خ غ* **89** فيخلطها *س ق ع*^{2} : مخلطها *ا ر* : ويخلطها *خ* : فخلطها *غ* | بدهن *س ا ق ر ع*^{2} *خ* : بدن *غ* | السمسم *س ا ر ع*^{2} *خ* : التمر *ق* : التمسم *غ* | ويدهن بها *س ا ق ر ع*^{2} *خ* : وبدن *غ* | مذاكيره *س ا ر ع*^{2} : مذاكره *ق خ* : بـ؟ذاكره *غ* | وخواصره *س ا ر ع*^{2} *خ* : وحضواصره *ق* : وخواص به *غ* **90** عنه *ا ق ر ع*^{2} *خ غ* : *سقطت من س* | من ذلك *س ا ق ر* : من السحر *ع*^{2} : *سقطت من خ غ* | وهذه *س ا ق ع*^{2} *خ غ* : ؟ *ر* | الرقية *س ا ق ر ع*^{2} *خ* : الزقيه *غ* | أيضا *س ا ق ر ع*^{2} : *سقطت من خ غ* تحل *ا ر ع*^{2} *خ غ* : يحل *س ق* **91** وكتبتها له *س ا ق ر ع*^{2} : فاخذه ذلك فاقبل عليه *خ* : وكتبت *غ* : *زادت* كاتبة معكوسة فقوى وهمه بذلك *ر* | ففعل *س ا ق ر ع*^{2} : *سقطت من خ غ* ذلك^{1} *ا ق ع*^{2} *خ غ* : *سقطت من س ر* | الوهم *س ا ق ر ع*^{2} *غ* : *سقطت من خ* | من ذلك *س ا ق ر ع*^{2} : على النساء *خ* : من فعله *غ* : *نهاية الفراغ في ع*

The sages of India used to do that and may have cured ill people from their maladies. Excessive terror, sadness and sorrow act in the same way in the body, when something similar to what imagination does takes place for the soul. This is also the case with excessive joy: both the joyful and the sad person may abstain from eating and drinking to the point that they do not feel the pain of hunger, and this is the case when one is excessively astonished at [some] matter. In a similar way, shame and embarrassment modify the color.

Know, my brother, that the corruption of the intellect and the ruin of the soul may occur as a result of imagination. As for spells and incantations, they are only words which were brought together from the Torah, the Gospel and the Qur'ān and which the sages have written down and placed in amulets, leaves, and apotropaic objects. They are

وقد كانت حكماء الهند يفعلون ذلك وربما شفوا به المرضى من أمراضهم. والفزع المفرط والحزن والأسف يفعل مثل ذلك في الجسم إذا حل بالنفس مثل ما يفعل الوهم وكذلك الفرح المفرط وربما امتنع الفرح والحزين من الأكل والشرب حتى لا يحس بألم الجوع وكذلك إفراط التعجب من الأمر. وكذلك 95
الحياء والخجل يغيران اللون.

واعلم يا أخي أنه ربما حدث من الوهم فساد العقل وتلف النفس. وإما الرقى والعزائم فإنما هي كلمات جمعت من التوراة والإنجيل والقرآن وكتب الحكماء وجعلت في أحراز وصحائف وتعاويذ وهي لا تصلح لأصحاب

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92 كانت *ا ق ع*^{2} *خ* : كان *س ر ع* : فانت *غ* | الهند *س ا ق ر ع*^{2} *ع* : *سقطت من خ غ* : *زادت* تشفي المرضى بمثل ذلك ويُقَوُّون أنفُسَهم *ع* | يفعلون ذلك *س ا ق ر ع*^{2} : فلون بذلك *خ* : يقتلون بذلك *غ* : *مبدأ فراغ في ع* | وربما *س ا ق ر خ* : قديما ع^{2} : *سقطت من غ* | شفوا *س ق ع*^{2} : سفو *ا* : استنفذوا *ر* : اسفر *خ* : ويسفوا *غ* | المرضى ... أمراضهم *س ا ق ر ع*^{2} *غ* : الامراض *خ* **93** والفزع ... والحزن *س ر ع*^{2} *خ غ* : والفرح المفرط والخوف *ا ق* : *زادت* والمفرط *خ* مثل^{1} *س ا ق ر ع*^{2} : *سقطت من خ غ* | في *ا ق ر ع*^{2} *خ* : *سقطت من س* : هـ؟ *غ* | الجسم إذا *ا ق ر ع*^{2} *خ غ* : *سقطت من س* | حل *ا ق ر ع*^{2} *غ* : *سقطت من س* : اخذ *خ* | بالنفس *ا ق ر ع*^{2} *خ غ* : *سقطت من س* | مثل^{2} *ا ق ر ع*^{2} *غ* : *سقطت من س خ* **94** ما ... الوهم *ا ق ر ع*^{2} *خ غ* : *سقطت من س* | الفرح^{1} *س ا ق ر ع*^{2} *غ* : الفرغ *خ* | وربما *س ر خ غ* : ربما *ا ع*^{2} : انما *ق* | امتنع *س ا ر ع*^{2} (*أصلح في الحاشية وكتب* منع) *خ غ* : امنع *ق* | الفرح^{2} *س ا ق ر ع*^{2} *غ* : الفرحان *خ* | والحزين *ا ق ر غ* : والحزن *س ع*^{2} : والحزين *خ* **95** والشرب *س ع*^{2} *خ غ* : *سقطت من ا ق* : او الشرب *ر* | حتى ... الجوع *زادت* والعط؟ *ر* | إفراط *س ق ر ع*^{2} *خ غ* : ؟نط *ا* | التعجب *س ا ق ر ع*^{2} *خ* : الت؟ت *غ* | وكذلك^{2} ... 96 الحياء *س ا ق ر ع*^{2} : والحياء *خ غ* **96** والخجل *س ا ق ر ع*^{2} *خ* : والحمل *غ* | يغيران *س ا ر ع*^{2} *خ غ* : يغير *ق* اللون *س ا ق ر ع*^{2} *خ غ* : *نهاية الفراغ في ع* **97** يا أخي *س ق ر ع*^{2} *خ غ ع* : أيها الأخ *ا* : *زادت* ايدك الله بروح منه *ا* : *زادت* ايدك الله وايانا بروح منه *خ* | أنه *س ا ر ع*^{2} *خ غ ع* : *سقطت من ق* | حدث *ا ق ر ع*^{2} *خ غ ع* : يحدث *س* | وتلف *س ا ق ر ع*^{2} *خ ع* : ومتلاف *غ* | وإما *س ا ق خ غ* : فاما *ر ع* : فأما ع^{2} **98** الرقى *س ا ق ر ع*^{2} *خ ع* : الرقا *غ* | فإنما هي *س ر خ ع* : فانها *ا ق غ* : فإنما ع^{2} | كلمات *س ا ق ر ع*^{2} (*أصلح في الحاشية وكتب* الطلسمات) *خ* : كلماملمات؟ *غ* : طلسمات *ع* (*في الحاشية* كلمات) | التوراة *س ا ر خ* : التواررة *ق* : التورية ع^{2} *غ ع* | والقرآن *ا ق ر غ ع* : والفرقان *س ع*^{2} : والقرقان *خ* | وكتب ... 99 الحكماء *س ا ر خ غ* : وا؟ الحكماء *ق* : بكتب ع^{2} : *سقطت من ع* **99** وجعلت *س ق ر ع*^{2} *خ غ ع* : ؟ *ا* أحراز *س ا ر ع*^{2} *غ ع* : احرارٍ *ق* : احرار *خ* | وتعاويذ *س ا ق ر ع*^{2} *ع* : وتعاريف *خ* : وتعالين؟ *غ* | وهي *س ا ق ر ع*^{2} *خ غ* : وانها *ع* | لا تصلح *س ا ق ر ع*^{2} *ع* : يصلح *خ غ* : *زادت* الا *ق*

not good for the people of understanding, but they are good for women, young people and those men of weak intellects. They serve only through the imagination. There are physicians of India that do many things similar to this discipline.

Socrates the sage said that spells are deceptive words from the rational soul toward the imagination, be it by some kind of desire or by some kind of terror, by some kind of intimacy or by some kind of desolation.

The physicians of India make use of spells and incantations holding that by way of them they can make their remedies penetrate the illnesses since, when the soul imagines that the remedy is beneficial for itself, that imaginative faculty circulates in the corrupt natures and balances them well. Through this faculty [one's] nature is strengthened, and hence the remedy reaches the illness and [one's] nature is prepared to receive it. Indeed, these [physicians] utter [the name] of the patient through spells, they designate his illness and say in their spells and their incantations, after designating the patient by his name: "Get out, o illness, of the body of such-and-such man, son of such-and-such

الإفهام لكنها تصلح للنساء والصبيان والضعفاء العقول من الرجال. وهي تنفع 100
بالوهم فقط. وأطباء الهند يكثرون من مثل هذا الفن.

وقد قال سقراط الحكيم إن الرقى كلمات خداع من النفس الناطقة نحو الوهم إما بنوع رغبة وإما بنوع رهبة وإما بنوع أنس وإما بنوع وحشة.

وأطباء الهند يستعملون الرقى والعزائم ويرون أنهم يقدرون بها على إنفاذ أدويتهم في الأمراض لأن النفس إذا توهمت أن الدواء نافعا لها سرت تلك القوة 105
الوهمية في الطبائع الفاسدة فعدلتها وتقوى الطبيعة بتلك القوة فيصل الدواء إلى العلة وقد تهيأت الطبيعة لقبوله. وذلك أنهم يبدون العليل بالرقى ويذكرون علته ويقولون في رقاهم وعزائمهم بعد ذكر اسم العليل: ''اخرجي أيتها العلة من

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100 الإفهام ... للنساء *س ا ق ر ع*^{2} *ع* : الأوهام مثل النساء *خ غ* | والضعفاء *س ا ق ع*^{2} *ع* : وضعفاء *ر خ غ* | وهي تنفع *س ا ق ر ع*^{2} : وهي شفع *خ* : وهي سفع *غ* : *سقطت من ع* : *زادت* من الالم *ر* **101** بالوهم ... من *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | مثل *س ا ق ع*^{2} *خ غ* : *سقطت من ر ع* | هذا *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | الفن *س ق ر ع*^{2} *خ غ* : ؟ *ا* : *سقطت من ع* **102** وقد قال *س ق ر ع*^{2} *خ غ ع* : وقالت *ا* | الحكيم إن *س ا ق ر ع*^{2} : *سقطت من خ غ ع* | الرقى *س ا ق ر ع*^{2} *خ ع* : والرقا *غ* | خداع *س ا ق ر ع*^{2} *غ ع* : خراج *خ* | نحو ... 103 الوهم *س ا ق ر ع*^{2} *غ* : من الوهم *خ* : والوهم *ع* **103** وإما[1] ... رهبة *س ا ق ر ع*^{2} *ع* : *سقطت من خ غ* | وإما[2] ... أنس *س ا ق ر ع*^{2} : او بنوع انس *خ* : واما بنوع لحن *غ* : *مبدأ فراغ في ع* | وحشة *س ا ق ر ع*^{2} *غ* : وحتبة *خ* **104** ويرون *س ا ق ر ع*^{2} : وهو يرون *خ* : يرون *غ* | بها *س ا ق ر ع*^{2} *غ* : *سقطت من خ* | إنفاذ *س ا ق ر ع*^{2} : نفاد *خ* : نقاد *غ* **105** أدويتهم *س ا ر ع*^{2} : ادورهم *ق* : او رم(ن؟)يهم *خ* : امدتهم؟ *غ* | أن *ا ق ر خ غ* : بان *س* : *سقطت من ع*^{2} | نافعا *س ا ق ع*^{2} : نفع *ر* : نافع *خ غ* | لها سرت *س ر ع*^{2} : سرت *ا ق* : لحاشرب؟ *خ* : لحاسرت؟ *غ* | تلك *س ا ر ع*^{2} *خ غ* : بذلك *ق* **106** الوهمية *س ا ق ر ع*^{2} : *سقطت من خ غ* | الطبائع *س ا ق ر ع*^{2} *خ* : الطبايه *غ* | فعدلتها ... الطبيعة *س ا ر ع*^{2} : فعدلتها بقوى الطبيعة *ق* : واعتدها فيقوى الطبيعة *خ* : فعدلها فيقوى *غ* | بتلك *ا ق ر ع*^{2} : *سقطت من س* : تلك *خ* : بذلك *غ* | القوة ... 107 العلة *ا ق ر ع*^{2} *خ غ* : *سقطت من س* **107** وقد تهيأت *ا ق ر خ غ* : *سقطت من س* : وتهيات *ع*^{2} | الطبيعة *ا ق ر ع*^{2} *خ غ* : *سقطت من س* | لقبوله ... أنهم *س ا ق ر غ* : لقبوله وأنهم *ع*^{2} : لقوله وذلك انه *خ* | يبدون *س ر غ* : يبدو *ا* : يبدوا *ق خ* : يبدأون *ع*^{2} | ويذكرون ... 108 ويقولون *س ا ق ر ع*^{2} *غ* : ويذكروا عليه ويقولوا *خ* **108** رقاهم *س ا ق ر ع*^{2} *خ* : رقايهم *غ* | ذكر اسم *س ا ع*^{2} : ذكر اسم الله *ق* : ذكراهم *ر* : اسم *خ* : ذكراتهم *غ* | أيتها *س ا ق ر ع*^{2} *خ* : *سقطت من غ*

woman! Otherwise, we shall take action!" They make him swear these [words] with certain faith, with threat, and reprimand. [The fact of] giving this credence is imprinted in the imagination of the patient. Then, they order him to make use of the remedy and say: "The illness has ceased. With this remedy we shall wash away only its traces. It will never return to you."

Greek physicians start by putting the temperament in good order, by balancing the natures well, and by putting the imagination right, so that by way of this [imagination] what is harmful to the soul cannot enter it and consequently dissolve its faculties that circulate in the body.

For him who believed, inwardly, that he was blocked from women, they used to write in the inverse, and his imagination was strengthened by that and he was reassured by that and, additionally, he made use of the remedy and relied on the spells. After that, he had power over women, and what he had made up ceased. This is the way the work of magic is made; its practice is specific to women, through the

جسم فلان بن فلانة وإلا فعلنا وصنعنا.'' ويستحلفونها بإيمان مؤكدة وتوعد
وزجر. فينطبع في وهم العليل تصديق ذلك. ثم يأمرونه باستعمال الدواء 110
ويقولون: ''قد زالت العلة وإنما نغسل بهذا الدواء آثارها فلا تعود إليك أبدا.''

وأطباء اليونانيين يبدؤون بإصلاح المزاج وتعديل الطبائع وصحة الوهم حتى لا يدخل به إلى النفس ما يؤذيها فيحلل قواها السارية في الجسد.

وكانوا يكتبون لمن ظن بنفسه أنه معقود عن النساء كتابة معكوسة فيقوى توهمه بذلك ويسكن إليه ويستعمل معها الدواء فيثق بالرقى ويقدر بعد ذلك 115
على النساء ويزول عنه ما كان يجده. وبهذا الوجه يكون عمل السحر الذي

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109 جسم *س ا ق ر خ غ* : نفس ع^2 | فلانة *س ا ر* ع^2 *خ* : فلان *ق غ* | وإلا ... وصنعنا *زادت في الحاشية* كذا وكذا ع^2 | ويستحلفونها *ا ق* ع^2 *خ غ* : ويحلفونها *س ر* | مؤكدة *س ا ق ر* ع^2 *خ* : موكرة *غ* | وتوعد ... **110** وزجر *ا ر* : ويوعدون *س* : وبوعدٍ وزجرٍ *ق* : وبوعد وزجر ع^2 : ويوعد ويزجر *خ* : وترعد وتزجر؟ *غ* **110** فينطبع *س ا ق ر* : فطبع ع^2 : فيطبع *خ* : فيستطبع *غ* في ... العليل *س ق ر* ع^2 *خ غ* : *سقطت من ا* | تصديق ... باستعمال *زادت* ذلك *خ* **111** قد *س ا ق ر* ع^2 *خ* : *سقطت من غ* | زالت *س ا ق ر* ع^2 : برت *خ* : *سقطت من غ* | العلة وإنما *س ا ق ر* ع^2 *خ* : *سقطت من غ* | نغسل ... الدواء *ا ق ر* ع^2 : يغسل وهذا الدواء *س* : هذا بغسل *خ* : *سقطت من غ* | آثارها *س ا ر* ع^2 *خ* : اثارصا *ق* : قربال؟ *غ* | فلا *س ا ر* ع^2 *خ غ* : ولا *ق* **112** اليونانيين *ا* ع^2 *خ* : اليونانيون *س ق ر غ* : *زادت* فالفويد؟ *خ* : *زادت* فانهم *غ* يبدؤون *كتبنا* : يبدون *س ر غ* : *سقطت من ا خ* : يبتدون *ق* : يبدأون ع^2 | بإصلاح *س ا ق ر* : بصلاح ع^2 *غ* : وابصلاح *خ* | وتعديل *س ا ق ر غ* : واعتدال ع^2 : وتعاديل *خ* | حتى ... **113** لا *ا ق* ع^2 *خ غ* : ليلا *س ر* **113** به *س ا ق ر* ع^2 *خ* : *سقطت من غ* | ما *س ا ق* ع^2 *خ غ* : شي مما *ر* | السارية *س ا ق ر* ع^2 *غ* : الشارية *خ* **114** وكانوا ... لمن *س ا ق ر* ع^2 : *سقطت من خ غ* | ظن بنفسه *س ا ر* ع^2 : طن نفسه *ق* : *سقطت من خ غ* | أنه ... النساء *س ا ق ر* ع^2 : *سقطت من خ غ* | كتابة معكوسة *س ا ق ر* ع^2 *غ* : *سقطت من خ* | فيقوى ... **115** توهمه *ا ق* : مقوى نفسه *س* : لتقوى نفسه *ر* : فيقوى وهمه ع^2 *خ غ* **115** ويسكن *س ا ق* ع^2 *خ غ* : وتسكن *ر* | إليه *س ق ر* ع^2 *خ غ* : البه *ا* | ويستعمل معها *س ا ق ر* ع^2 : فاستعمل *خ* : واستعمال *غ* | فيثق ... ويقدر ع^2 : فينق بالدواء ويقدر *س* : فيثف بالرقى ويقدر *ا* : فسف بالرقى ويقدر *ق* : ويمهد *ر* : يفيق بالرقا فقدر *خ* : ووبق بالرقا فقدر *غ* | بعد ذلك *س ا ق ر* ع^2 : *سقطت من خ غ* **116** النساء *س ا ق ر* ع^2 *غ* : البلى *خ* | ويزول *س ا ق ر* ع^2 : وزال *خ غ* عنه *س ر* ع^2 *خ غ* : *سقطت من ا ق* | يجده *س ا ق ر* ع^2 : *سقطت من خ* : يجد *غ* : *زادت* عنه *ا ق* | وبهذا *س ا ق ر* ع^2 : وهذا *خ غ* | عمل السحر *س ا ق ر* ع^2 *خ* : الشجر *غ*

imaginations that enter into those men who are of weak intellect, into women and into young men, regarding what they practice in terms of superstitions and sleights of hand, what they write in terms of humbugs, what they practice in terms of excitations and *nīrañjāt*.

Among these [spells], [there is] what is good when the one who performs them knows the actions of the spiritualities. Only the learned sages perform that. Through this is the making of talismans, the prodigies, and the transmutation. As to the evil eye and what afflicts man through it according to what the common people say, the damage in that results from the [stricken person's] consent and imagination, and harms that struck person through the vision of what he is scared or afraid of, as has been explained.

Galen said: "I have seen in the books of the best scholars of the people of India and others that some plants of the earth, organs of animals, and minerals are suspended on sick people, and that this is the

يتخصص بعمله النساء بالأوهام الداخلة على الضعفاء العقول من الرجال والنساء والصبيان مما يعملونه من الخرافات والمخرقات وما يكتبونه من الترهات ويعملونه من التهييجات والنيرنجات.

ومنها ما يصح إذا كان الفاعل به عالما بأفعال الروحانيات. ولا يعمل ذلك إلا الحكماء العلماء. ويكون به نصب الطلسمات وخرق العادات وقلب العيان. فأما العين وما يصيب الإنسان بها على ما يقول العامة فإنه يكون الضرر بذلك بالاتفاق وبالوهم فيؤذي صاحبها بمعاينة ما يفزع ويخاف منه كما بين.

وقال جالينوس: "رأيت في كتب الأفاضل من العلماء من أهل الهند وغيرهم أن أشياء من نبات الأرض ومن أعضاء الحيوان ومن الأحجار تعلق

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117 يتخصص بعمله *س* : يخصص بعلمه *ا* : يخصص بعمله *ق* : يتخصص بفعله *ر* : يتخصص بعلمه *ع*^{2} : يختص بعمله *خ غ* | بالأوهام ... على *س ا ق ر ع*^{2} *غ* : *سقطت من خ* | الضعفاء *س ا ق ع*^{2} *غ* : ضعفا *ر* : *سقطت من خ* | العقول ... **118** والصبيان *س ا ق ر ع*^{2} *غ* : *سقطت من خ* **118** *مما س ا ق ع*^{2} *غ* : ؟ما *ر* : بما *خ* | من^{1} *س ع*^{2} *خ غ* : عن *ا ق* : ؟ن *ر* | الخرافات والمخرقات *ع*^{2} : المخراقات والمخاريق *س* : الخرافات والمحرقات *ا* : الخرافات المخرقات *ق* : الخرافات؟ المخارقات *ر* : الحمامات والحراقات *خ* : الحماقات *غ* | من^{2} *س ا ق ر ع*^{2} *غ* : *سقطت من خ* الترهات *كتبنا* : الرايات *س* : الراسات *ا* : الترامات؟ *ق* : النزهات *ر* : البرانيات *ع*^{2} : البرامات *خ* : السربات؟ *غ* **119** ويعملونه ... والنيرنجات *س ا ق ر* : ويعملونه من التهجينات والنيرنجات *ع*^{2} : ويعملون في السحر السوتحات والسفحات *خ* : ؟ في النيرنجات واله؟حات *غ* **120** به *ا ق ر خ غ* : له *س* : *سقطت من ع*^{2} | بأفعال *س ا ق ر ع*^{2} *خ* : بالفعال *غ* | ذلك *س ا ر* : به *ق* : بذلك *ع*^{2} *خ غ* **121** الحكماء *س ا ق ر خ غ* : *سقطت من ع*^{2} | العلماء *س ا ق ع*^{2} *خ* : العلما بافعال الروحانيات *ر* : والعلماء *غ* | وقلب *س ر ع*^{2} *غ* : واقلاب *ا ق خ* **122** العيان *س ا ق ع*^{2} *خ* : الاعيان *ر* : العيون *غ* : *نهاية الفراغ في ع* | فأما *س ا ق ع*^{2} *ع* : واما *ر* : وقال *خ* : قال *غ* العين ... يصيب *س ا ق ر ع*^{2} *ع* : والعين والاصابة *خ غ* | الإنسان *ا ق ر ع*^{2} *ع* : الناس *س* : *سقطت من خ غ* | بها *س ا ق ر ع*^{2} *ع* : لها *خ غ* : *زادت* مِن الوَهم فباتّفاق واعتقاد العامّة *ع* على ما *س ا ر ع*^{2} : على *ق* : كما *خ غ* : *مبدأ فراغ في ع* | يقول العامة *زادت* بها *ع*^{2} | فإنه *س ا ق ر ع*^{2} : *سقطت من خ غ* **123** بذلك *س ا ق ر ع*^{2} : بها *خ* : لها *غ* | بالاتفاق *س ا ق ع*^{2} *خ غ* : بالفاق *ر* | وبالوهم *س ا ق ر خ غ* : بالوهم *ع*^{2} | فيؤذي صاحبها *س ا ق ع*^{2} : فتوذي صاحبها *ر* : وبالنظر يودي لصاحبها *خ غ* | بمعاينة *ق ر ع*^{2} *غ* : معاينه *س ا* : بالمعاينة *خ* **124** بين *س ا غ* : تبين *ق* : نبين *ر ع*^{2} : بنى *خ* **125** وقال *س ر ع*^{2} *خ* : وقد قال *ا ق* : قال *غ* | العلماء ... أهل *س ا ق ع*^{2} *خ غ* : علما *ر* **126** ومن^{1} *س ا ق ر ع*^{2} *غ* : من *خ*

cause of their recovery from certain diseases." I tested them and found them useful according to how we have presented the imagination. They operate by their peculiarities and by becoming mingled. When their spiritualities are mixed with the breathing orifices of the human being, they bring to that nature, out of their scent, what appeases him. Hence what Aristotle said in his book known as the [book] of stones and their peculiarities: "He who wears an emerald stone as a necklace and a seal ring keeps the disease of epilepsy away from him if he wears it before the disease occurs, but it is of no use to an epileptic if he was born with it. For this reason, kings tie some on their children." He said that whoever wears a seal ring or a necklace with a stone of any kind of gems and is in a country whose people are suffering from epidemic and plague, it will prevent what has afflicted the people of that country

على المرضى فيكون سببا لبرئهم من علل ما.'' وجربتها فوجدتها نافعة على سبيل ما قدمناه من الوهم. وتفعل بخصائصها وبالمخالطة. إذا خالطت روحانياتها منافس الإنسان أدت من رائحتها إلى تلك الطبيعة ما تسكن به. من ذلك ما قال أرسطاطاليس في كتابه المعروف بالأحجار وخصائصها: ''إنه 130 من تقلد بحجر الزمرد وتختم به دفع عنه داء الصرع إن كان لباسه إياه قبل حدوث الداء به ولا ينتفع صاحب الصرع إذا كان مولودا به. ولذلك صارت الملوك تعلقه على أولادها.'' وذكر أنه من تختم أو تقلد بحجر من أجناس اليواقيت وكان في بلد قد وقع بأهله الوبأ والطاعون منع منه أن يصيبه ما

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127 لبرئهم *س ا ق ع*^{2} : لبرمهم *ر* : لبورهم؟ *خ* : لبرّهم؟ *غ* | ما *ا ق ر ع*^{2} *خ غ* : *سقطت من س* | وجربتها *س ا ق ر ع*^{2} : وجرتها *خ* : وحربها؟ *غ* | على^{2} *س ا ق ع*^{2} *خ غ* : ؟ *ر* **128** وتفعل *س ا ق ر غ* : ويفعل *ع*^{2} : ويعقل *خ* : *زادت* بحا *ق* | بخصائصها وبالمخالطة *س ا ق ع*^{2} : بخواصّها وبالمخالطه *ر* : بالمخالطة *خ* : بحفايقها؟ بالمخالطة *غ* **129** منافس *ا ق ع*^{2} : منافذ *س* : منا؟ *ر* : منافس؟ *خ* : منا من *غ* | أدت *س ا ق ر ع*^{2} : فادت *خ* : فأدّت *غ* | به *س ا ق ر خ غ* : *سقطت من ع*^{2} **130** من *س ا ق ر ع*^{2} : ومن *خ غ* | ما *س ا ق ر ع*^{2} : *سقطت من خ غ* : *نهاية الفراغ في ع* | أرسطاطاليس *س ا ر ع*^{2} *خ غ ع* : الحكيم *ق* في ... بالأحجار *س ا ق ع*^{2} : ؟ ؟ ؟ بالاحجار *ر* : في كتابه المعروف بكتاب الأحجار *خ غ* : في كتاب الاحجار *ع* | وخصائصها *س ق ر ع*^{2} *غ ع* : *سقطت من ا* : وبخصايصها *خ* | إنه *ا ق ع*^{2} *خ غ ع* : ان *س ر* **131** بحجر الزمرد *س ا ق ر ع*^{2} *خ* : حجر الزمرد *غ* : بالزمرد *ع* | وتختم *س ا ق ع*^{2} : او تختم *ر غ ع* : تختم *خ* | داء *س ا ق ر ع*^{2} *غ ع* : *سقطت من خ* | إن ... 132 الصرع *ر* : *سقطت من س ا ق ع*^{2} *غ ع* : اذا كان لباسه إياه قبل حدوب الرابة ولا ينتفع صاحب الصرع *خ* **132** إذا *ا ق ع*^{2} *خ غ ع* : ان *س ر* | كان *ا ق ر ع*^{2} *خ غ ع* : كانوا *س* مولودا *س ا ق ر ع*^{2} *غ ع* : مولود *خ* | ولذلك *ا غ ع* : فلذلك *س ع*^{2} : ذلك *ق* : وكذلك *ر خ* | صارت *س ا ق ر ع*^{2} *خ ع* : صار *غ* **133** تعلقه *س ا ق ر خ ع* : يعلقونه *ع*^{2} *غ* أولادها *س ا ق ر خ* : أولادهم *ع*^{2} *غ ع* | وذكر *س ق ر ع*^{2} : وذكرو *ا* : وذكروا *خ ع* : ويذكر *غ* | أنه *س ا ق ر ع*^{2} *خ غ* : ان *ع* | تختم ... تقلد *س ع*^{2} *غ* : يختم او تقلد *ا ق خ* : تقلد او تختم *ر ع* | بحجر *س ا ق ر ع*^{2} *خ ع* : *سقطت من غ* | أجناس *س ا ق ر ع*^{2} *خ ع* : احباس *غ* **134** اليواقيت *س ا ق ع*^{2} *ع* : البراقوث؟ *ر* : الياقوت *خ* : التوافي *غ* | في بلد *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | قد *س ا ق ع*^{2} *غ ع* : *سقطت من ر* : وقد *خ* | بأهله *س ا ق ع*^{2} *خ غ ع* : به *ر* | والطاعون *س ا ق ر ع*^{2} *خ غ* : سلِمُوا مِن ذلك *ع* : *زادت* منه *س* | منع منه *س ر خ* : منعه *ا غ* : منع عنه *ق ع*^{2} : *سقطت من ع* | أن *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* يصيبه *س ا ق ع*^{2} *خ غ* : يصيب *ر* : *سقطت من ع* | ما *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع*

from afflicting him and he will be considered eminent in the eyes of the people. He reported that whoever wears a seal ring with a garnet stone weighing twenty grains will not have bad dreams during his sleep. For him who wears a seal ring of carnelian stone, his fury about his trial will subside. For him who wears a carnelian stone with the color of meat juice, this will cut off the hemorrhage of blood from any organ of the [wearer's] body, especially for women with persistent menstruation. He reported that he who wears a necklace of onyx will have many worries, and lasting sorrows; he will have bad and terrifying dreams in his sleep; he will have many trials, damages and accidents between him and the people. If you tie one to an infant's neck, his flow of saliva will be abundant and his pains will last.

أصاب أهل ذلك البلد ونبل في أعين الناس. وذكر أنه من تختم بحجر البجاذي 135
وزن عشرين حبة لم ير في منامه أحلاما رديئة. ومن تختم بحجر العقيق سكنت
حدته عن الخصومة. ومن لبس من العقيق الذي لونه لون ماء اللحم قطع عنه
نزف الدم من أي عضو كان من بدنه وخاصة النساء اللواتي يدوم بهن
الطمث. وذكر أنه من تقلد بحجر الجزع كثرت همومه ودامت غمومه ورأى في
منامه أحلاما رديئة مفزعة وكان كثير الخصومة والشر والوقوع بينه وبين الناس 140
وإن علق منه على طفل كثر سيلان لعابه ودامت أوجاعه.

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135 أصاب *س ا ق ر ع*^{2} *غ* : أصابه *خ* : *سقطت من ع* | أهل ... البلد *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | ونبل *س ا ر ع*^{2} : وتبل *ق* : وقبل *خ* : وبل *غ* : ونبلوا *ع* | أعين *س ا ق ر ع*^{2} *غ ع* : عين *خ* | وذكر *س ا ق ر ع*^{2} *خ ع* (*من هنا تغير ترتيب النص في ع بثلاثة أجزاء : هنا بدأ الجزء الثاني : انظر إلى السطور* 145، 149، 151، 160) : وذكروا *غ* | تختم *س ق ر ع*^{2} *خ غ ع* : يختم *ا* | البجاذي *كتبنا* : البجاذي *س* : البجادى *ا* : السحادى *ق* : البجادى *ر* : البَيجاذِيّ *ع*^{2} (*أصلح في الحاشية وكتب* البيجاذة) *ع* : النحاري *خ* : الجادي *غ* **136** وزن *ع* : دون *س ع*^{2} : ما يكون وزنه *ا ق* : في وزن *ر* : لوزن *خ* : بوزن *غ* | ير *س ا ق ر ع*^{2} *غ ع* : يرى *خ* | أحلاما *س ا ر ع*^{2} *خ ع* : احلامٌ *ق* : رويا *غ* | ومن *س ا ق ر ع*^{2} *ع* : وذكر انه من *خ* : وذكروا انه من *غ* | العقيق *س ا ق ر ع*^{2} *غ ع* : القيق *خ* | سكنت *س ا ع*^{2} *خ غ* : سكت *ق* : سكتت *ر* : *سقطت من ع* **137** حدته *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | عن *س ا ق ر ع*^{2} : عند *خ غ* : *سقطت من ع* | الخصومة *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | ومن ... العقيق *س ر ع*^{2} *خ غ* : ولا سيما ما كان منه سيبها *ا ق* : *سقطت من ع* | الذي ... ماء *س ر ع*^{2} *غ ع* : بماء *ا ق* : الذي لونه لون لما؟ *خ* | قطع عنه *س ر ع*^{2} *خ ع* : فانه يقطع *ا ق* : قطع *غ* **138** من^{2} *س ا ق ر غ* : في *ع*^{2} *خ ع* | وخاصة *س ا ق ر ع*^{2} *ع* : وبخاصة *خ غ* | النساء *س ا ق ر خ غ* : للنساء *ع*^{2} *ع* | اللواتي *س ا ق ع*^{2} *خ غ ع* : اللاتي *ر* | بهن *س ا ق ر ع*^{2} *غ ع* : بهم *خ* **139** وذكر *س ا ق ر ع*^{2} *خ ع* : وذكروا *غ* | الجزع *س ا ق ر ع*^{2} *غ ع* : الجذع *خ* | كثرت همومه *س ا ق ع*^{2} *خ غ ع* : *سقطت من ر* **140** مفزعة *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* وكان ... الخصومة *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | والشر *س ا ق ر ع*^{2} : والسر *خ غ* : *سقطت من ع* | والوقوع *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | بينه *س ا ق ر ع*^{2} *خ* : بينه؟ *غ* : *سقطت من ع* | وبين الناس *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* **141** منه *ا ق ع*^{2} *خ غ* : *سقطت من س ر ع* | على طفل *س ق ر ع*^{2} *خ غ ع* : ؟ ؟ *ا* | كثر سيلان *س ق ع*^{2} *ع* : ؟ سيلان *ا* : كثر سبلان (سيلان؟) *ر* : كمرسلان *خ* : كثر سلان *غ* | ودامت أوجاعه *س ا ق ر ع*^{2} *خ ع* : *سقطت من غ*

Galen said in the *Book of Simple Medicines* and the appended commentaries that when one ties fly droppings to the neck of someone with colic, he will recover from it. He said in his book: "I did this, I placed the droppings in a pistachio nut and tied it to the neck of someone who had colic, and I noticed that it was useful. You will make two handles for the pistachio nut with which to tie it, with the droppings inside, at the place of the heart, and you will tie it to the neck of the human being until it reaches his insides. If you take a viper, and bind its neck with a linen thread, and strangle it with [the thread] until it dies, and then take that thread after it dies and tie it to the neck of a human being with a sore throat and tumors in the tonsils, he will recover from it."

وذكر جالينوس في كتاب الأدوية المبسوطة والتعاليق أن زبل الذباب إذا علق على صاحب القولنج برئ منه. وقال في كتابه: "أنا فعلت ذلك وجعلت الزبل في فستقة وعلقته على صاحب القولنج فوجدته نافعا. وتجعل الفستقة
145 عروتين لتعلق بها والزبل في جوفها مكان اللب وتعلق على عنق الإنسان إلى أن تصل إلى جوفه. وإن أخذت أفعى فربطت عنقها بخيط كتان وخنقتها به حتى تموت وأخذت ذلك الخيط بعد موتها فجعلته في عنق إنسان به داء الخوانيق وأورام اللوزتين برئ منه."

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142 وذكر *س ا ق ر ع*^{2} *خ غ* : وزعم *ع* | في *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | كتاب *س ا ق ر ع*^{2} : كتابه في *خ غ* : *سقطت من ع* | الأدوية *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* المبسوطة *س ا ق ر ع*^{2} *خ غ* : *سقطت من ع* | والتعاليق *س ر غ* : *سقطت من ا ق ع*^{2} *ع* : التعاليق *خ* | أن *س ا ق ر خ غ* : *سقطت من ع*^{2} : من اخذ *ع* | زبل الذباب *س ا ع*^{2} *غ ع* : ربل الدباب *ق* : ؟بل الذياب *ر* : زبك الزباب *خ* **143** على ... القولنج *س ق ر ع*^{2} *خ غ ع* : ؟ القولج *ا* | برئ *س ا ق ع*^{2} *غ ع* : مراسة؟ *ر* : ابرا *خ* | منه *س ا ق ع*^{2} *خ ع* : *سقطت من ر غ* | في كتابه *س ا ق ر ع*^{2} *ع* : *سقطت من خ غ* | أنا *س ا ق ر ع*^{2} *خ غ* : اني *ع* فعلت ... وجعلت *س ا ق ع*^{2} *خ غ* : فعلته لك وجعلته *ر* : جعلت *ع* **144** فستقة *زادت في الحاشية* فضة *ع*^{2} | وعلقته *س ق ر خ غ* : وعلمته *ا* : وعلقتها *ع*^{2} *ع* | القولنج ... نافعا *س ق ر ع*^{2} *خ غ* : الق؟ ؟ ؟ *ا* : القولنج فوجدتها نافعا *ع* | وتجعل *ا ق ر ع*^{2} *خ* : ويجعل *س ع* : واجعل *غ* : *زادت في ع* | الفستقة *س ا ق ر ع*^{2} *ع* : للفيقه *خ* : للفستقة *غ* **145** عروتين *س ا ق ر خ غ* : عروتان *ع*^{2} *ع* : *زادت* له *ق* | لتعلق *س ر غ* : ليعلق *ا ع*^{2} *ع* : بعلق *ق* : لتعليق *خ* | بها *س ا ق خ غ ع* : بهما *ر ع*^{2} | في *س ا ق ر ع*^{2} *خ ع* : قي *غ* | جوفها *هنا انتهى الجزء الثاني في ع* : *انظر إلى السطور* 135، 149، 151، 160 *ع* | مكان *س ق ر ع*^{2} *خ غ* : بمكان *ا* : *مبدأ فراغ في ع* | على ... الإنسان *س ر ع*^{2} *خ* : عنى الانسان *ا* : على عر الانسان *ق* : على العنق *غ* **146** تصل *ق ر ع*^{2} : يصل *س خ* : ؟ *ا* : يضل *غ* | جوفه *س ا ق ر ع*^{2} *غ* : جوفها *خ* | وإن *س ر ع*^{2} *خ غ* : وقال ان *ا ق* | أفعى *س ا ق ر ع*^{2} (*في الحاشية وأيضا زادت* لعلها فارة) *خ* : افع *غ* | فربطت عنقها *س ا ر ع*^{2} *خ غ* : وربطت حلقها *ق* | كتان *س ا ق ر ع*^{2} : *سقطت من خ* : طان *غ* | وخنقتها *ا ق ر ع*^{2} : وخنقها *س خ* : وحقها *غ* | به *ا ق ر خ غ* : *سقطت من س ع*^{2} **147** تموت *س ر ع*^{2} *غ* : ؟توت *ا* : يموت *ق خ* | وأخذت *س ا ق ر ع*^{2} *غ* : وجدت *خ* | موتها *س ق ر ع*^{2} *خ غ* : مو؟ *ا* | إنسان *س ا ق ر ع*^{2} *غ* : النسان؟ *خ* | داء الخوانيق *س ا ق ر ع*^{2} *غ* : الحواس *خ* **148** اللوزتين *س ر ع*^{2} *غ* : الورس *ا ق* : اللورتين *خ* | برئ *س ا ق ر ع*^{2} : ابراته؟ *خ* : برد؟ *غ* | منه *س ا ق ر ع*^{2} *غ* : *سقطت من خ* : *نهاية الفراغ في ع*

Some sages have reported: "When a human being takes a dog's fang after it has bitten a human being, and places it in a piece of leather, and tightens it onto the upper arm, it will be useful against the evil [caused by] rabid dogs. And if they bite him, it will not do him any harm." They reported: "When one takes the first hatched of a swallow, splits its belly, takes two of the stones that are in it, one of which has a color and the other has a different [color] from it, before they fall to the ground and the dust reaches them, and [when] one ties them in a piece of calf leather, and places it on the upper arm of someone who has epilepsy, this will free him from it." It has been reported that there is a kind of

وذكر بعض الحكماء أنه متى أخذ إنسان ناب الكلب إذا عض إنسانا
وجعل في قطعة من جلدة ويشد في العضد نفعه من شر الكلاب الكلبة. وإن 150
عضته لا يضره شيء. وذكروا أنه إذا أخذ فراخ الخطاف أول ما يفرخ وشق
جوفه وأخذ من الحصى الموجودة فيه حصاتين إحداهما ذات لون والأخرى
مخالفة لها قبل أن تسقط إلى الأرض ويصيبها التراب وشدهما في قطعة من جلد
عجل وجعل على عضد من به داء الصرع أبرأه منه. وذكر أن من العنكبوت

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149 وذكر *س ا ق ر ع*^{2} *خ غ* : وقد ذكر *ع* (*هنا بدأ الجزء الأول في ع : انظر إلى السطور* 135، 145، 151، 160) | أنه متى *س ا ق ر* : متى *ع*^{2} : انه خ : انه ان غ : ان من ع | أخذ *س ا ق ر ع*^{2} *غ ع* : *سقطت من خ* | إنسان *س ا ق ر ع*^{2} : *سقطت من خ غ ع* | ناب الكلب *ق ر ع*^{2} *خ غ* : ناب كلب *س* : نا؟ ؟ *ا* : اسنان الكلب او نابه *ع* : *زادت* الكلب *ر* : *زادت* كلب *غ* إنسانا *س ا ر ع*^{2} *غ ع* : النتانا *ق* : انسان خ **150** وجعل *س ا ق ر ع*^{2} *ع* : يجعل خ : ويجعل غ | ويشد *س ع*^{2} *خ غ ع* : وشد *ا* : ويسد *ق* : وشدّه *ر* | نفعه *س ا ق ر ع*^{2} : انه يحفظ من شد عليه خ غ : يبعد ع | شر *س ا ر ع*^{2} *ع* : *سقطت من ق خ غ* | الكلاب *س ق ر ع*^{2} *خ غ ع* : الكلب *ا* | الكلبة *زادت* عليه *س ا ق ع*^{2} **151** عضته *س ق ر غ* : ؟ *ا* : عضه *ع*^{2} *خ ع* | لا *س ر ع*^{2} *خ غ* : فلا *ا ع* : ولا *ق* | يضره *س ا ق ع*^{2} *خ غ ع* (*هنا انتهى الجزء الأول في ع : انظر إلى السطور* 135، 145، 149، 160) : تضرّه *ر* | شيء *س ا ق ع*^{2} *غ* : بشيّ *ر* : شيا خ : *مبدأ فراغ في ع* : *زادت* منها *ا ق* | وذكروا *س خ غ* : وذكر *ا ر ع*^{2} : فائدة *ق* | أنه ... أخذ *زادت* من *ق* | فراخ *س ا ق ع*^{2} : فرخ *ر خ غ* | الخطاف *ا ق ر ع*^{2} *خ غ* : الخطاطيف *س* | أول ما *س ا ق ر ع*^{2} *غ* : *سقطت من خ* | يفرخ *ا ق غ* : يخرج *س ر* : تفرخ *ع*^{2} : *سقطت من خ* **152** الحصى *ع*^{2} : الحصا *س ا ق ر غ* : الحصاء خ | الموجودة *س ر ع*^{2} خ : ؟ *ا* : الموجود *ق غ* | فيه *س ق ر ع*^{2} *خ غ* : ؟ *ا* | حصاتين *كتبنا* : حصتان *س ر* : ؟ *ا* : حصانان *ق* : خصينين *ع*^{2} (*أصلح في الحاشية وكتب* حصاتين) : حصّاتان خ : حصاتان غ | إحداهما *ر* : احدهما *س ا ق* : إحدهما *ع*^{2} : الواحده خ : اقدابها غ | ذات *ر ع*^{2} *خ غ* : داب *س ا ق* : دان | لون *ر خ غ* : *سقطت من س ا ق ع*^{2} **153** لها *ق ع*^{2} *غ* : له *س ا ر خ* | قبل أن *زادت* يصُبّهما تراب ولا خ : *زادت* يصبها تراب ولا غ | تسقط *س ا ق ر ع*^{2} *غ* : يقط خ | ويصيبها التراب *س ا ر ع*^{2} : ويصيبهما التراب *ق* : *سقطت من خ غ* | وشدهما *س ق ر ع*^{2} : ؟ *ا* : فشدتا خ : وبندتا؟ غ | في *س ق ر ع*^{2} *خ غ* : ؟ *ا* | قطعة من *س ر ع*^{2} *خ غ* : *سقطت من ا ق* جلد ... 154 عجل *س ق ر ع*^{2} *خ غ* : ؟ ؟ *ا* **154** وجعل *ق ر ع*^{2} : *سقطت من س* : ؟ *ا* : وربط خ غ | على *س ق ر ع*^{2} *خ غ* : *سقطت من ا* | عضد *س ر ع*^{2} *خ غ* : *سقطت من ا ق* من[1] ... داء *س ق ر ع*^{2} *خ غ* : *سقطت من ا* | الصرع *س ا ق ر ع*^{2} *غ* : الصداع خ : *زادت* او رقبه خ : *زادت* او رقبته غ | أبرأه *ا ق ع*^{2} : برأ *س ر خ* : بر؟ غ | أن *س ا ق ر ع*^{2} *غ* : انه خ

spider whose white web is as dense as the tight garment like the drachma, and [which] is found on the walls; when it is tied in leather and suspended on the upper arm, it prevents quartan fever. Some physicians suspend a root of sorrel around the neck of someone with scrofula. When a peony root is suspended around [the neck of] someone with epilepsy or an ache in the stomach, he will recover from it. It was reported that when a henbane seed is ground, soaked with the milk of a mare, tied in a camel leather, and suspended on a woman, she will not be pregnant as long as it is suspended on her.

Some physicians reported about their tricks which are unparalleled for their emplacement in nature, and which are placed among the secrets whose study is not accessible to the particular intellect, except from them. Nature does some actions whose perception by knowing

صنفا يكون نسجه أبيض كثيفا كالثوب الصفيق مثل الدرهم يكون على 155
الحيطان. إذا شد في جلد وعلق في العضد منع من حمى الربع. ومن الأطباء
من يعلق أصل الحماض في رقبة من به الخنازير. وعرق الفاوانيا إذا علق على
من به صرع أو وجع في المعدة برئ منه. وذكر أن بزر البنج إذا دق وعجن
بلبن فرس وشده في جلد إبل وعلق على المرأة لم تحبل ما دام ذلك معلقا عليها.
وذكر بعض الأطباء من حيلها التي تفردت بوضعها في الطبيعة وجعلتها من 160
الأسرار التي لا سبيل للعقل الجزئي الاطلاع عليها إلا من جهتها. وإن الطبيعة

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155 صنفا *ر ع*^{2} : صنف *س ا ق خ* : ؟ *غ* | نسجه *س ق ر ع*^{2} : نجه *ا* : سحته *خ* : ف؟ *غ* كثيفا ... 156 الحيطان *ر* : كثيف كالثوب الصفيق *س* : صفيقا كا؟ الصفيق ؟ ؟*ا* : صفيقا كالثوب الصفيق ومثل الدرهم *ق* : كثيفا كالثوب الصفيق مثل الدرهم *ع*^{2} : كالتوب السفيق مثل الدراهم يكون على الخيطان *خ* : كثيفا كالتوب الصفيق متد؟ الدراهم على الحيطان *غ* **156** وعلق *س ا ر ع*^{2} *خ غ* : *ق* | في^{2} *س ا ق ع*^{2} *خ* : على *ر غ* | العضد *س ا ق ر ع*^{2} *غ* : العضو *خ* من ... الربع *س ا ر ع*^{2} *غ* : الحمى *ق* : من الحمي الرابع *خ* **157** الحماض *س ق ر ع*^{2} *خ غ* : الجماض *ا* | رقبة ... به *س ق ر ع*^{2} *خ غ* : ؟ ؟ ؟*ا* | الخنازير *س ق ر ع*^{2} : ؟*ا* : خنازير *خ* : حازير *غ* : *زادت* فيبراه *ر* | الفاوانيا *ا ق ر ع*^{2} : الفارة *س* : الفارسا؟ *خ* : العاوينا *غ* | إذا علق *زادت* به *ا* **158** من *ا ق ر ع*^{2} *خ غ* : *سقطت من س* | صرع *س ر ع*^{2} *خ غ* : داء الصرع *ا ق* أو *س ا ر ع*^{2} *خ غ* : لو *ق* | في *س ع*^{2} *خ غ* : *سقطت من ا ق ر* | المعدة *س ا ق ر ع*^{2} : المعدرة *خ* : الحمدة *غ* | برئ *س ا ق ع*^{2} *خ* : برأ *ر* : يرى *غ* | إذا دق *س ق ر ع*^{2} *خ غ* : ؟ ؟ *ا* | وعجن *س ا ق ر ع*^{2} *خ* : وعجر *غ* **159** بلبن *س ق ر ع*^{2} *خ غ* : ؟*ا* | فرس ... إبل *ر* : *سقطت من س ا ق ع*^{2} : فرس وشد في طبد؟ ابل *خ* (*صعب القرآة*) : فرس ؟ في جلد ابل *غ* وعلق *س ا ر ع*^{2} *خ غ* : وعلو *ق* | المرأة *س ا ق ع*^{2} *خ غ* : امراة *ر* | تحبل *س ع*^{2} *خ* : يحبل *ا* : تحيل *ق ر* : يحمل *غ* | ذلك *س ا ق ر ع*^{2} : *سقطت من خ غ* | معلقا عليها *س ا ق ر ع*^{2} *خ غ* : *نهاية الفراغ في ع* **160** وذكر *س ا ق ع*^{2} *خ غ ع* (*هنا بدأ الجزء الثالث في ع : انظر إلى السطور* 135، 145، 149، 151) : *سقطت من ر* | بعض *س ا ق ع*^{2} *غ ع* : *سقطت من ر* : بعلم *خ* | الأطباء *س ا ق ع*^{2} *خ غ ع* : *سقطت من ر* | من^{1} *س ا ق ر خ غ ع* : في *ع*^{2} حيلها *ا ر ع*^{2} *غ ع* : حيلتها *س* : حلها *ق خ* | تفردت *س ا ر ع*^{2} *غ ع* : انفزدت *ق* : بفردت *خ* | وجعلتها *س ا ر ع*^{2} *ع* (*في الحاشية*) : وجعلتها *ق* : وجعلتها؟ *خ* : وجعلها *غ* | من^{2} ... 161 للعقل *في الحاشية ع* **161** الجزئي *س ا ق ر ع*^{2} *غ* : الجزوي *خ* : *سقطت من ع* : *زادت* الى *ر غ* | الاطلاع ... إلا *في الحاشية ع* | من ... وإن *س ا ق خ غ* : ؟ ؟ وان *ر* : من جهتها ان *ع*^{2} *ع* (*في الحاشية*) | الطبيعة *في الحاشية ع*

and confirming them from nature is not accessible to the intellect. It may be that one judges about a thing as it is according to the description of someone who believes something authentic, whereas it is the opposite thereof, as with what is brought about by quince rob: one does not doubt that it will constipate the belly, and one gives it as a drink to whoever is constipated, and this releases him. The intellect is bewildered by this and does not know where this divergence from what he had deemed has occurred. Then he who brought it, says: "I have put scammony in it." At that moment, this specificity becomes patent to him. The intellect needs the clarification in this, and knowing what

تفعل أفعالا لا يجد العقل السبيل إلى إدراكها بمعرفتها وإثباتها من الطبيعة. وإنه ربما حكم على الشيء أنه بصفة فلان يصدق ويكون الأمر بخلاف ذلك مثل ما جاء برب السفرجل الذي لا يشك فيه أنه يعقل البطن فسقى منه من ليس به إسهال فأسهله. فتحير العقل في ذلك ولم يدر من أين حصل فيه ذلك 165
الخلاف لما في قضيته. فقال الذي جاء به: "إني جعلت فيه السقمونيا." فعند ذلك بانت له تلك الخاصية. فصار العقل محتاجا إلى البيان في ذلك والعلم بما

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162 تفعل أفعالا *س ر ع*^{2} *غ* : يفعل افعالا *ا ع* : يفعل افعالاً *ق* : يفعل افنالا *خ* | العقل *ا ق ر ع*^{2} *خ غ ع* : *سقطت من س* | السبيل *ا ق ع*^{2} *خ غ ع* : سبيلا *س ر* | إدراكها . . . وإثباتها *س ع* (*أصلح في الحاشية وكتب* وانبايها من الطبيعة) : ادراكها بمعرفتها واتيانها *ا* : ادركها بمعرفتها واثباتها *ق* : ادرك معرفتها واثباتها *ر* : إدراكها بمعرفتها وإنبائها ع^{2} : ادراك معرفة اتساعصا *خ* : ادراك معرفة السابها *غ* | من *س ا ر ع*^{2} *خ غ* : في *ق ع* | الطبيعة *زادت* إلى هذا القول والفصل ما كان فيه زيادة ونقصان في بعض النسخ وبعده إلى آخر الكتاب ما فيه خلاف تم بحمد الله ومنه وحسن توفيقه وهو المشكور والمحمود على كل حال ع^{2} | وإنه *س ا ق خ غ ع* : وان ؟ *ر* : *قبل هذه القراءة انتهت ع*^{2} **163** حكم *س ا ق ر خ ع* : يحكم *غ* | بصفة *ا ق ر غ ع* : يصفه *س خ* : *زادت* تودّى الى منفعة شي *ر* : *زادت* ما *خ غ* | فلان يصدق *ا ق خ* : فلا صدق *س* : فلا يصدق *ر ع* : فلانه صدق *غ* | ويكون *س ا ق غ ع* : ويكونوا *ر* : ويطون *خ* | ذلك . . . 164 ما *س ا ق ع* : ذلك مثل ؟ *ر* : *سقطت من خ* : ذلك مثل من *غ* **164** جاء *س ا ق خ غ ع* : ؟ *ر* | برب *س ا ق ر غ ع* : رب *خ* | الذي *س ا ق ر خ غ* : *سقطت من ع* | يشك فيه *س ر* : شك *ا ق* : شك فيه في *خ* : شك في *غ* : شك *ع* | يعقل البطن *س ا ق ر غ ع* : يفعل الطبع المنطق *خ* فسقى . . . من *ر ع* : يسقى منه من *س* : فسقا من *ا* : فسقا منه *ق* : فيبقى منه من *خ* : فيسقى منه من *غ* **165** إسهال *س ا ق ر خ ع* : اسهاله *غ* | فتحير *س ا ق ر ع* : متحير *خ غ* | في *س ر خ غ* : من *ا ق* : عن *ع* | ولم *س ر خ غ ع* : فلم *ا ق* | يدر *س ا ق ر خ غ* : ير *ع* ذلك^{2} . . . 166 الخلاف *س ا ق خ ع* : ذلك الخلاق *ر* : وذلك خلافٌ *غ* **166** قضيته *س ا ق خ ع* : قبضيته *ر* : طبقه *غ* | جعلت فيه *زادت* شيا من *ع* | السقمونيا *ا ر ع* : سقمونيا *س ق غ* : سمقمونيا *خ* | فعند *س ق ر خ* : فبعد *ا ع* : فضد *غ* **167** ذلك^{1} . . . له *س ا ق* : ذلك بان له *ر خ غ* : عن *ع* : *زادت* من اين صارت لدلك *ر* : *زادت* من اين صارت له *خ غ* | الخاصية *س ا ق ر ع* : الخاصة *خ* : الخاصّة *غ* | فصار *ا ق ر خ غ ع* : وصار *س* | محتاجا *س ا ق ر ع* : محاج في ذلك *خ* : في ذلك محتاجاً *غ* | في ذلك *س ا ق ر ع* : *سقطت من خ غ* | بما . . . 168 تفعله *س ر ع* : به وما تفعله *ا ق* : لذلك هذه *خ* : ولذلك يزه؟ *غ*

things do by way of their properties is part of what the intellect needs to have recourse to through knowledge. The science in this [consists in] the deposits and in their specifics, so that their locations may be known. Otherwise, where would the intellect gain knowledge from? Indeed, the disgraceful and weak fish, as long as it is alive and in motion, cannot be held fast in the hand of the brave and bold man without his feeling a violent fright and having his senses numbed. He will be terrified of this even if [this fish] does not have a dreadful aspect nor a terrifying appearance, [and despite the fact that] you will see this [man] approach a lion and kill him without this being dreadful to him. From where does it come to the intellect that when on raises a dead stone and a mute substance in the air toward a vase containing vinegar, [and when] the acidity from the vinegar is projected onto it, [it] falls in another direction? And [from where does it come to the intellect that,] even if someone would throw it and the thrower would aim for the place of the vinegar, it would not fall on it? That is the stone that is called 'the vinegar hater'. If we did not perceive them visually, we would deny many of these things on the basis of a report and we would say that they are falsehood. This is part of the magic of nature and of the properties that the universal soul has deposited in it. The scholars have, among the secrets of nature, cryptic sciences, fine secrets and things that

تفعله الأشياء بخواصها مما يحتاج العقل أن يستعين بالمعرفة. والعلم في ذلك
الودائع وتفصيلها حتى يعرف مواضعها. وإلا فمن أين للعقل المعرفة؟ فإن
السمكة المهينة الضعيفة ما دامت حية متحركة لا يقدر الرجل الشجاع البطل 170
أن يمسكها بيده إلا ارتعدت فرائصه وخدرت حواسه وفزع منها وليس لها منظر
هائل ولا صورة مفزعة وتجده يتقدم إلى الأسد فيقتله ولا يهوله. ومن أين للعقل
أن حجرا ميتا وجوهرا صامتا إذا رفع في الهواء نحو إناء فيه خل وألقي عليه حاد
عن الخل وقع في ناحية غيره ولو رمى به وتعمد الرامي به موضع الخل لما وقع
فيه؟ وهو الحجر المسمى بباغض الخل. وكثير من هذه الأشياء لو لم ندركها 175
مشاهدة لأنكرناها بالخبر وقلنا إنها باطل. فهذا من سحر الطبيعة ومن الخواص
التي أودعتها فيها النفس الكلية. وعند العلماء من أسرار الطبيعة علوم غامضة

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168 بخواصها مما / ر ع : بخواصها س : بحواصها مما ق : نفعل نحو اصها ما خ : تفعل نحو اصها ما غ | يحتاج العقل / ق ر خ غ ع : *مبدأ فراغ في س* | أن / ق ر غ ع : ما خ | يستعين *زادت* فيه ر | والعلم / ق ر غ ع : *مبدأ فراغ في خ* | في ... 169 يعرف / ق ر : في مفرقه تلك الودايع وتفصيلها حتى يعرف غ : بتلك الودائع بتفصيلها ع **169** مواضعها ق ر : مواضها / : موضعها غ : *سقطت من ع* | فمن / ق ر غ : من ع | المعرفة فإن ر : معرفه ذلك وان / ق : المعرفة بانّ غ ع **170** السمكة / ق ر ع : سمكه غ | المهينة الضعيفة / ق : المعروفه بالرعاده مع ؟ ؟ ر : مهينه صفيفه غ : الضعيفة المهينة اذا ع | متحركة / ق ر غ : *سقطت من ع* | الرجل الشجاع ر ع : الشجاع / ق : الرجل السماع غ | البطل ر غ ع : النجد / ق **171** أن / ر ع : ان ان ق : على ان غ فرائصه وخدرت / ر غ ع : فوايصه وحدرت ق | حواسه / ق ر ع : حواشه غ **172** وتجده / ق ر ع : وبلو؟ غ | إلى الأسد / ر : على الأسد ق ع : الى الأشد غ | يهوله / ق ر ع : هوله غ **173** ميتا / ق ع : مائتا ر : مهينا غ | وجوهرا ق ر غ ع : وجوها / | إذا / ر غ ع : اذ ق في / ق ع : الى ر : *سقطت من غ* | الهواء نحو / ق ر ع : الهوا يحنت؟ غ | وألقي / ق ر ع : ؟الع غ **174** عن الخل / ق ر ع : عنه غ | وقع[1] *كتبنا* : ووقع / ق ر غ ع | غيره / ق ر ع : *سقطت من غ* | وتعمد الرامي / ق ر : ولقعد؟ الرلمى؟ غ : ويعمد الرامي ع | به[2] ر غ ع : *سقطت من / ق* **175** الحجر / ق ر ع : *سقطت من غ* | بباغض / ق ع : باغض ر : بغاصبة؟ غ | وكثير ... هذه / ق ر : واكثر عن غ : فليس من هذه ع | ندركها ق ع : تدركها / : يدركها ر غ **176** مشاهدة / ق ر ع : مشابرة غ | لأنكرناها ... إنها / ر غ ع : لانكرها بالخبر قلنا انه ق | سحر / ق ر ع : ؟ غ **177** الكلية / ق ر ع : بالكلبه غ | الطبيعة *زادت* ومن الاسرار التي اودعتها النفس الكلية ر | غامضة / ر غ ع : عامضه ق

act by their active natures and their properties. Were we not afraid of it taking too long, we would mention what we have perceived and seen from this.

Know, my brother, that the soul needs science when it gains control over those things and has command of them in their realities, for indeed the actions of the universal soul are hidden from the particular souls. If one suspends the little finger of a miscarried fetus on a woman, [that woman] will not become pregnant as long as this is suspended on her. Some people have reported that, when a woman takes a frog, opens its mouth, spits three spittles into it and leaves it, she will have sexual intercourse for a year without becoming pregnant. It has been reported that the red coral stone—that is, coral—is useful against stomach illnesses due to the specificity of its substance, when it is suspended on that [stomach]. He said: "I tried this and found it so useful that I made a necklace out of it." Some sages have reported that, when someone

وأسرار دقيقة وأشياء تفعل بطباعها وخواصها. ولو لا خوف الإطالة لأتينا بذكر ما أدركناه من ذلك ورأيناه.

واعلم يا أخي أن النفس تحتاج إلى العلم إذا حازت هذه الأشياء فتربها بحقائقها وذلك أن النفوس الجزئية خفيت عليها أفعال النفس الكلية. وإن خنصر السقط إذا علق على المرأة لم تحبل ما دام ذلك معلقا عليها. وذكر بعض الناس أن المرأة إذا اخذت الضفدع وفتحت فاها وبصقت فيها ثلاث بصقات وتركتها تجامع سنة ولا تحبل. وذكر أن حجر البسد وهو المرجان ينفع من علل المعدة بخاصية جوهره إذا علق عليها. وقال: ''إني امتحنت ذلك فوجدته نافعا حتى اتخذت منه قلادة.'' وذكر بعض الحكماء أن القرطم البري

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178 وأشياء / *ق ر ع* : *سقطت من غ* | تفعل *ق ر* : يفعل / : *سقطت من غ* : نفعل *ع* بطباعها وخواصها / *ق* : خواصها وطباعها *ر* : *سقطت من غ* : بطبايعها وخواصها *ع* | الإطالة : الاطالة / *ق ر غ ع* **179** بذكر / *ق غ ع* : بذكرها ؟ *ر* | أدركناه / *ق ر* : ادركاه *غ* : ادركنا *ع* من ذلك / *ق ر ع* : في هذا *غ* | ورأيناه *زادت* فصل *ر* **180** واعلم / *ق ر ع* : ؟ *غ* | يا أخي *ر ع* : أيها الأخ / *ق* : *سقطت من غ* : *زادت* ايدك الله بروح منه / | أن النفس *زادت* الجزيه *غ* حازت *ع* : حارت / *ر غ* : جازب *ق* : *زادت* في *ر غ* | فتربها ... 181 بحقائقها : فتربها حقايقها / : فمربها حقايقها *ق* : فتراها بحقايقها *ر* : فتر؟ها حقايقها *غ* : فيربها بحقايقها *ع* **181** النفوس *ر ع* : النفس / *ق غ* | الجزئية / *ق ر* : الجزية *غ* : الجزوة *ع* | النفس / *ق ر ع* : النقل *غ* الكلية *زادت* في الجواهر الطبيعية وكيفية سبائها ؟ *ر* | وإن / *ق ع* : ان *ر غ* **182** خنصر / *ق ر ع* : خضر *غ* | تحبل / *ر ع* : تحيل *ق* : تعمل *غ* | دام ذلك / *ق ر ع* : دامت *غ* | معلقا عليها *ق ر* : معلق عليها / : مقامه عليها *غ* : عليها معلقا *ع* | وذكر ... 183 بعض *في الحاشية ع* **183** الناس *ر غ ع* (*في الحاشية*) : الحكماء / *ق* | اخذت ... وفتحت *ر غ* : فتحت / *ق ع* (*في الحاشية*) | فاها / *ق ر ع* (*في الحاشية*) : فائها *غ* | وبصقت *ر غ* : وبصق / *ق ع* (*في الحاشية*) فيها / *ق ع* (*في الحاشية*) : في فيها *ر* : فيه *غ* | ثلاث / *ق ر ع* (*في الحاشية*) : لان *غ* **184** بصقات / *ق ع* (*في الحاشية*) : ؟ *ر* : قرات *غ* | وتركتها *ر ع* (*في الحاشية*) : *سقطت من* / *ق* : وتركها وباس؟ ؟ *غ* | تجامع *في الحاشية ع* | سنة *ق ر ع* (*في الحاشية*) : *سقطت من* / *غ* | ولا *في الحاشية ع* | تحبل / *ق ر ع* (*في الحاشية*) : تعمل *غ* : *زادت* سنه سد / : *زادت* ؟ *غ* | وذكر / *ق ر* : وزذكر *غ* : واعلم *ع* | أن حجر / *ق ر ع* : جالينوس ان حمر؟ *غ* | البسد / *ق ر غ* : البُسِّذ *ع* | وهو المرجان / *ق ر ع* : *سقطت من غ* **185** من *زادت* جميع *ر غ* | المعدة ... جوهره / *ق ر* : للعده؟ بخاص؟ه جوهره *غ* : المعدة بخاصية فيه *ع* | وقال إني / *ق ر ع* : قال وقد *غ* | امتحنت ذلك *زادت* مرار كثيرة *ر غ* **186** فوجدته *ق ر غ ع* : فوجدتها / | نافعا حتى *زادت* أني *ع* | قلادة / *ق ر ع* : شيا العلا؟ *غ* | البري / *ق ر ع* : البتري *غ*

stung by a scorpion holds fast a wild safflower, one will not find any pain in him, yet the pain will come back when one removes it. If one suspends the root of an agaric on a human being, no scorpion will sting him. Some physicians have said that, if one suspends the dried root of an asparagus onto a painful molar tooth, one will cause it to fall out without pain. It is said that he who takes a dog's tick and holds it fast to him, dogs will not bark at him, and they will be submissive to him, with the exception of the dog from which that tick was taken. The Indians say that when a woman is carrying something related to an elephant mixed up with honey, she will never be pregnant. The evidence for this, they say, is that when you suspend on a tree something that comes from an elephant, that tree will not bear any fruit that year. Some physicians have reported that when you suspend the right leg of a turtle onto someone having gout, it will be useful to him. If the ache is in the left leg, then it is the turtle's left leg which, when suspended onto it, will be useful to him. Likewise, the front legs for the hands having gout. The peony root and pyrethrum are useful against

إذا أمسكه الملسوع بالعقرب لم يجد له وجعا فإذا طرحه عاد الوجع إليه. وإذا علق أصل الغاريقون على إنسان لم يلسعه عقرب. وقال بعض الأطباء: ''إن علق على الضرس الوجع أصل من الهليون يابس قلعه من غير وجع.'' وقيل أنه من أخذ من قراد الكلاب فأمسكه معه لم تنبح عليه الكلاب وخضعت له ما خلا الكلب الذي أخذت منه تلك القرادة. والهند يقولون إنه إذا حملت المرأة شيئا من نحو الفيل مخلوطا بالعسل لا تحمل أبدا. وقالوا والدليل على ذلك أنك إذا علقت على شجرة من نحو الفيل شيئا لم تحمل تلك الشجرة شيئا في تلك السنة. وذكر بعض الاطباء أن الرجل اليمنى من السلحفاة إذا علقت على من به النقرس نفعه فإن كان الوجع في الرجل اليسرى فالرجل اليسرى منها إن علقت عليها نفعه وكذلك اليدان لليدين المنقرسة. وعرق الفاوانيا

187 إذا / *ر ع* : اذ *ق غ* | الملسوع بالعقرب *ر غ ع* : بالعقرب / : من لسعه عقرب *ق* | له ... فإذا / *ق ر ع* : وحق؟! واذا هو *غ* | الوجع إليه / *ق ر* : الوجع *غ* : اليه الوجع *ع* | وإذا ... 188 علق *زادت* على انسان / **188** الغاريقون / *ق ر ع* : الفاريقون *غ* | على إنسان *ق ر غ ع* : *سقطت من* / **189** الضرس ... أصل / *ر ع* : الطرس اصل *ق* : الضرس الواجع *غ* | من الهليون / *ق ر* : هليون *غ ع* | يابس / *ق غ ع* : *سقطت من ر* | من[2] ... وقيل / *ق ر* : بالاوج هو؟ قيل *غ* : من غير وجع وقال *ع* **190** قراد الكلاب / *ق ع* : قراد الكلب *ر* : قرا بالكلب *غ* : *زادت* قرادا / *ق* | معه *ق ر غ ع* : لمعه / | تنبح / *ر ع* : سحح *ق* : ينتح؟ *غ* **191** أخذت / *ق ر* : اخذ *غ ع* | تلك القرادة / *ق ر ع* : ذلك القراد *غ* | والهند / *ق غ ع* : واطباء الهند *ر* | حملت / *ق ر ع* : احملت *غ* **192** شيئا : شياء / *ق ر ع* : شي *غ* | مخلوطا بالعسل / *ع* : ملطوخاً بالعسل *ق* : ؟ بالعسل *ر* : *سقطت من غ* | وقالوا / *ق ر* : قالوا *غ* : *سقطت من ع* **193** أنك إذا / *ر* : انه اذا *ق* : انك لو *غ ع* | شجرة *زادت* شيا / | الفيل / *ق ر ع* : *سقطت من غ* | شيئا[1] : *سقطت من* / *ق* : شياء *ر ع* | لم / *ق ر ع* : ؟لم *غ* | تحمل *زادت* في *غ* | الشجرة ... 194 تلك / *ق ر* : *سقطت من غ* : الشجرة في تلك *ع* **194** الاطباء أن / *ق ر ع* : الاطبا انه ان اخذت *غ* السلحفاة *ق ع* : السحفاة / *ر* : السل؟فاه *غ* | إذا علقت / *ق ر ع* : فملقت *غ* **195** على ... به *زادت* وجع *ر* | النقرس *زادت* في الرجل اليمنى *ر* : *زادت* في الرجل تعنها؟ *غ* | نفعه / *ق ر ع* : هوان؟ *غ* | كان / *ق ر ع* : *سقطت من غ* | الرجل / *ق ر ع* : *سقطت من غ* | فالرجل ... 196 منها *ق ع* : فالرجل اليسرى / : فان الرجل اليسرى منها *ر* : هوان؟ فاليوى؟ فانها *غ* : *زادت* فالرجل اليسرى منها *ع* (*في الحاشية*) **196** إن ... عليها *ر* : ؟ / : *سقطت من ق* : ان علقت عليه *غ* : وان علقت عليها *ع* | نفعه *ق ع* : ؟ / : نفع منه *ر* : تعقت *غ* | وكذلك *ق ر غ ع* : ؟ / | اليدان *ر غ ع* : البدن / *ق* | لليدين المنقرسة *ر ع* : البرز؟ المنقرس / : لليدين المنقرس *ق* : ان كان النقرس ؟؟اء *غ* | وعرق الفاوانيا / *ق ر ع* : والفاونيا *غ*

epilepsy in young people when they are suspended onto someone having it. One of these two will be satisfactory when it is suspended onto him. If the hair of a black dog in which there is no white is suspended onto him, it will be useful against epilepsy.

Know, my brother, that the scholars have reported these things and the sages have written about them only as a [way of] strengthening of the imaginations of the patients, so that the conceptualization of the cessation of that ache may be imprinted in their souls. As for us, we see that this exists only as a result of the blending and the action of nature coming from the inside of the body, [as well as] of ointments, cerates and the things that have a power to penetrate [going] from the outside to the inside of the body. Upon my life, among these roots and herbs, there are some that have smells that mix with the breaths and then unite

وعاقرقرحا ينفعان الصرع في الصبي إذا علق على من به ذلك. ويجزي أحدهما إذا علق عليه. وإن علق عليه شعر كلب أسود لا يكون فيه بياض نفع من الصرع.

200 واعلم يا أخي أن هذه الأشياء إنما ذكرتها العلماء ووضعتها الحكماء تقوية لأوهام الأعلاء حتى ينطبع في نفوسهم تصور إزالة ذلك الوجع. فأما نحن فلا نرى ذلك أنه كائن إلا بالمخالطه وفعل الطبيعة من داخل الجسد والأدهان واللطوخات والأشياء التي لها قوة نافذة من خارج الجسم إلى داخله. ولعمري إن من هذه العروق والحشائش ما يكون لها روائح تمازج الأنفاس فتتصل

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197 وعاقرقرحا *في الحاشية ا* | ينفعان *ا ق ر ع* : يفعان غ : *زادت من* غ ع | إذا ... ذلك *ا ق ر ع* : له اعلق عليه غ | ويجزي أحدهما *ق ر* : و؟ ؟ *ا* : اخذها وكذلك غ : ويجري احدهما ع **198** إذا *ق ر* غ ع : ؟ *ا* | عليه[1] ... علق[2] *ر ع* : ؟ ؟ *ا* : وان علق *ق* : *سقطت من* غ عليه[2] ... أسود *زادت* الذي *ا* | لا ... بياض *زادت* بتة ع | نفع *ق ر ع* : يفع *ا* : *سقطت من* غ | من ... 199 الصرع *ا ق ر ع* : *سقطت من* غ **200** يا أخي *ق ر* غ : أيها الأخ ايدك الله وايانا بروح منه *ا* : *نهاية الفراغ في* خ : *سقطت من* ع | إنما *ا ق ر* خ غ : كلها ع | ذكرتها ... ووضعتها *ا ر ع* : ذكرناها للعلما ووضعتها *ق* : ذكرتها العلماء ووصفتها خ : ذكرتها للعلما ووضقها غ | الحكماء *ا ق ر* خ ع : للحكماء غ | تقوية ... 201 الأعلاء *ر* : بقوبه لاوهام الا؟ *ا* : بقوبه الأوهام الاعلا *ق* : بقوية للاوهام خ : لقويه للاونام في؟ الأعلى غ : بقوة الأوهام الاعلاء ع **201** حتى ينطبع *ق ر* خ غ ع : ؟ ؟ *ا* | في نفوسهم *ق ر ع* : ؟ ؟ *ا* : النفس خ : في النفس غ تصور *ق ر* خ غ ع : به؟ *ا* | إزالة *ا ق ر ع* : بازالة خ : انالة غ | الوجع *ر* خ غ ع : المرض *ا ق* | فأما *ا ق ر* غ ع : واما خ | فلا *ا ق ر* غ ع : فانا لا خ **202** ذلك أنه *ا ر ع* : ان ذلك *ق* خ : ذلك غ | إلا *ا ق ر* غ ع (*في الحاشية*) : لا خ | بالمخالطه *ر ع* : بالمحافظه *ا ق* خ : بالحالطه غ | وفعل *ر* خ غ ع : التي لها من بافدة ؟ ؟ *ا* : التي لها قوه نافده لان فعل *ق* | الطبيعة *ا ق ر* خ ع : الطبيع؟ غ | والأدهان *ا ق ر* خ : والادان غ : *سقطت من* ع **203** والأشياء *ا ر* خ غ ع : بالاشيا *ق* | قوة *ق ر* خ غ ع : ؟ *ا* | الجسم *ا ق* ع : الجسد *ر* خ غ | داخله ... 204 إن *ق ر* خ ع : ؟ ؟ ؟ *ا* : داخله والعم ان غ **204** من *ا ق ر* خ ع : *سقطت من* غ العروق *ق ر* خ غ ع : ؟ *ا* | ما *ا ق ر* خ ع : لها غ | تمازج ... فتتصل *ق ر ع* : يمازج الانفاس فيتصل *ا* : تمازج الانفاس فيتصل خ : تمازج الانفس ينتظر غ

with nature, and strengthen it to push the anomaly back through it. The example of this is the smell of musk, [which] harms whomever is of the yellow bile, whereas the smell of camphor is useful to him. In a similar way, things act through their properties.

Know, my brother, that when the spiritualities of the planets descend to the world, as we have previously reported, and [when] they bring out the nativities of things, they connect to each nature specific to each plant and each animal what is like it, and from them appears what has been deposited in them. The usefulness will be in accordance with the nature of the benefic and with the balance, and the harmfulness will be in accordance with the nature of the malefic and the distance from the balance.

بالطبيعة فتقويها على دفع العارض بها. والمثال في ذلك أن رائحة المسك تضر من به الصفراء وتنفعه رائحة الكافور. وعلى مثل ذلك تفعل الأشياء بخواصها.

واعلم يا أخي أن روحانيات الكواكب إذا انحطت إلى العالم كما ذكرنا فيما تقدم وأبرزت مواليد الأشياء ربطت بكل طبيعة مختصة بكل نبات وكل حيوان ما يشاكله فيظهر منها ما كان مستودعا فيها. فتكون المنفعة بحسب طبيعة السعد والاعتدال والمضرة بحسب طبيعة النحس والبعد عن الاعتدال.

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205 فتقويها / ر ع : فيقوبها ق : فنقوي فيها خ : فيقويها غ | دفع ق ر خ غ ع : ؟ / : *زادت* الداء ر خ : *زادت* الدو غ | العارض بها ق ر ع : ؟ ؟ / : العارض لها خ غ | أن ق ر خ ع : من / : *سقطت من* غ | تضر ... 206 به / ق ر : تضربه من به خ : تضرّ بها حب غ : تضر بمن به ع **206** الصفراء ق ر خ غ ع : لصفرا / | رائحة / ق ر غ ع : من به خ | مثل ر خ غ ع : مثال / ق | تفعل الأشياء ق ر خ غ ع : ؟ ؟ / | بخواصها ق ر خ ع : ؟ / : ذكير لها غ **207** واعلم ق ر خ غ ع : ؟ / | يا أخي ر خ غ ع : أيها الأخ ايدك الله بروح منه / : أيها الأخ ق | إلى العالم *زادت* ؟ / : *زادت* الأبضي ع | كما ... فيما ر ع : ؟ ؟ ؟ / : كما ذكرنا مما ق : بما ذكرنا اولا فيما خ : كما ذكرنا أولا فيما غ **208** وأبرزت مواليد / ر ع : وابرت مواليد ق : وانبررت من اليد خ : وابرزت موالد غ | مختصة / ق ر خ ع : تحصه غ | بكل[2] / ق خ غ ع : وكل ر وكل ... 209 ما[1] ق ر خ ع : وحيوان ما / : وحيوان فما غ **209** يشاكله / ق ر خ غ : يشاكلها ع | منها ... فيها ق ر خ غ ع : تلك ؟ ؟ ؟ ؟ / | فتكون المنفعة / ق ر غ ع : *سقطت من* خ **210** السعد والاعتدال ر خ غ ع : الاعتدال والسعد / ق | بحسب طبيعة / ق غ ع : بحسب ر : *سقطت من* خ | النحس ... الاعتدال ر ع : البعد عن الاعتدال والنحس / : البعد عن الاعتدال والنحس ق : *سقطت من* خ : النحس والتعبد من الاعتدال غ

Abstract

Godefroid de Callataÿ – Sébastien Moureau, *An Arabic Version of Qusṭā b. Lūqā's* De Physicis Ligaturis?

After the short version (52a), published in 2011, the critical edition of two other versions (52b and 52c) of the Epistle of Magic ascribed to the Ikhwān al-Ṣafā' is to come out soon as part of the *Epistles of the Brethren of Purity* series at Oxford University Press in association with the Institute of Ismaili Studies. Although it occupies the last position in the corpus and has sometimes been presented as the conclusion of the work as a whole, there are various reasons to assume that this epistle on magic was not part of the original plan of the Brethren and that therefore none of these three mutually exclusive versions should be regarded as integral to the Ikhwānian encyclopaedia. This is concerned with one particular section of the 52b version – a version whose heterogeneity of content and intricate manuscript tradition are particularly notable. In this section, found in many authoritative manuscripts but lacking in others and not part of the Beirut edition, the author discusses the power of imagination (*wahm*) and the use that physicians from Greece and from India made of it to help curing some illnesses, generally by means of spells attached to parts of the body. We argue that this section is, if not the Arabic original itself, an early testimony in the tradition of the *De Physicis Ligaturis*, a work written by the Christian physician Qusṭā b. Lūqā (d. 912) and which was thus far only known through its Latin translation, presumably by Constantine the African (d. 1087).

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Part V

KNOWLEDGE ORGANIZATION

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M-*CLASSI*: A NEW DIGITAL TOOL FOR THE CLASSIFICATION OF THE SCIENCES, IN ISLAM AND BEYOND

Introduction

M-*Classi* is a new digital tool in the field of knowledge organization. It is conceived primarily as a means of cataloging and interrogating the classifications of the sciences in Islam and those cultures with which the Islamicate world came into contact from antiquity to the premodern era. Practically, M-*Classi* is focused, by priority, on Arabic, Persian, and Turkish classifications, but for comparative purposes it also integrates taxonomies in Syriac, Greek, Latin, Hebrew, and other languages. This said, the application is universally usable and can be adapted to any language and script. The aim of this article is to present this game changing tool whose vocation is to become an open-access engine for future research. After briefly recapitulating the current state of the art on Islamic classifications of the sciences and succinctly presenting the specificities of M-*Classi*'s technical configuration in its current beta version (available on request at https://www.m-classi.eu), we review some of the application's main functionalities. In particular, we provide examples of complex queries that M-*Classi* and its extensive database can address, and we illustrate, with screen captures, various aspects of its great potential in terms of visualization.

State of the Art

At present, the classifications of Islamic sciences remains largely understudied, especially when measured in relation to its vast historical record. From the third-/ninth-century epitomes of Aristotelian

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works, in which early attempts at structuring human knowledge in disciplines was noted[1], to the enormous catalogues of the rational sciences produced in Ottoman times by Ṭāshköprüzāda (d. 968/1561) and others, the classifications of the sciences, as devised by Muslim scholars in multiple fields – theologians, philosophers, logicians, naturalists, cosmographers, physicians, litterateurs – number in the hundreds, yet thus far, only a small fraction of this enormous production has received serious attention. Modern scholarship on encyclopedism and the organization of knowledge in Islam has traditionally focused on Arabic literature and the so-called "classical period", and considered only a very limited number of emblematic examples, among which we almost inevitably find al-Kindī's *Risāla fī kammiyya kutub Aristūṭālis* (d. ca. 259/873), the *Rasā'il Ikhwān al-Ṣafā'* (fourth/tenth century or earlier), al-Fārābī's *Iḥṣā' al-ʿulūm* (d. 339/950-51), and Ibn Sīnā's (d. 428/1037) *Risāla fī taqsīm al-ʿulūm al-ʿaqliyya*. Other writings regularly mentioned in this context are the *Mafātiḥ al-ʿulūm* by the civil servant Muḥammad b. Aḥmad al-Khuwārizmī (fourth/tenth century), the *Risāla fī l-ʿulūm* of the litterateur Abū Ḥayyān al-Tawḥīdī (d. 414/1023), Ibn Ḥazm's *Marātib al-ʿulūm* (d. 456/1064), and sometimes also Fakhr al-Dīn al-Rāzī's *Jāmiʿ al-ʿulūm* (d. 605/1209) and Ibn Khaldūn's *Muqaddima* (d. 808/1406). The list rarely goes much beyond this handful of books[2]. With the exception of valuable,

1. Ch. Hein, *Definition und Einteilung der Philosophie: von der spätantiken Einteilungsliteratur zur arabischen Enzyklopädie* (Frankfurt am Main 1985); D. Gutas, «The Greek and Persian Background of Early Arabic Encyclopedism». in *Organizing Knowledge: Encyclopaedic Activities in the Pre-Eighteenth Century Islamic World*, ed. G. Endress (Leiden 2006), 91-101.

2. The standard references in this field remain W. Heinrichs, «The Classification of the Sciences and the Consolidation of Philology in Classical Islam», in *Centres of Learning: Learning and Location in Pre-modern Europe and the Near East*, ed. J. W. Drijvers and A. MacDonald (Leiden 1995), 119-39; J. Jolivet, «Classifications of the Sciences», in *Encyclopedia of the History of Arabic Sciences*, ed. R. Rashed and R. Morelon, 3 vols. (London 1996), 1008-25; A. M. Al-Najjar, «Classification of Sciences in Islamic Thought: Between Imitation and Originality», *American Journal of Islamic Social Sciences* 13 no. 1 (1996), 59-87; O. Bakar, *Classification of Knowledge in Islam* (Cambridge 1998); H.-H. Biesterfeldt, «Medieval Arabic Encyclopedias of Science and Philosophy», in *The Medieval Hebrew Encyclopedias of Science of Philosophy: Proceedings of the Bar-Ilan University Conference*, ed. S. Harvey (Dordrecht 2000), 77-98; Biesterfeldt, «Arabisch-islamische Enzyklopädien: Formen und Funktionen», in *Die Enzyklopädie im Wandel vom Hochmittelalter bis zur Frühen Neuzeit: Akten des Kolloquiums des Projekts D im Sonderforschungsbereich 231 (29.11.-1.12. 1996)*, ed. Ch. Meier (Munich 2002),

but rather general contributions on Persian encyclopedias[3] and a few recent studies on specific Ottoman classifications[4], the exploration

43-83; P. Heck, «The Hierarchy of Knowledge in Islamic Civilization», *Arabica* 49 no. 1 (2002), 27-54; G. Endress, «The Cycle of Knowledge: Intellectual Traditions and Encyclopaedias of the Rational Sciences in Arabic Islamic Hellenism», in *Organizing Knowledge: Encyclopaedic Activities in the Pre-Eighteenth Century Islamic World*, ed. G. Endress (Leiden 2006), 103-33. More recently, Biesterfeldt also wrote articles on individual classifications such as, Biesterfeldt, «Ibn Farīghūn's *Jawāmiʿ al-ʿulūm*: Between Classification of Sciences and Mirror for Princes». in *Global Medieval: Mirrors for Princes Reconsidered* (Ilex Foundation Series 15), ed. R. Forster and N. Yavari (Boston 2015), 11-25; Biesterfeldt, «Eine arabische Klassifikation der Wissenschaften aus dem 4./5. Jahrhundert H.», *Studia graeco-arabica* 10 (2020), 261-70; Biesterfeldt and M. Cüneyt Kaya, «An Aristotelian Classification of the Sciences by Avicenna?», *Zeitschrift für Geschichte der Arabish-Islamischen Wissenschaften* 22 (2020), 1-21. See also, among G. de Callataÿ's recent contributions to the field: «The Classification of Knowledge in the *Rasāʾil*», in *The Ikhwān al-Ṣafāʾ and their Rasāʾil: An Introduction*, ed. N. El-Bizri (Oxford 2008), 58-82; G. de Callataÿ, «Trivium et quadrivium en Islam: des trajectoires contrastées», in *Une lumière venue d'ailleurs: Héritages et ouvertures dans les encyclopédies d'Orient et d'Occident au Moyen Age, Actes du colloque international tenu à Louvain-la-Neuve du 19 au 21 mai 2005* (Collection Réminisciences 9), ed. G. de Callataÿ and B. Van den Abeele (Turnhout 2008), 1-30; G. de Callataÿ, «Science in Islam: Classification», in *Encyclopedia of Sciences and Religions*, ed. A. L. C. Runehov and Ll. Oviedo (Dordrecht 2013), 2100-2; G. de Callataÿ, «Encyclopaedism on the Fringe of Islamic Orthodoxy: The *Rasāʾil Ikhwān al-Ṣafāʾ*, the *Rutbat al-ḥakīm* and the *Ghāyat al-ḥakīm* on the Division of Science», *Asiatische Studien* 71 no. 3 (2017), 857-77; G. de Callataÿ, «Dividing Science By Ten», *Studia Islamica* 111 (June 2020), 1-32.

3. For the Persian encyclopedic material, see in particular: Ž. Vesel, *Les encyclopédies persanes. Essai de typologie et de classification des sciences* (Paris 1986); Ž. Vesel, «Les encyclopédies persanes: culture scientifique en langue vernaculaire», in *Une lumière venue d'ailleurs: Héritages et ouvertures dans les encyclopédies d'Orient et d'Occident au Moyen Age, Actes du colloque international de Louvain-la-Neuve* (*19-21 mai 2005*), ed. G. de Callataÿ and B. Van den Abeele (Turnhout 2008), 49-89; M. Melvin-Koushki, «Powers of One: The Mathematicalization of the Occult Sciences in the High Persianate Tradition», *Intellectual History of the Islamicate World* 5 (2017), 127-99. See also Ž. Vesel and M. Melvin Koushki, «Encyclopedias, Persian», in *EI*[3] (forthcoming).

4. F. Bellino, «The Classification of Sciences in an Ottoman Arabic Encyclopaedia: Ṭāšköprüzāda's *Miftāḥ al-saʿāda*», *Quaderni di Studi Arabi* 9 (2014), 161-80; F. Bellino, «Arabic Encyclopaedias and Encyclopaedism between the Seventeenth and Nineteenth Centuries: Forms, Functions, Intersections of *adab* and Modernity», in *Adab and Modernity: A «Civilising Process»?* (*Sixteenth-Twenty-First Century*), ed. C. Mayeur-Jaouen (Leiden 2020), 123-27; F. S. Eryılmaz and G. de Callataÿ, «Following the Steps of the Ikhwān al-Ṣafāʾ in the Ottoman World I: Insights from Three Universal Histories», *JIS* 34 no. 3 (2023), 340-70; G. de Callataÿ, «Following the Steps of the Ikhwān al-Ṣafāʾ in the Ottoman World II: ʿAbd al-Raḥmān al-Biṣtāmī and His *tashjīr* Diagrams of Science», *Mediterranea: International Journal on the Transfer of Knowledge* 8 (2023), 55-88.

and exploitation of this "post-classical" heritage remains largely to be done. From this point of view, we can only observe that there still exists a major disproportion in the interest accorded, on the one hand, to the classifications of Greco-Latin antiquity and their heirs in the western medieval tradition and, on the other hand, to those of the Muslim world. The contrast is all the more striking as we compare the Islamic classifications of the sciences with those produced in the medieval Latin Christian West. It seems that these western classifications have been continuously and scrupulously inventoried and analyzed, despite the fact that they include only a small number of sciences and have changed very little over the centuries. In fact, these taxonomies appear to have been rooted once and for all on: (1) the Aristotelian tripartite division of science (*ἐπιστήμη*) into "speculative" (*θεωρητική*), "practical" (*πρακτική*), and "productive" (*ποιητική*); (2) Aristotle's further division of speculative science (or rational philosophy) into mathematics, physics, and theology, with logic as the "instrument" (*ὄργανον*) of science; (3) the notions of quadrivium and trivium, inherited from the Greco-Roman liberal arts education as handed down by Boethius (d. 524) and Cassiodorus (d. 585) at the crossroads of antiquity and the Middle Ages[5]. The situation could hardly be more diverse for the Islamic sciences. Not only do classifications in Islam generally include a greater number of sciences, reaching into the hundreds in some extreme cases such as Ṭāshköprüzāda's *Miftāḥ al-saʿāda*; but their authors also appear to have distanced themselves from the authorities of the past much more freely than their Latin counterparts, even while Aristotle's influence continue to play an important role in many of them[6].

Current scholarship on premodern classifications of the sciences, whether antique or medieval, western or eastern, has thus far suffered from another major flaw. In the absence of a digital tool allowing

5. We limit ourselves here to J. Weisheipl, «Classification of the Sciences in Medieval Thought», *Mediaeval Studies* 27 (1965), 54-90; I. Hadot, *Arts libéraux et philosophie dans la pensée antique. Contribution à l'histoire de l'éducation et de la culture de l'antiquité* (Paris 1984).

6. See now G. de Callataÿ, "Classifications of the sciences in Islamic cultures", in *Encyclopedia of Knowledge Organization* (International Society for Knowledge Organization), ed. B. Hjørland and C. Gnoli, available at https://www.isko.org/cyclo/islamic. This periodically revised contribution is intended to serve as a companion to M-*Classi*.

both the treatment and implementation of a massive collection of data and a visual comparison of numerous taxonomies with each other, approaches to these classifications have remained fragmented and static. It is also regrettable that the vast majority of researchers concerned with such classifications have not taken the trouble to reproduce faithfully and in full the hierarchical organizations of the sciences therein, much less to indicate the names of those sciences in the original languages[7].

Why Devise a New Tool?

Today even the best publications in the form of articles or books on the classification of knowledge cannot easily classify a number of things. How can we assert the position of a such and such a science in a particular hierarchical classification? How can we determine the original name that a science was given in such and such a classification? How can we gauge the relative importance of a particular group of sciences in a given taxonomy? Answering these kinds of questions would certainly be greatly facilitated by using a digital tool with an extensive database.

In what follows, we formulate examples of more elaborate queries that are incredibly hard to address without such a cumulative digital tool equipped with the appropriate filters to limit the selection of data (by authors, languages, periods, etc.) according to the user's choice:

• In which taxonomies is alchemy a science derived from physics, and are there any that consider it a mechanical art?

7. A partial exception is Raphaël Sandoz's *Interactive Historical Atlas of the Disciplines* (https://atlas-disciplines.unige.ch/), a rich online database in which the taxonomies of 255 authors (from Plato to Jean Piaget) are shown in the form of tree-shaped tables, sometimes accompanied by a reproduction of the same in a manuscript or an ancient edition. For the premodern section of the catalogue, sciences are normally mentioned by their English designation. The original appellation is also usually provided for the Latin classifications, but not for the Greek ones. Sandoz's database includes seven Arabic classifications, only one of which indicates the original Arabic designations (in transliteration).

• How many Arabic and Latin classifications incorporate the science of navigation, and do they all use ملاحة and *navigatio* (respectively) to name it?

• Were there more classifications between the eighth/fourteenth and the eleventh/seventeenth century than between third/ninth and sixth/twelfth centuries that include *adab* or *adab*-related disciplines?

• Are there other Persian classifications than Ibn Sīnā's *Dānēsh nāme* and Shīrāzī's *Durrat al-tāj* that include music as one of the four mathematical sciences?

• Which classifications prior to 656/1258 make time-keeping a sub-branch of astronomy?

• Is there any classification other than Ikhwān al-Ṣafā', *Epistle 7*, that divides the science of governance (سياسة) into five further branches?

• Which classifications consider blood compensation (ديات) a science derived from Islamic jurisprudence (فقه)?

Starting from scratch, M-*Classi* is designed to address these types of queries, and countless others, in a way that is as complete, systematic, objectifiable, and dynamic as possible.

M-Classi*'s IT Configuration*

M-*Classi* runs on a Linux server. Its backend was developed in Python with the Django web framework. Its frontend is coded in JavaScript and it uses the NextJS framework based on the React JavaScript library. The graphs are displayed using the vis.js JavaScript library. M-*Classi* has a responsive design (see figure 1), meaning that the interface may be adapted to different screen sizes and geometries. It incorporates a number of data visualization functionalities, which are described below. It also allows data to be edited, either from an Excel file or directly in the interface.

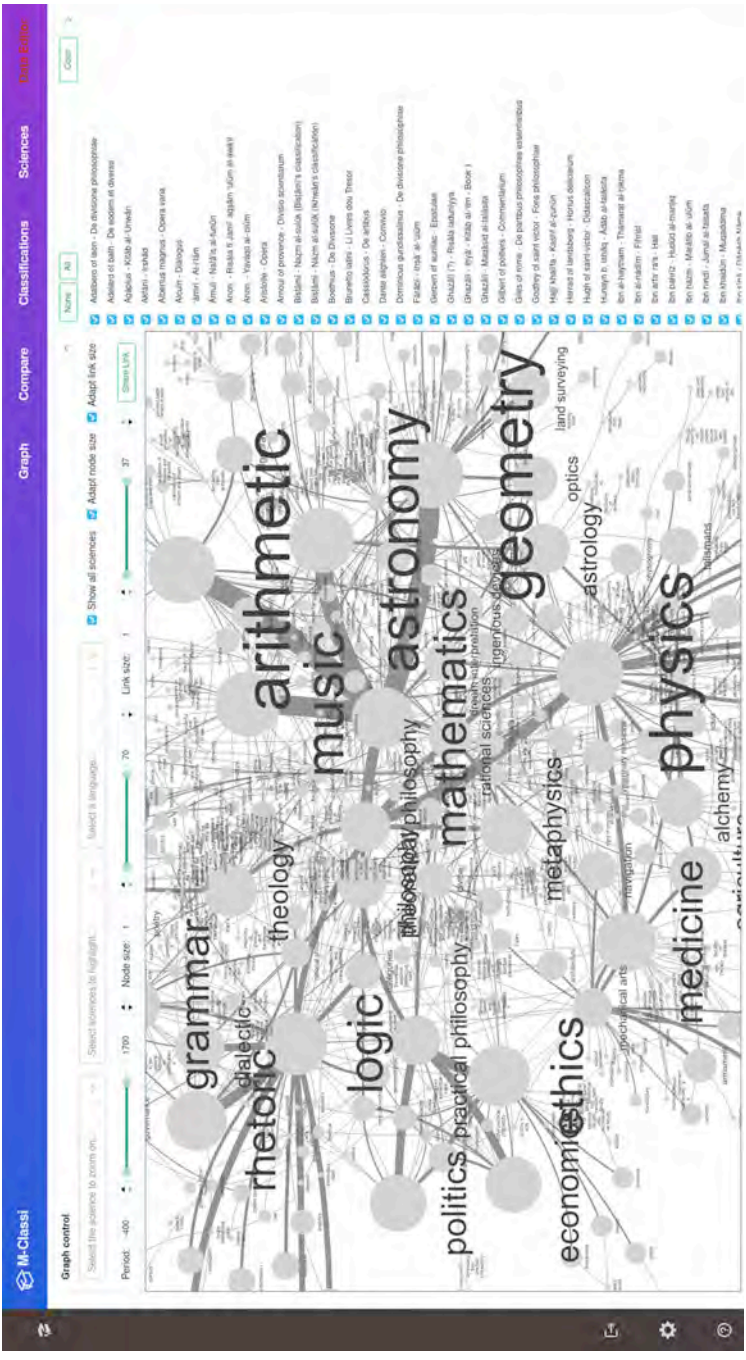


Fig. 1. M-*Classi* cumulative graph tool.

Main Functionalities

The tool's dashboard, in English, currently offers four main functionalities ("Classifications", "Compare", "Sciences", and "Graph"), which we briefly present here in succession.

1. Classifications

This function provides a full list of classifications, ordered alphabetically by author in English, and the titles of their works (when several classifications are provided for the same author). Clicking on a title gives access to the corresponding classification displayed in full, in both the source language and in English translation. Classifications are of three types: (1) "hierarchical" (in fact, the vast majority of them are), when they can be displayed either in the form of a spider chart (figure 2) or in the form of a tree, with branches and sub-branches (figure 3); (2) "ladder-shaped", when sciences are arranged to form a certain progression (figure 4); (3) "linear", when neither a tree-shaped hierarchy nor a ladder-shaped progression is indicated or suggested in the text (figure 5)[8].

8. A particular case is the *Kashf al-ẓunūn* by the Ottoman encyclopedist Kātip Çelebi (Ḥājjī Khalīfa, d. 1068/1657), a voluminous compilation the author wrote in Arabic and in which the sciences are listed in alphabetical order. Since this order cannot be properly considered a progression, we assimilated Ḥājjī Khalīfa's taxonomy to a linear classification.

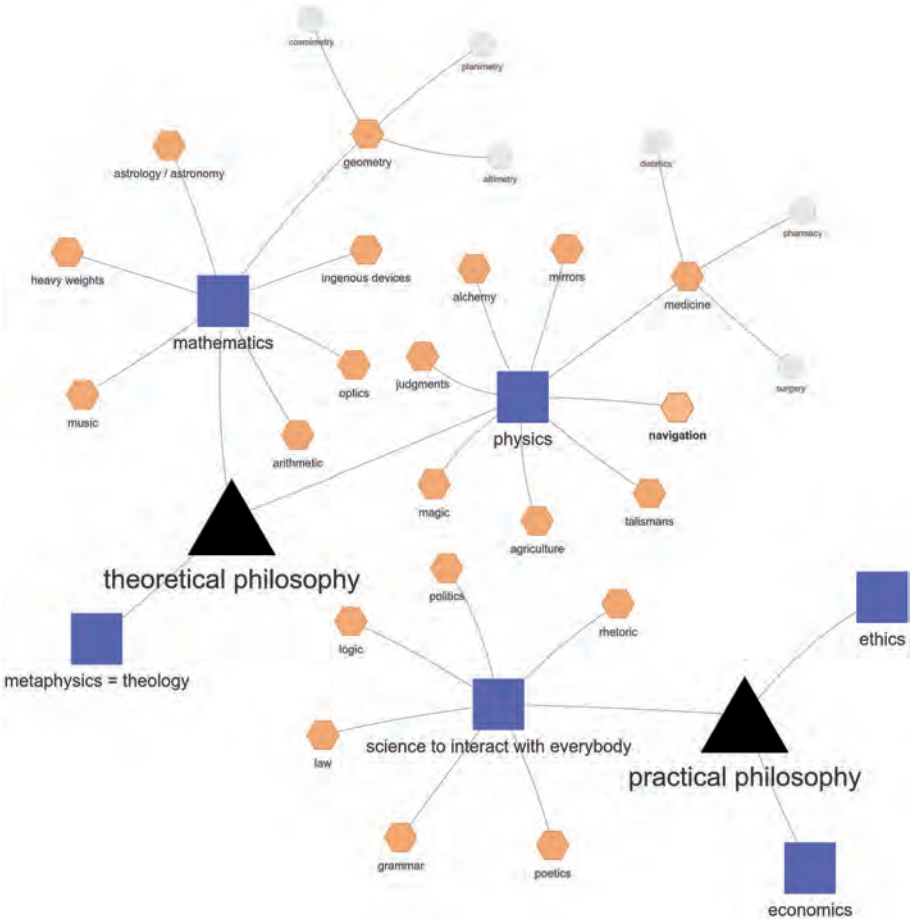


Fig. 2. Hierarchical classification, in the form of a spider chart (Dominicus Gundissalinus, *De divisione philosophiae*).

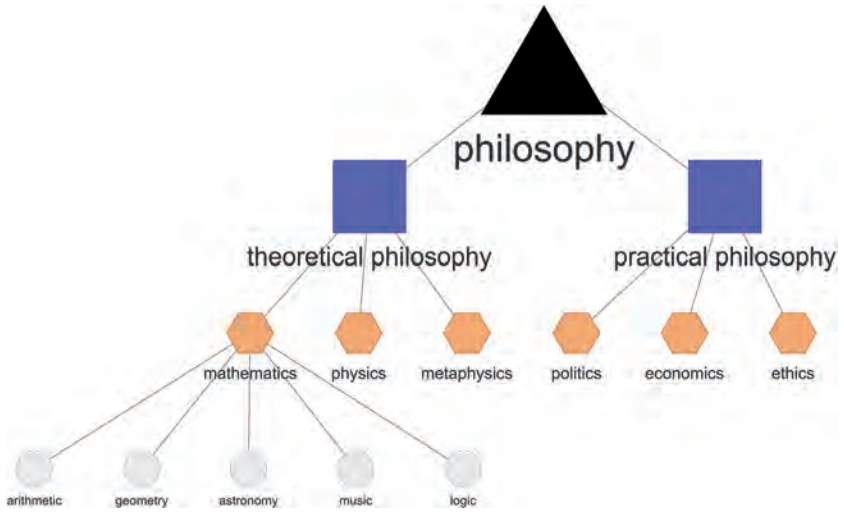


Fig. 3. Hierarchical classification, in the form of a tree (Ibn Hindī, *Jumal al-falsafa*).

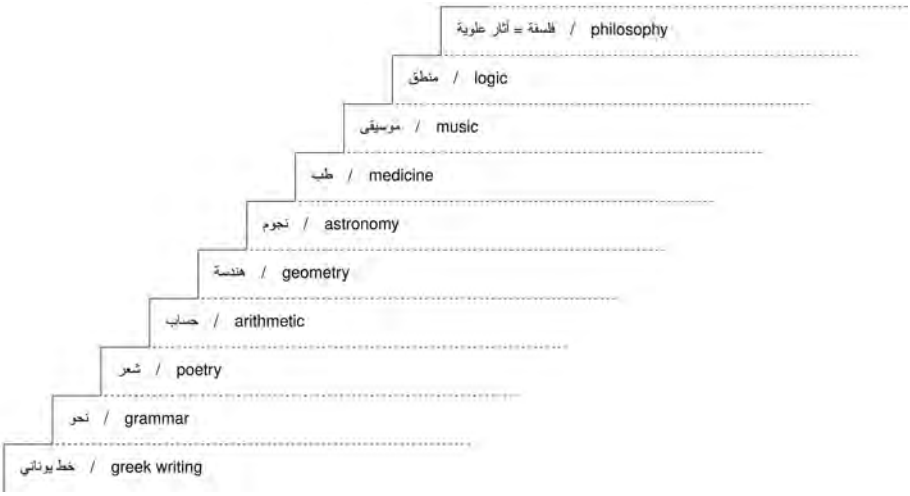


Fig. 4. Ladder-shaped classification (Ḥunayn b. Isḥāq, *Ādāb al-falāsifa*).



Fig. 5. Linear classification (Agapius, *Kitāb al-ʿunwān*).

2. Compare

This functionality allows users to visually compare any two classifications of the database with one another, highlighting the elements common to both and contrasting them with those found only in one (figure 6). The compare functionality is particularly useful in the case of a classification extant in different languages for example, between Maslama b. Qāsim al-Qurṭubī's *Ghāyat al-ḥakīm* (in the Arabic original), and the *Picatrix* (its Latin translation), or when we know of two different versions of the same taxonomy (as for instance the Ikhwān al-Ṣafā''s original classification in *Epistle 7* and its reuse by ʿAbd al-Raḥmān al-Bisṭāmī in his *Naẓm al-sulūk fī musāmarat al-mulūk*). In like manner, this functionality may greatly assist in evaluating whether one classification is the source of another. The compare functionality makes it clear at a glance, for instance, that Ṭāshköprüzāda's *Miftāḥ al-saʿāda* was a source for Ḥājjī Khalīfa when this latter compiled the *Kashf al-ẓunūn*.

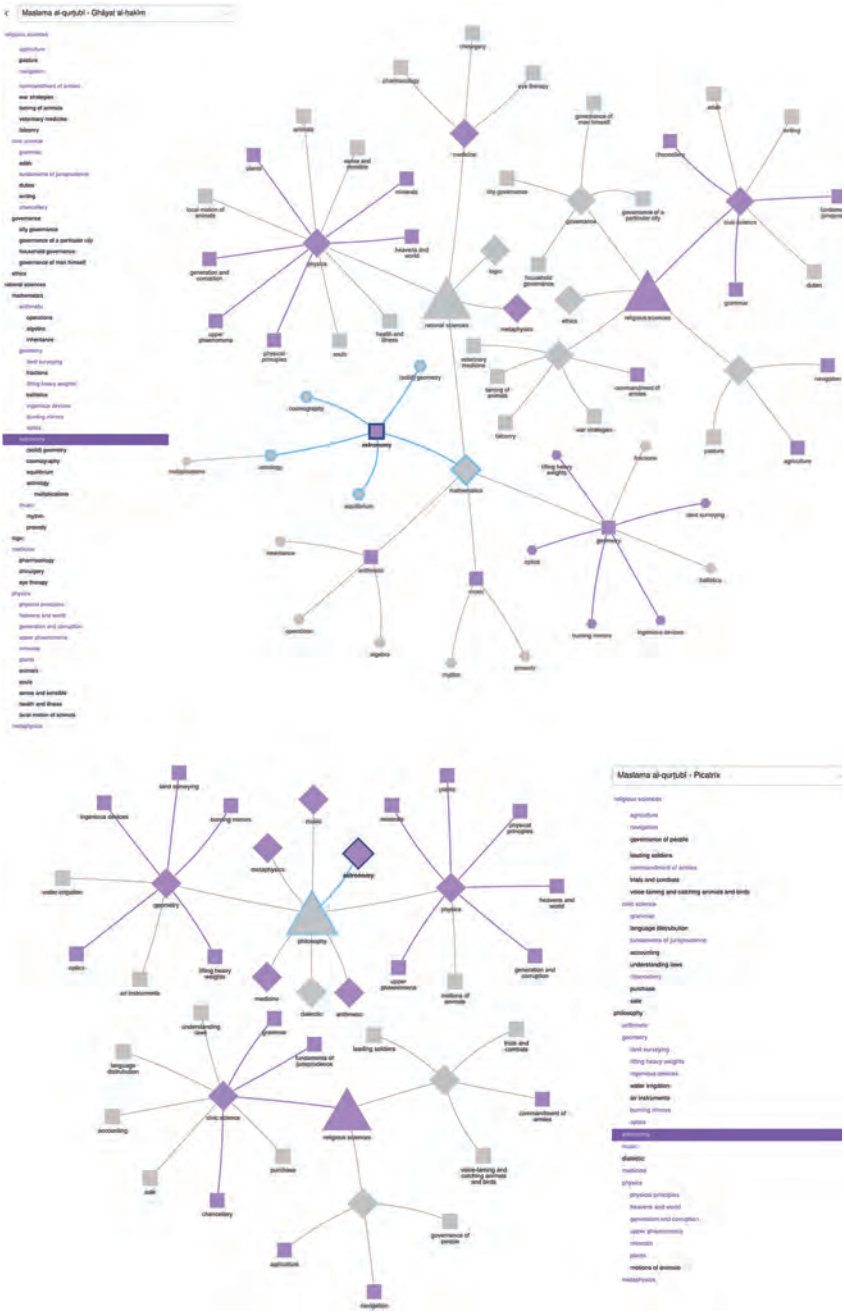


Fig. 6. Comparison of two classifications (*Ghāyat al-ḥakīm* vs. *Picatrix*).

1. Sciences

M-*Classi*'s general index of sciences is displayed in columns for different languages. In the first column, sciences are arranged in the alphabetical order of their designation in English, the interface language of the application. The other columns show the corresponding appellations in the other languages in which classifications have been incorporated into the system. This functionality allows users to make a variety of lexical comparisons between languages but also between the various appellations of any given science in one particular language (figure 7).

Here we provide a few examples to illustrate (1) the richness and diversity of the scientific vocabulary employed; (2) the kind of identification and translation problems that result from such richness and diversity; and (3) the value of the classifications of science to address such problems. Let us first take the case of the vocabulary concerned with the sciences of astronomy and astrology respectively. Astronomy is easily identified as such when it is designated by terms like اسطرنوميا or هيئة. Likewise, terms like أحكام النجوم, اسطرلوجيا, and قضاء unambiguously refer to astrology, as do more elaborate formulations such as نجوم وأحكام المواليد والطوالع (literally, "the planets and the judgments based on their risings and settings") as found in the pseudo-Ghazālī's *Risāla laduniyya*. But how then to understand and translate نجوم or تنجيم when they appear alone, given that these words can refer, in the absence of a context enabling one to decide, to both astronomy and astrology? One of the greatest advantages of scientific taxonomies is that they usually allow readers to make such epistemological discriminations since, by nature, they tend to provide a rational and objectifiable depiction of the sciences and their divisions, either explicitly or implicitly. For example, the title of the third epistle of the Ikhwān al-Ṣafā' علم النجوم refers to astronomy and not to astrology, as is made absolutely certain from the full title of the treatise in most manuscripts, which is الموسومة بالأسطرونوميا في علم النجوم وتركيب الأفلاك, that is, "[the science] referred to as astronomy on the science of the stars and the disposition of the spheres". Even in the absence of such explicit descriptions, the hierarchical presentations found in most taxonomies are sometimes sufficient to allow one to decide. Indeed, in the classification of Maslama's *Ghāyat al-Ḥakīm* we may perhaps infer that النجوم refers to astronomy from the fact that it is presented

English	Arabic	Persian	Turkish	Latin	French	Italian
astral magic	-	هیمیا	-	-	-	-
astrolabes	اسطرلاب	-	-	-	-	-
astrologia	-	-	-	astrologia	-	-
astrology	أحكام النجوم اسطرلوجيا نجوم قضاء وأحكام غليها وحركاتها، ودلائلها وأحكامها نجوم وأحكام المواليد والطوالع	نجوم احكام أحكام النجوم	-	astrologia	-	astrologia – saturno
astrology / astronomy	-	-	-	astrologia / astronomia	-	-
astronomical calculation	حساب النجوم	-	-	-	-	-
astronomical instruments	آلات المنجمين	-	-	-		
astronomy	تنجيم هيئة اسطرنوميا هيئة = كتاب المجسطى لبطلميوس نجوم علم الفلك وحركات النجوم الموسومة بالأسطرونوميا في علم النجوم وتركيب الأفلاك صورة الأفلاك وكيفية دورانها، وابراج طلوعاتها، وكذلك الكواكب علم أوسط = تنجيم هيئة الأفلاك وحركاتها علم النجوم	نجوم هيئة اسطرنوميا	nūcūm	astronomia astrologia astronomica	astronomie	
astronomy - astrology	-	-	-	astronomia - astrologia	-	-
astronomy / astrology	أحوال الكواكب \ أحكام في الأمور المستقبلة	-	-	astronomia / astrologia	-	
atmospheric and terrestrial events	آثارعلوية وسفلية	-	-	-	-	

Fig. 7. An example of lexical comparisons on a selection of classifications.

there as one of the four sciences of the mathematical quadrivium. In other words, the hierarchical structure of a classification provides a context of its own, which at times may compensate for the absence of a context in the text itself.

Certainly there are more problematic lexical issues, as with the following example. Thus, under the same quadrivium of mathematical sciences, the vast majority of the Arabic and Persian classifications include موسيقا (music), yet a few of them – as for instance al-ʿĀmirī's *al-Iʿlām* or ʿĀmulī's *Nafāyis al-funūn* – mention تأليف (harmony) instead. Does the venerability of the quadrivium tradition authorize us to regard موسيقا and تأليف as two different appellations for the same science? Evidently not, since music and harmony are two different

things in reality[9], but can we completely rule out the hypothesis that these two notions were confused in the minds of these authors? Conversely, it is evident that the name of a science did not always mean the same thing to everyone, in every age. In their tripartite classification of the sciences, the Ikhwān al-Ṣafā' use the same word *riyāḍiyyāt* (or *riyāḍiyya* in its adjectival form) to refer to two different groups: on the one hand, the propaedeutical sciences, including disciplines such as writing, reading, and poetry, but also magic, talismans, alchemy, and mechanical devices; and on the other hand, the properly named mathematical sciences, that is, the four sciences of the quadrivium of the Pythagorean tradition[10]. In like manner, the letters (حروف) that Ṭāshköprüzāda was concerned with in his discussion of the science of penmanship have little to do with lettrism, a sacred and occult science by the same name that ʿĀmulī classified as a Sufi discipline and whose secrets Ibn Khaldūn likened to theurgy or astral magic (سيمياء). It is not always clear how to respond to these issues. The exercise of defining and translating concepts to implement in a multi-language tool such as M-*Classi* is bound to include an element of subjectivity. It is our hope that by sharing these data among scholars we can, progressively, achieve greater precision in our definitions and conceptualizations of this scientific and technical vocabulary.

4. Graph

The graph is a synthesis of the M-*Classi* application. It is a cumulative visualization that shows the relative positions that sciences occupy in the general organization of knowledge, based on an algorithm that determines the location of these sciences according to the relationships they have with each other through the whole set of classifications. Sciences that are found in many classifications, and which have numerous hierarchical links with other sciences tend to occupy the center of the graph, whereas isolated sciences will remain at the periphery.

9. On this, see L. Tribuzio, «Restoring Harmony through the Propaedeutic Science of Music. A Reconsideration of the Brethren of Purity's Epistles on Music and Its Relation with the Epistle on Proportions», in this issue.

10. On this ambiguity, see G. de Callataÿ, «Introduction to Epistle 7», in *On Companionship and the Arts: An Arabic Critical Edition and English Translation of Epistles 6-8*, ed. N. El-Bizri and G. de Callataÿ (Oxford 2018), 80-82.

The overall principle of the graph is to represent each science by a circular "node" and show each hierarchical link between the two sciences by an arrow, either "ascending" or "descending," depending on their mutual positions in the hierarchy. Thus, for instance, since astronomy is often mentioned as a sub-branch of mathematics and almanacs as a sub-branch of astronomy, clicking on the node representing astronomy will show two arrows around this node: one "going-to" the other, representing a mother-to-daughter filiation from astronomy to almanacs, and one "coming-from"the other, representing the mother-to-daughter filiation from mathematics to astronomy (figure 8).



Fig. 8. "Going-to" and "coming-from" links around a node.

Two additional functions ("adapt node size" and "adapt link size") make it possible to visualize, respectively, (1) the relative importance that a science has in the overall organization of knowledge (according to the number of classifications in which the science is mentioned); and (2) the relative importance of a hierarchical link between two sciences (likewise, by taking into account the number of classifications in which this link appears). Adapting the node size for a science mentioned, for example, in 57 classifications will make its node appear larger. Likewise, adapting a hierarchical link size between two sciences will make the corresponding arrow appear larger by the same proportion. By clicking on the color picker button on the dashboard, the node will take the form of a colored 57-pie chart. Figures 10 to 13 illustrate these modalities.



Fig. 9. Simple nodes and links.



Fig. 10. "Adapt node size".



Fig. 11. "Adapt link size".



Fig. 12. "Show colors".

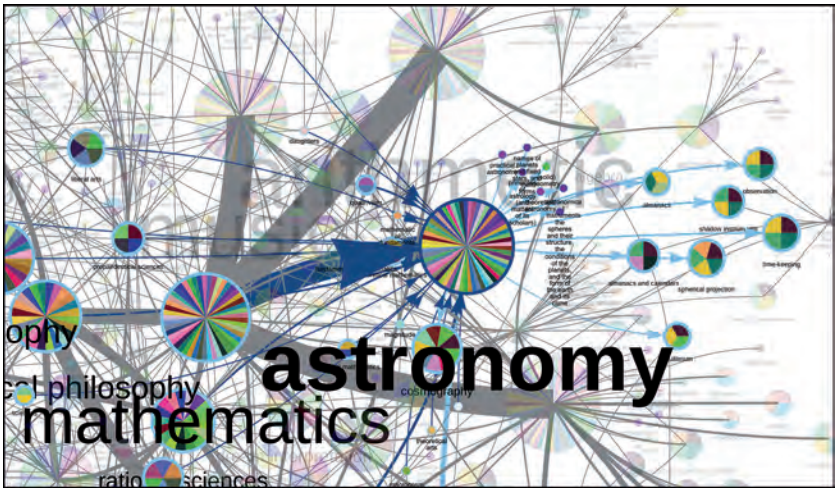


Fig. 13. "Show colors" in the cumulative graph.

If the cumulative graph enables one to visualize at a glance the distribution of the sciences in the general organization of knowledge, the three above-mentioned devices are also particularly helpful to see the extent to which certain features have survived over the *longue durée*, regardless of the cultural areas in which the classifications were produced (as is the case for the quadrivium of the mathematical sciences or Aristotle's tripartite division of practical philosophy into ethics, politics, and economics). Conversely, the same devices also reveal how infrequently certain human activities – like chess or shoemaking – have been considered worthy of inclusion in scientific classifications.

Filters and Other Devices

Various filters allow users of the M-*Classi* graph to refine their research, according to their specific needs. One filter enables a user to limit the research to a certain period of time (for example, "from 925 to 1650 CE"). Another filter permits the selection of one or more source languages (for example, "Persian" or "Arabic, Greek, and Persian"). It is also possible to refine the research by selecting an individual classification (like "Akfānī, *Irshād*") or any combination (for example, "Ibn Khaldūn, *Muqaddima*," "Nev'ī Efendi, *Netāyic ül-fünūn*", and "Dominicus Gundissalinus, *De divisione philosophiae*"). These different filters can also be all activated simultaneously.

The graph dashboard also contains a box ("Select the science to zoom on") which, as its name suggests, allows users to zoom in on the graph in search of any science, by typing its name in English or in any of the source languages for which a classification including this science has been incorporated (thus, for instance, "geomancy", رمل, or *geomantia*).

Finally, in combination with user-defined settings, another box ("Select sciences to highlight") of the graph dashboard allows users to select certain sciences (or a group of sciences) to make them appear more clearly on the graph. For pedagogical presentations this device is particularly convenient, as it allows one, for instance, to highlight certain contrasting groups of sciences (like "sciences of the trivium" vs "sciences of the quadrivium" or "rational sciences" vs "religious sciences"), or to pinpoint a case in which two sciences are close-

ly-related conceptually, even though usually, they are not assimilated to each other in classifications (such as theology and metaphysics or governance and politics).

As previously mentioned, M-Classi is currently in a beta mode accessible on request at https://www.m-classi.eu.

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Abstract

Godefroid de Callataÿ – Rémy Baranx – Hubert Naets, *M*-Classi: *A New Digital Tool for the Classification of the Sciences, in Islam and Beyond*

M-*Classi* is a new digital tool in the field of knowledge organization. It is conceived primarily as a means of cataloging and interrogating the classifications of the sciences in Islam and those of the cultures with which the Islamicate world came into contact from antiquity to the pre-modern era. The aim of this paper is to present this game changing tool, whose vocation is to become an open-access engine for future research. After briefly recapitulating the current state of the art on Islamic classifications of the sciences and succinctly presenting the specificities of M-*Classi*'s technical configuration in its current beta version, we review some of the application's main functionalities and illustrate various aspects of M-*Classi*'s potential in terms of visualization.

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INDEXES

Index of Names of People (only ancient)

Aaron of Alexandria, 427
ʿAbbās b. Nāṣiḥ, 39
ʿAbd al-Ghāfir al-Faradī, 49, 53
ʿAbd al-Karīm, 37
ʿAbd Allāh (emir), 27, 29, 31–32
ʿAbd Allāh (son of ʿAbd al-Raḥmān III), 40–41, 57
ʿAbd Allāh al-Sarī (≈ Abū Muḥammad ʿAbd Allāh al-Sūsī), 37, 51
ʿAbd al-Raḥmān I, 77
ʿAbd al-Raḥmān II, 6, 18, 26, 29, 38–39, 40, 42, 57, 77
ʿAbd al-Raḥmān III, 6, 12, 25, 29, 32, 34–36, 40–42, 44, 48–49, 56–57, 78, 369–70
Abel, 114
Abū ʿAbd Allāh [al-Shīʿī], 66, 70
Abū ʿAbd Allāh al-Rabāḍī, 43–45, 47
Abū ʿAlī al-Sarrāj, 27
Abū ʿAlī b. al-Ḥātim, 54–55
Abū ʿUbayd al-Balansī, *"ṣāḥib al-qibla"*, 30
Abū ʿUmar Aḥmad b. Muḥammad b. Saʿdī, 45
Abū al-ʿAbbās, 66, 70
Abū al-Khayr, 51, 79
Abū al-Qāsim al-Bustī, 81, 85
Abū Bakr b. ʿAbs, 49, 53
Abū Bakr, 79
Abū Isḥāq Ibrāhīm b. Masarra al-Tujībī, 42
Abū Maʿshar, 25
Abū Muḥammad ʿAbd Allāh al-Sūsī, 50–51
Abū Muḥammad, 81, 85
Abū Sahl Wayjan al-Qūhī, 376
Abū Sulaymān ʿAbd al-Salām b. al-Samḥ b. Nabil b. ʿAbd Allāh b. Yaḥyun b. Ḥārith b. ʿAbd Allāh b. ʿAbd al-ʿAzīz al-Hawwārī al-Shāfiʿī, 50
Abū Sulaymān al-Zahrāwī, 44, 50
Abū Yaʿqūb al-Sijistānī, see al-Sijistānī
Abū Yazīd, 65
Adam, 105, 113–14, 130–32, 135, 137, 194, 269, 414
Admānūs, 402, 408–10
Aflaḥ b. Hārūn al-ʿIbānī, 71
Agapius, 499
Aḥmad b. Fāris, 37, 43, 45
Aḥmad b. Ḥanbal, 29, 120
Aḥmad b. Khālid (≈ Aḥmad b. Khālid al-Tamīmī/Aḥmad b. Khālid Ibn al-Jabāb), 49
Aḥmad b. Muḥammad al-ʿĀmirī, 45
Aḥmad b. Yūnus al-Ḥarrānī, 24
ʿĀʾisha, 79
Akfānī, 506
Akhū Muḥsin, 80
Alexander (emperor), 393
Alexander the Great, 12
Alfonso X the Wise, 55
ʿAlī b. Abī Ṭālib, 69, 133, 135
al-ʿĀmirī, 502
al-ʿĀmulī, 502–3
al-Andalusī, Awḥad al-Dīn, 136
al-Anṣārī, Abū al-Qāsim, 137–39, 142, 161, 163–65, 170
Apollonius of Tyana, 38
Apollonius, 139
Aras, 170
Aristoas, 413–14, 419
Aristotle, 12, 66, 139, 156–57, 173–74, 253, 257–58, 267–69, 306, 322, 393, 401–2, 407, 409–10, 412, 426, 432, 464, 492, 506
Arod, 413
Āṣif b. Barkhiyā, 130
Avicenna, see Ibn Sīnā
ʿAzāzīl, 114
al-Azharī, 106, 108
al-Azraqī, Abū al-Walīd, 120

al-Baghdādī, 80
Banū Ḥafṣūn, 27
Banū Mūsā, 376
Barozzi da Vignola, Giacomo, 386
al-Baṭalyawsī, Ibn al-Sīd, 4, 10, 275, 277, 279–83, 288, 290, 292–93, 296–97
Ben Ezra, 11
al-Bīrūnī, Abū al-Rayḥān, 105
al-Bisṭāmī, ʿAbd al-Raḥmān, 499
Boethius, 492
Brethren of Purity, see Ikhwān al-Ṣafāʾ
al-Burzulī, 53
al-Buzjānī, Abū al-Wafāʾ, 369, 375–76
Buzurg b. Shahriyār, 116

Cain, 114
Chaghatay Khān, 116–17
Constantine the African, 422, 486

al-Ḍabbī, 45
Democritus, 170
Dhū al-Nūn, 201
Dioscorides, 35, 38, 432

Enoch, 131
Euclid, 12, 354, 380
Eve, 105, 113
Ezekiel, 131

al-Fākihī, Abū ʿAbdallāh, 120
Faqṭiṭiyūs, 131
al-Fārābī, 23, 186, 282, 490
al-Fīrūzābādī, 105
Fuqṭus, 130
al-Furāwī, Abū al-Barakāt ʿAbdallāh, 138

Gabriel, 413
Galen, 24, 157, 426, 428, 432, 444, 446, 448, 452, 454, 462, 468
al-Ghazālī, 80, 85, 101, 138, 201, 278, 284
Gundissalinus, Dominicus, 278, 497, 506
Gundissalvi, see Gundissalinus

Hādūs, 402, 408–10
Ḥājjī Khalīfa, 130, 496, 499
al-Ḥakam I, 18
al-Ḥakam II, 6, 17–18, 25, 34–45, 47, 49, 52–53, 57
al-Ḥākim bi-Amr Allāh (Abu ʿAlī Manṣūr), 310
al-Ḥākim II, 79
al-Ḥallāj, al-Husayn b. Manṣūr, 101, 134–35
Ḥasan al-Baṣrī, 201
al-Ḥasan b. Mufarrij, 38
Hasdāy b. Shaprūṭ, 24, 35
Hermes, 25, 131, 139, 168, 401–2, 407, 409–13, 419
Hermetica, 393–94
Hippocrates, 307, 428, 444
Hishām I, 27, 31
Ḥoni the Circle Maker, 121
al-Ḥumaydī, 34, 45–46
Ḥunayn b. Isḥāq, 37–38, 306, 498

Iblīs, 130, 132, 135–36
Ibn ʿAbd Rabbihi, 29–30
Ibn ʿAqīl, 116
Ibn ʿArabī, 9, 161–62, 179–80, 192–201, 297
Ibn ʿIdhārī, 36–37
Ibn Abī Zayd al-Qayrāwānī, 46
Ibn al-Abbār, 31, 37, 41, 44, 51
Ibn al-Faraḍī, 28, 30, 33
Ibn al-Faraj al-Anbarī, 136
Ibn al-Fāriḍ, 162
Ibn al-Haytham, 66, 57, 71, 385
Ibn al-Iflīlī, 17, 45
Ibn al-Khayyāṭ, 53
Ibn al-Mushtarā
Ibn al-Nadīm, 115, 130, 132, 136–37, 142, 145, 323
Ibn al-Qifṭī, 202
Ibn al-Qiṭṭ, 27, 31–32
Ibn al-Ṣaffār, 50
Ibn al-Samḥ, 49–51
Ibn al-Sīd al-Baṭalyawsī, see al-Baṭalyawsī
Ibn Arfaʿ Raʾs, 8, 53, 155–56, 159–66, 168, 170–74
Ibn Bājja (Avempace), 4, 23
Ibn Bākuway, 134
Ibn Bashkuwāl, 45, 49, 52
Ibn Bassām, 37, 55
Ibn Baṭṭūṭa, 107
Ibn Bishrūn, 7, 49–50, 52–55
Ibn Durayd, 106
Ibn Faḍl Allāh al-ʿUmarī, 38
Ibn Fanjawayh, Abū ʿAbd Allāh, 139
Ibn Farḥūn, 42
Ibn Gabirol, Salomon (Avicebron), 4, 275

Ibn Ḥafṣūn, 75
Ibn Ḥajar al-ʿAskalānī, 33, 40–41
Ibn Ḥayyān, 27–28, 30–32, 34, 38–40
Ibn Ḥazm, 490
Ibn Hilāl, ʿAbdallāh, 101, 126, 136
Ibn Hindī, 497
Ibn Jānah, 48, 51
Ibn Juljul, 24, 34, 37–38, 44, 48–49
Ibn Khaldūn, 19, 49–51, 54, 186, 490, 503
Ibn Manẓūr, 106
Ibn Masʿūd, 119–20
Ibn Masarra, 4–5, 20, 28, 30–31, 34, 41, 43–44
Ibn Paqūda, 275
Ibn Qanān, 136
Ibn Qutayba, 104, 117
Ibn Rizām, 80
Ibn Rushd, 23
Ibn Saʿīd al-Maghribī, 18, 33, 37
Ibn Sabʿīn, 53
Ibn Sahl, 79
Ibn Shuhayd, 55
Ibn Sīnā, 23, 101, 140, 186, 277, 308, 490, 494
Ibn Taymiyya, 141
Ibn Tibbon, Moïse, 275–76
Ibn Tufayl, 84
Ibn Wāfid, 51
Ibn Waḥshiyya, 4, 139, 320
Ibrāhīm al-Fallāh, 127
Ibrāhīm b. Ḥajjāj, 28
Ibrāhīm b. Sinān, 376
Idrīs b. Maytham (al-Haytham), 34
Idrīs, 131
Ikhwān al-Ṣafāʾ, 4, 9–11, 13, 22, 113–14, 137, 179, 192, 249–74, 276, 279, 281–88, 293, 296–97, 305, 309, 311–12, 315, 325, 335–36, 338, 340–41, 343–46, 348, 350, 352–55, 357–58, 360, 362, 366, 369, 375–77, 379–80, 385–86, 389, 394, 413, 421, 429, 494, 499, 501, 503
al-ʿIrāqī al-Sīmāwī, Abū al-Qāsim, 161
ʿĪsā b. Isḥāq, 47–48
Ismenus, 414
al-Isrāʾīlī, Abū Makārim Hibat Allāh b. Zayn al-Dīn b. Jumayʿ, 306

Jābir b. Ḥayyān, 4, 8–9, 21, 161, 164–65, 179–85, 187–93, 195, 198–202, 317, 320–23
Jaʿfar al-Ṣādiq, 164–65, 191–92
al-Jāḥiẓ, Abū ʿUthmān, 112–14, 130, 132, 136–37, 140
al-Jawbarī, ʿAbd al-Raḥīm, 55, 102, 107, 145
al-Jawharī, 106
Jesus, 71, 133, 198
al-Jildakī, 161, 166
Joseph (son of Jacob), 199
Joseph b. Shimʿon, 1–3
al-Junayd, 201
al-Juwaynī, Imām al-Ḥaramayn, 138

al-Karābīsī, 40–41
al-Kashnawī, Muḥammad, 108, 125, 127
Kātip Çelebi, see Ḥājjī Khalīfa
Khalaf b. ʿAbbās al-Zahrāwī, see al-Zahrāwī
Khalaf b. Yūsuf, 136
Khālid b. Yazīd, 180, 310
Khayr b. ʿArafa, 33
al-Khurrāʿī, Abū Ghanīm, 142
al-Khuwārizmī, Muḥammad b. Aḥmad, 490
Khwāndamīr, Ghiyāth al-Dīn, 116
al-Kindī, Abū Yūsuf, 23–24, 83, 113–14, 186, 490
al-Kirmānī, 50, 53, 72, 74, 76

Lucian, 157

Mahākāl al-Hindī, 98
Mahdī (eschatological figure), 183
Maimonides, Moses, 103, 306
al-Makīn, 172
al-Maʾmūn, 26, 38–39, 42, 57, 306
al-Manṣūr, 76
Manṣūr al-ʿAzīzī l-Jawdharī, 76
al-Manṣūr b. Abī ʿĀmir, 17, 25, 29, 36–37, 43, 47, 57
al-Maqdisī, Abū Sulaymān, 250, 259–61
al-Maqqarī, 18, 42–43
al-Marrākushī, ʿAbd al-Malik, 45, 49
Marwān b. Janāh, 396
Maslama al-Majrīṭī, 28, 33, 44, 46–54, 58
Maslama b. Qāsim al-Qurṭubī, 4–5, 7–8, 21–22, 25–26, 28–29, 33–35, 38–41, 50, 52–56, 167–68, 172, 179–80, 250, 499, 501
Maymūn, 136

al-Māwardī, ʿAlī b. Muḥammad b. Ḥabīb, 307
Muʿāwiyya b. Hishām, 31–32
al-Muʾayyad al-Shīrāzī, 70
al-Mughīra, 44
Muḥammad (emir), 26, 29
Muḥammad (Prophet), 99, 119–20, 133, 135, 194, 197, 261
Muḥammad al-Nasafī, 66–67
Muḥammad b. ʿAbdūn al-Jabalī, 24
Muḥammad b. al-Jahwar al-Bukhtī, 30, 32
Muḥammad b. Faḍl Allāh b. Saʿīd, 44
Muḥammad b. Ḥafṣ b. Faraj, 39–40
Muḥammad b. Isḥāq, 104–5, 117, 120
Muḥammad b. ʿĀṣim al-ʿĀṣī, 45
Muḥammad b. Fatḥūn b. Mukram al-Tujībī, 45
al-Muḥāsibī, al-Ḥārith b. Asad, 202
al-Muʿizz, 77
al-Mundhir, 26
Mundhir b. Saʿīd al-Ballūṭī, 44–45
al-Mustaʿīn, 28
al-Muʿtaṣim, 306
al-Mutawakkil

al-Nāṣir, 77
Nāṣir al-Dīn Muhammad b. Ibrāhīm, 124–25
al-Naẓẓām, Abū Isḥāq, 113
Nev'ī Efendi, 506
Nicomachus of Gerasa, 12, 345, 352, 354–57, 380

Palladio, Andrea, 386
Philolaus, 352, 357–58
Plato, 66, 83, 156–57, 164, 173, 341, 343, 357, 425–26, 429, 432, 440
Pliny, 55
Plotinus, 83–84, 114
Pseudo-Ghazālī, 501

Qāḍī l-Nuʿmān, 76, 78
Qāsim b. Muṭarrif, 33
Qāsim b. Aṣbagh, 49
al-Qāyinī, Abū l-Qāsim, 139
al-Qayrawanī, Abū Jaʿfar Aḥmad al-Jazzār, 306–7
al-Qazwīnī, ʿImād al-Dīn, 105, 118, 138
Qusṭā b. Lūqā, 12, 302, 421, 424, 430–32, 486
Qūthāmā, 9

al-Rāzī, Abū Bakr, 24, 308
al-Rāzī, Fakhr al-Dīn, 7, 102, 108, 124, 127, 129, 140–41, 145, 186, 490
al-Riyāshī, Abū l-Jaʿfar, 113
al-Rūdakī, Abū ʿAbdallāh, 108, 112, 140

al-Saʿdī, 46–47
al-Ṣāḥib b. ʿAbbād, 105, 395, 403
Sahl al-Ṭustarī, 133–32, 202
Saʿīd b. ʿAbd Rabbihi, 32–33
Saʿīd b. Fathūn, 45
Ṣāʾid al-Andalusī, 30, 35–37, 44, 49, 51, 53
al-Sakkākī, Muḥammad b. Sirāj al-Dīn, 93, 124
al-Sakkākī, Sirāj al-Dīn, 7, 92, 102, 116, 124, 129, 136, 140, 145
Ṣalāḥ al-Dīn, 306
Ṣāliḥ al-Mudaybirī, 136–37
Samuel b. ʿEli, 103
al-Ṣandalī, Abū Ḥasan, 139
Serlio, Sebastiano, 386
Seth, 9
al-Shādhyākhī, Abū l-Futūḥ, 139
al-Shahrazūrī, Shams al-Dīn, 130
al-Shiblī, Badr al-Dīn, 119
Shīrāzī, 494
Sībawayh, 44
al-Sijistānī, 7, 66–67, 72, 83–84, 286–87
al-Sīmāwī, see al-ʿIrāqī al-Sīmāwī, Abū al-Qāsim
Socrates, 432
Solomon, 98, 101, 115, 131–32, 135, 142
al-Sulamī, Abū ʿAbd al-Raḥma, 134
Sulaymān al-Mustaʿīn, 53

al-Ṭabarī, ʿAlī b. Sahl b. Rabbān, 307
al-Ṭabasī, ʿAbdallāh, 142
al-Ṭabasī, Fakhr al-Aʾimma, 7, 91–92, 97–98, 102, 124, 128–43
Ṭāshköprüzāda, 490, 492, 499, 503
al-Tawḥīdī, Abū Ḥayyān, 260, 490
Teukros, 139
Thābit b. Qurra, 24, 302, 358, 376
Theon of Smyrna, 340–41, 352, 354, 356–57
al-Tirmīdhī, 194
Ṭumṭum al-Hindī, 139
al-Ṭūsī, Abū Manṣūr, 108–9, 117–18
al-Ṭustarī, see Sahl al-Ṭustarī

ʿUmar b. al-Khaṭṭāb, 79, 118
al-Umawī l-Qurṭubī, 37

Vitruvius, 385

al-Wansharīsī, 42–43
al-Wāthiq (bi-Llāh), Abū Jaʿfar Hārūn b. Muḥammad, 306

Yaḥyā b. Yaḥyā b. Samīna, 31
Yaḥyā b. Isḥāq, 48
Yūḥannā b. Māsawayh, 306

al-Zabīdī, Abū l-Fayḍ, 106–8
al-Zahrāwī, 47–48
Zayn al-ʿĀbidīn, 133
Zosimus, 170
al-Zubaydī, 34–35, 43–44

Index of Titles of Works (only ancient)

Ἀριθμητικὴ εἰσαγωγή, see *Introduction to Arithmetic*
Ādāb al-falāsifa, 498
K. al-aḥjār, 167, 187
K. al-aḥkām al-sulṭāniyya wa-l-wilāyāt al-dīniyya, 307
Aḥkām ṭulūʿ al-shuʿrā l-yamāniyya, 393
ʿAjāʾib al-Hind, 116
Alf layla wa-layla, 119
ʿAqāʾid al-thalāth wa-l-sabʿīn farqa, 81

K. al-bāb, 321
Bahjat al-āfāq, 108, 125
K. al-baḥth, 182, 185, 187, 191
K. al-bayān, 167, 188, 192, 198
Book of Simple Medicines, 426, 468
Bughyat al-multamis, 45

Commentary on Hippocrates (Galen), 428
Commentary on Hippocrates's Book of Mixtures, 426, 444
Corpus Jābirianum, 4

Dānēsh nāme, 494
K. al-dawāʾir, 10, 276, 296–97
De anima, see *Maqāla fī al-nafs*
De architectura libri decem, 385
De divisione philosophiae, 497, 506
De Imaginibus (by Ibn Ḥātim), 55
De Imaginibus (by Thābit b. Qurra), 24
De Physicis Ligaturis, 12, 422, 424, 431–32, 486
De radiis, 23–24
al-Dhakhīra fī maḥāsin ahl al-jazīra, 37, 55
Dhakhīrat Iskandar, 393
Dīvān-i ḥikmet, 160
al-Dhayl wa-l-takmila, 45, 49
al-Dhibāj al-mudhjib, 42
Durrat al-tāj, 494

Elements, 354, 380
Enneads, 83, 114
Epistle (Ikhwān al-Ṣafāʾ), see *Risāla*
Epistle to Jaʿfar b. Khālid b. Yaḥyā b. Barmak, 322
Epistle to Manṣūr b. Aḥmad b. Barmak, 322
Epistles of the Brethren of Purity, see Rasāʾīl Ikhwān al-Ṣafāʾ
Expositio Rerum Mathematicarum ad Legendum Platonem Utilium, 340, 354

Faḍāʾiḥ al-bāṭiniyya, 80–81
Farq bayn al-firaq, 80
K. al-fatarāt wa-l-qirānāt al-ʿashara, 170–71
al-Fihrist, 115
Fihrist (Ikhwān al-Ṣafāʾ), 10
al-Fihrist al-kabīr, 323
al-Fihrist al-ṣaghīr, 323
Filāḥa nabaṭiyya, 9
Firdaws al-ḥikma, 307
Fons vitae, 275
Fuṣūl Abuqrāṭ, see *Medical aphorisms*
Futūḥāt makkiyya, 194–97, 199–200

Ghāyat al-ḥakīm, 4–5, 21–23, 28, 38, 50, 52–53, 55, 58, 167, 180, 499–501
On Generation and Corruption, 257–58, 267–69
Gospel, 456

K. al-ḥadāʾiq, 10, 275–76
K. al-hādhīṭūs, 393
Ḥall mushkilāt al-Shudhūr, 8, 160–66, 168, 170–74
K. al-ḥāwī, 308
K. al-hayʾa, 33
K. al-ḥayawān, 113
Ḥayy b. Yaqẓān, 84

Hidāya ilā farā'iḍ al-qulūb, 275
K. al-hudā, 322
K. al-ḥudūd, 188
al-Ḥulla al-siyarā', 31, 37, 41

K. al-ʿibar (Muqaddima), 19–20, 49, 51, 54
Iḥsā' al-ʿulūm, 490
K. ikhrāj mā fī al-quwwa ilā al-fiʿl, 190, 192
Iʿlām, 502
On Interpretation, 253
Introduction to Arithmetic, 345, 354–57, 380
al-ʿIqd al-farīd, 29
Irshād, 306, 506
K. al-irshād li-maṣāliḥ al-anfus wa-l-ajsād, 306
K. al-isfār ʿan natā'ij al-asfār, 193, 196
K. al-ishārāt wa-l-tanbīhāt, 278, 308
K. al-ishtimāl, 189, 192
K. istijlāb rūḥāniyyāt al-bahā'im kullihā, 12, 393, 413
K. al-isṭimākhīs, 393
K. al-isṭimāṭīs, 393
K. al-iʿtidāl fī quwā al-adwiya, 307
K. al-iʿtimād, 307

Jābirian Corpus, 11, 167
Jadhwat al-muqtabis, 34, 45
Jāmiʿ al-ʿulūm, 124, 490
Jāmiʿa, see *Risāla Jāmiʿa*
Jumal al-falsafa, 498

K. al-kamāl wa-l-tamām, 306
Kashf al-asrār wa-naqd al-afkār, 81
Kashf al-dakk wa-īḍāḥ al-shakk, 55
Kashf al-ẓunūn, 496, 499
Kashf asrār al-bāṭiniyya wa-ʿawār madhhabihim, 81
Keter malkut, 275
K. al-khalīl, 189, 191
K. al-khamsīn, 167, 191–92
K. al-khawāṣṣ al-kabīr, 190
K. al-khawāṣṣ, 189, 321
al-Kitāb al-makhzūn (mentioned in the *K. istijlāb rūḥāniyyat al-bahā'im kullihā*), 408
al-Kitāb al-maknūn fī asrār al-ʿulūm al-khafiyya (mentioned in the *K. istijlāb rūḥāniyyat al-bahā'im kullihā*), 402
Kitāb (by Sībawayh), 44
K. fī ʿamal al-misṭara wa-l-birkār wa-l-kūnyā, 369, 375
K. fī mā yaḥtāj ilayh al-ṣāniʿ min aʿmāl al-handasa, 369, 375
Kutub al-miʾa wa-l-ithnā ʿashara, 320–21
Kutub al-muṣaḥḥaḥāt, 322

Laduniyya, see *Risāla laduniyya*
Liber Almandal, 104
Liber continens, see *K. al-ḥāwī*
Liber Hermetis de quatuor confectionibus, 413, 419
Liber Thexaurizato, 413
Libro de las formas et de las imágenes, 55
Lisān al-mīzān, 33, 40–41
Longer Theologia, 83
Lughat-i Furs, 108–9

K. mā baʿd al-ṭabīʿa, see *Metaphysics*
al-Madhāṭīs (referenced in the *K. istijlāb rūḥāniyyat al-bahā'im kullihā*), 401
K. al-madīṭīs, 393
Madkhal ilā ʿilm al-ʿadad, see *Introduction to Arithmetic*
Mafātiḥ al-ʿulūm, 490
Mafātīḥ al-niʿma, 70, 85
Majālis mu'ayyadiyya, 70
K. al-majālis wa-l-musāyarāt, 76
al-Majmūʿ al-mubārak, 172
K. al-manāqib wa-l-mathālib, 78
K. al-Manāẓir, 385
K. al-mandal al-Sulaymānī, 101
Manual of Harmony, 354
Maqāla fī al-nafs, 306
al-Maqālīd, 72, 83
Maqāṣid al-falāsifa, 278
Marātib al-ʿulūm, 490
K. al-maʿrifa, 186, 188–89
Maṣābīḥ fī ithbāt al-imāma, 74, 76
Masālik al-abṣār fī mamālik al-amṣār, 38
Materia Medica, 35, 38–39
Mathematics Useful for Understanding Plato or Ptolemy's Harmonics, see *Expositio Rerum Mathematicarum ad Legendum Platonem Utilium*
K. maydān al-ʿaql, 182–83, 187
Medical aphorisms, 307
Metaphysics, 156, 306
Kutub al-miʾa wa-l-ithnā ʿashara, 320–21

Miftāḥ al-saʿāda, 492, 499
al-Miʿyār al-muʿrib, 43
K. al-mīzān al-saghīr, 182, 185, 187
al-Mughrib fī ḥulā al-Maghrib, 33
K. al-mujarrabāt, 51
K. al-mujarradāt, 320
Mujmal al-ḥikma, 335, 347, 350
Mukhtār fī kashf al-asrār, 55, 107
Muqaddima, 490, 506
al-Muqaddima fī al-naḥw, 308
Muqtabis II/1, 28, 39, 43
Muqtabis III, 27–28, 31–32
Muqtabis V, 30, 34
Kutub al-muṣaḥḥaḥāt, 322
al-Mustawʿib al-kāfī, 37

Nabatean agriculture, 4, 207–42
Nabatean Corpus, 5, 9
Nafāyis al-funūn, 502
Nafḥ al-ṭīb, 18, 42–43
K. al-najāt, 277
K. al-nāranjiyyāt, 55
Nazm al-sulūk fī musāmarat al-mulūk, 499
Netāyic ül-fünūn, 506
Nicomachean Ethics, 156
Nujūm al-ʿulūm, 93
Nuzhat al-āfāq, 138

Pandectae, 428
Physics, 306
Picatrix, 499–500
Politics, 156
Prior Analytics, 253
Pseudo-Ammonius, 83
Pseudo-Aristotelian Hermetica, 12, 423

K. al-qisma, 188
Quattro libri dell'architettura, 386
Qur'ān, 5, 97, 100, 114, 116, 118–21, 125, 128, 130, 133, 141, 143–44, 158, 200, 285–86

K. al-raḥma, 188, 190–91
Rasā'il Ikhwān al-Ṣafā', 4, 9–11, 21–22, 50, 53, 68, 83, 180, 249–76, 284–85, 288–89, 292, 296, 305, 308–13, 315, 325, 340–41, 348, 359, 361–62, 369, 375, 379, 386, 389, 394, 413, 421–22, 456, 490
K. al-rawḍa, 167–68
Rectifications of Aristotle, see *Kutub al-muṣaḥḥaḥāt*
Rectifications of Arkājālīs, see *Kutub al-muṣaḥḥaḥāt*
Rectifications of Democritus, see *Kutub al-muṣaḥḥaḥāt*
Rectifications of Ḥarbī, see *Kutub al-muṣaḥḥaḥāt*
Rectifications of Homer, see *Kutub al-muṣaḥḥaḥāt*
Rectifications of Plato, see *Kutub al-muṣaḥḥaḥāt*
Rectifications of Pythagoras, see *Kutub al-muṣaḥḥaḥāt*
Rectifications of Socrates, see *Kutub al-muṣaḥḥaḥāt*
Regola delle cinque ordini d'architettura, 386
Republic VII, 341, 357
Risāla (Ibn Bishrūn), 53–54
Risāla 1 Epistle on Arithmetic (Ikhwān al-Ṣafā'), 280, 291
Risāla 2 Epistle on Geometry (Ikhwān al-Ṣafā'), 8
Risāla 5 Epistle on Music (Ikhwān al-Ṣafā'), 335–37, 341, 343–45, 348, 350–53, 355, 357, 360, 366
Risāla 6 Epistle on Proportions (Ikhwān al-Ṣafā'), 336–38, 343–46, 350, 352–53, 355, 357, 359–61, 367
Risāla 7 Epistle on the Theoretical Speculative Arts (Ikhwān al-Ṣafā'), 345, 353, 359
Risāla 16 Epistle on the Heavens and the World (Ikhwān al-Ṣafā'), 362
Risāla 17 Epistle on Generation and Corruption (Ikhwān al-Ṣafā'), 363
Risāla 18 Epistle on Meteorology (Ikhwān al-Ṣafā'), 363
Risāla 20 Epistle on Nature (Ikhwān al-Ṣafā'), 363
Risāla 29 Epistle on Death and Birth (Ikhwān al-Ṣafā'), 363
Risāla 32b Epistle on the Intellectual Principles According to Pythagoras (Ikhwān al-Ṣafā'), 364
Risāla 35 Epistle on the Intellect and the Intelligible (Ikhwān al-Ṣafā'), 311, 364
Risāla 39 Epistle on the Quiddity of Motions (Ikhwān al-Ṣafā'), 279, 283, 285, 290
Risāla 40 Epistle on Causes and Effects (Ikhwān al-Ṣafā'), 279–81, 283, 285, 289, 290, 294–95

Risāla 50 Epistle on the Quantity and the Quality of the Species of a Proper Attitude (Ikhwān al-Ṣafāʾ), 288
Risāla 52 Epistle on the Quiddity of Magic (Ikhwān al-Ṣafāʾ), 421, 424–26, 430
Risāla fī kammiyya kutub Arisṭūṭālis, 490
Risāla fī l-ʿulūm, 490
Risāla fī taqsīm al-ʿulūm al-ʿaqliyya, 490
Risāla Jāmiʿa, 9–10, 250, 254–55, 263–71, 275–76, 288
Risāla laduniyya, 501
K. al-riyāḍ, 321
al-Riyāḍ, 74
Royal Crown, see *Keter malkut*
K. al-rukn, 320
K. al-ruqā wa-l-tamāʾim, 139
Rutbat al-ḥakīm, 5, 8, 21, 25, 28, 33, 38, 40–41, 50, 52–53, 58, 167, 179–80, 288–96

K. al-sabʿīn, 181–82, 184–87, 323
Sefer ha-ʾagullot ha-reʾyoniyyot (Livre des cercles imaginaires), 275
Sefer ha-razim, 130
Sette libri dell'architettura, 386
al-Shāmil min al-baḥr al-kāmil, 92, 129
Shudhūr al-dhahab, 8, 53, 159–62, 165–66, 168, 170–74
K. al-shuʿrā al-yamāniyya, 393
Sifr Ādam, 130–31
K. al-ṣila (by Ibn Bashkuwāl), 45, 49, 52
K. al-ṣila (by Maslama b. Qāsim), 40
K. al-simāʿ al-ṭabīʿī, see *Physics*
Sīrat al-ustādh Jawhar, 76
Sīrat mawlānā al-Ḥākim, 310
K. sirr al-khalīqa, 38
al-Sirr al-maktūm, 108, 125

K. ṭabaqāt al-aṭibbāʾ wa-l-ḥukamāʾ, 24–25, 34, 38
K. ṭabaqāt falāsifa al-ʿarab, 50
Ṭabaqāt al-naḥwiyyin, 34, 44
K. ṭabaqāt al-umam, 30, 35, 37, 44, 49, 53
K. al-tajmīʿ, 187
al-Takmila li-Kitāb al-ṣila, 44, 49, 51
K. al-talkhīṣ, 48, 51
On Talismans (Thābit b. Qurra), 302
Taʾrīkh al-ḥukamāʾ, 202
Taʾrīkh ʿulamāʾ al-Andalus, 28, 30, 33
K. tartīb qirāʾat kutubi-nā (Jābir b. Ḥayyān), 323
Taskhīrāt, 93, 124
K. al-taṣrīf, 182, 322
Ṭāwāsīn, 136
Theology of Aristotle, 83, 114
Torah, 456

K. al-ulūf, 25
ʿUmda, 51
K. al-ʿunwān, 499
K. Uqlīdis fīʾ al-uṣūl, see *Elements*
K. usṭuqus al-uss, 189
K. al-ustūṭās, see *K. al-ustuwaṭṭās*
K. al-ustuwaṭṭās, 12, 402, 423

Viaticum, see *K. zād al-musāfir wa-qūt al-ḥāḍir*

K. al-wisād, 51

K. al-yanābīʿ, 72, 287

K. zād al-musāfir wa-qūt al-ḥāḍir, 307

Index of Manuscripts

Berlin, Alte Bibliothek (Königliche Bibliothek), ms. 2303 : 277 n.
Berlin, Staatsbibliothek Preussischer Kulturbesitz, Or. fol. 52 : 91 n., 146
–, Landberg 191 : 101 n., 146
–, Petermann 207 : 146
–, Sprenger 1908 : 169 n.

Cambridge, University Library, T-S Ar. 29.54 : 311–12, 325–27
–, T-S Ar. 41.23 recto : 314
–, T-S Ar. 42.9 : 305
–, T-S Ar. 43.286 : 313
–, T-S Ar. 43.289: 311–12, 325–28
–, T-S Ar. 44.4 recto. : 318
–, T-S AS 181.79 recto : 309
–, T-S NS 31.6 verso : 319

Dublin, Chester Beatty Library, IN2 : 93

El Escorial, Real Biblioteca del Monasterio, ar. 984 : 91, 146

Hyderabad, Salar Jung Museum Library, ʿUlūm-i Sirriyya 14 : 128

Istanbul, Süleymaniye Yazma Eser Kütüphanesi, Aya Sofya 3306 : 146
–, Amcazade Hüseyn Pasha 452 : 252 n.
–, Atıf Efendi, 1681 : 251 n., 252, 255 n., 256 n., 257 n., 258 n., 422, 433
–, Carullah, 982 : 251 n.
–, Damat Ibrahim, 808 : 251 n.
–, Esad Efendi, 3637 : 251 n., 3638 : 251 n., 433
–, Feyzullah Efendi, 2130 : 251 n., 2131 : 433
–, Köprülü, 870, 871 : 251 n.
–, Yeni Camı, 1199 : 251 n.
–, Nuruosmaniye 2827 : 91 n., 146
–, Ragıp Paşa, 839 : 251 n., 840 : 251 n., 963 : 50–52, 54

London, British Library, Add. 22719 : 424 n.
–, Delhi Arabic 1946 : 393
–, Or. 11041 : 136 n. , 146
–, Or. 14140 : 146
–, Papyrus 121 : 122 n.

Montpellier, Bibliothèque interuniversitaire, Section de Médecine, 277 : 394, 424 n.

New Haven, Yale University, Beinecke Library, Arabic MSS suppl. 29 : 127 n., 146

Orléans, Médiathèque municipale, 301 : 424 n.
Oxford, Bodleian Library, Arab. d. 221 : 393
–, Laud Or. 260 : 433
–, Marsh 189 : 433
–, Walker 91 : 136 n., 146

Paris, Bibliothèque nationale de France, ar. 2303 : 251 n., 433
–, ar. 2304 : 251 n.
–, ar. 2305 : 251 n.
–, ar. 2630 : 123 n., 146
–, ar. 2577 : 402
–, ar. 6000 : 251 n.
–, ar. 6647-6648 : 251 n., 423
–, lat. 7337 : 424 n.
–, Persan 174 : 125 n., 126 n., 146
Princeton University Library, Garrett Collection, 4263: 252 n.
–, Islamic Manuscripts, New Series 160 : 91 n., 146

Srinagar, Hazaratbal, University of Kashmir Library, 2746 : 98, 146

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