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DOI
10.1163/15700585-20246911

Publication date
2024

Document Version
Final published version

Published in
Arabica

BRILL

ARABICA 71 (2024) 381-429

Arabica

brill.com/arab

Athanasius Kircher's *Cabala Saracenica*: European Reception of the Islamic Science of Letters and Divine Names

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Abstract

This article introduces a significant case regarding the European reception of *'ilm al-ḥurūf wa-l-asmā'* (the science of letters and divine names) in the *Oedipus Aegyptiacus* by the Jesuit polymath Athanasius Kircher (1602-1680). Classis V in Tomus II.1, Caps. I-X, and Classis VII, Cap. VI in Tomus II.2 contain Kircher's most comprehensive engagement with the science of letters, referred to as the *Cabala Saracenica* in juxtaposition with the *Cabala Hebraica*. In addition to identifying crucial sources that influenced Kircher's understanding of the science of letters, this article demonstrates how "Cabala" serves as a comparative tool in Kircher's construction of a universal language for the Church. It encapsulates his approach to sacred oriental philology, revealing the Hermetic and Kabbalistic erudition absorbed by their native users. This exposure aims to demonstrate that wisdom ultimately reveals the truth of Christian doctrine.

Keywords

Science of letters, magic, Kabbalah, Athanasius Kircher, hermetic philosophy, universal language, Islamic occult sciences, reception of Islamic magic in Europe, manuscript transmission

* I am grateful to Charles Burnett (Warburg Institute) for his generous feedback since I began looking into Kircher's *Cabala Saracenica* and the parallels with Rome, Vatican Library, Vat. Ar. 938. I presented my findings for the first time at the 54th International Congress on Medieval Studies (Kalamazoo, 2019), as part of a panel entitled "Lettrism as Islamic Kabbalah?" organised by Matt Melvin Koushki and sponsored by Societas Magica, https://scholarworks.wmich.edu/medieval_icms/2019/schedule/503/.

 | DOI:10.1163/15700585-20246911
 | ISSN: 0570-5398 (print) 1570-0585 (online)

Résumé

Cet article présente un cas significatif concernant la réception européenne du *'ilm al-ḥurūf wa-l-asmā'* (la science des lettres et des noms divins) dans l'*Oedipus Aegyptiacus* du polymathe jésuite Athanasius Kircher (1602-1680). Classis V dans Tomus II.1, Caps. I-X, et Classis VII, Cap. VI dans Tomus II.2 contiennent l'engagement le plus complet de Kircher à l'égard de la science des lettres, appelée *Cabala Saracenica* en juxtaposition avec la *Cabala Hebraica*. Outre l'identification des sources cruciales qui ont influencé la compréhension de la science des lettres par Kircher, cet article démontre comment la "Cabale" sert d'outil comparatif dans la construction par Kircher d'un langage universel pour l'Église. Il résume son approche de la philologie sacrée orientale, révélant l'érudition hermétique et kabbalistique absorbée par ses utilisateurs natifs. Cet exposé vise à démontrer que la sagesse révèle en fin de compte la vérité de la doctrine chrétienne.

Mots clefs

Science des lettres, magie, Cabale, Athanasius Kircher, philosophie hermétique, langage universel, sciences occultes islamiques, réception de la magie islamique en Europe, transmission des manuscrits

Introduction

When discussing the reception of Arabic works on the occult sciences in Latin Europe, the *Ġāyat al-ḥakīm* is often cited as the epitome. Known in Latin as the *Picatrix*, it, along with many other medieval Arabic works on the occult sciences, enjoyed a successful career during the European Renaissance, leaving a profound impact on esotericists and occultists such as Marsilio Ficino (1433-1499), Pico della Mirandola (1463-1494), Heinrich Cornelius Agrippa (1486-1535), and John Dee (1527-*c*.1609), among others. The magic of *Ġāyat al-ḥakīm* derives its potency from astral influences and the occult properties of animals, plants, and stones. It is grounded in an understanding of the cosmic networks of causality carried out by motion, heat, and the actions of celestial souls, all working collaboratively to operationalize God's creative decree. The theoretical foundations of this type of magic are rooted in ancient astrology, medicine, and natural philosophy.[1]

1 Liana Saif, *The Arabic Influences on Early Modern Occult Philosophy*, Basingstoke, Palgrave Macmillan, 2015.

Natural or astral magic represents just one facet of medieval Islamic magical practices. Much less explored is the European reception of the science of letters and divine names (*ʿilm al-ḥurūf wa-l-asmāʾ*), which arguably boasts a more enduring legacy, still claiming practitioners across the Islamic world today. This practice is grounded in a cosmology wherein God's creative decree is encoded in letters and divine names, woven into the fabric of all creation. These elements serve as the formulae for engaging with natural, celestial, and divine realities. Originating from the diverse traditions of alphanumeric-cosmological speculations within the Mediterranean, including Pythagoreanism, the Ǧābirian Science of Balance (*ʿilm al-mīzān*), and the Kabbalah,[2] it developed within Sufi, Ismāʿīli, and Muʿtabirī circles across the eastern and western regions of the Islamic world. By the thirteenth century, with the institutionalization of Sufism, it solidified as an Islamic cosmological model. Following a spiritual path unveils to seekers the ways to manipulate nature and circumstances through various magical techniques and rituals, utilizing letters and divine names. The popularization of the magical use of letters and divine names is attributed to the works of the Maghrebi esotericist and Sufi Aḥmad al-Būnī (d. ca 622/1225) and the activities of the informally networked lettrists known as the Neo-Iḫwān al-Ṣafāʾ. These figures played influential roles in cultivating the occult sciences in the Timurid, Mamluk, and Ottoman domains. Among them was ʿAbd al-Raḥmān al-Bisṭāmī (d. 858/1454), whose works, such as *Šams al-āfāq fī ʿilm al-ḥurūf wa-l-awfāq* ("The Sun of the Horizons on the Science of Letters and Magic Squares,") further disseminated al-Būnian magic and the science of letters and divine names.[3]

2 Juan Acevedo, *Alphanumeric Cosmology from Greek into Arabic: The Idea of Stoicheia through the Medieval Mediterranean*, Tübingen, Mohr Siebeck, 2020.

3 Denis Gril, "La science des lettres," in *Les Illuminations de la Mecque : textes choisis*, ed. Michel Chodkiewicz, Paris, Sindbad, 1989, p. 385-487, p. 414-415; Jean-Charles Coulon, *La Magie en terre d'Islam au Moyen Âge*, Paris, CTHS, 2017, p. 117-119, p. 173-229; Liana Saif and Francesca Leoni, "Introduction," in *Islamicate Occult Sciences in Theory and Practice*, eds Liana Saif, Francesca Leoni, Matthew Melvin-Koushki, and Farouq Yahya, Leiden: Brill, 2020, p. 1-5; Noah Gardiner, "Lettrism and History in ʿAbd al-Raḥmān al-Bisṭāmī's *Naẓm al-sulūk fī musāmarat al-mulūk*," in *Islamicate Occult Sciences in Theory and Practice*, eds Liana Saif, Francesca Leoni, Matthew Melvin-Koushki, and Farouk Yahya, Leiden: Brill, 2020, p. 230-266; Maria Subtelny, "Kāshifī's Asrār-i qāsimī: A Late Timurid Manual of the Occult Sciences and its Safavid Afterlife," in *Islamicate Occult Sciences*, p. 267-316; Matthew Melvin-Koushki, "Toward a Neopythagorean Historiography: Kemālpaşazāde's (d. 1534) Lettrist Call for the Conquest of Cairo and the Development of Occult-Scientific Imperialism," in *Islamicate Occult Sciences*, p. 380-419; Pierre Lory, "La magie des lettres dans le *Šams al-maʿārif* d'al-Būnī," *Bulletin d'Études Orientales*, 39-40 (1987-1988), p. 97-111, p. 103; Pierre Lory, *La Science des Lettres en Islam*, Paris, Dervy, 2004, p. 41-42; İlker Evrim Binbaş, *Intellectual Networks in Timurid Iran: Sharaf al-Dīn ʿAlī Yazdī and the Islamicate Republic of Letters*, Cambridge, Cambridge University Press, 2016, p. 8-15, p. 104-113; Cornell Fleischer, "Ancient Wisdom and New

This article presents a significant case of the European reception of the science of letters and divine names, seen in the *Oedipus Aegyptiacus* by the Jesuit polymath Athanasius Kircher (1602-1680). Described as "one of the most detailed compendiums of magical practices and esoteric traditions published in early modern Europe," the *Oedipus Aegyptiacus* holds a central place in this exploration.[4] It was printed in Rome over the period of 1652-4 but was only made available to the public in 1655. It is an extremely ambitious four-volume work intended as an encyclopaedic reference on Oriental languages (Hebrew, Arabic, Japanese, Mexican, and Sanskrit) and hieroglyphs. This work encapsulates Kircher's approach to sacred philology seeking to expose the Hermetic and Kabbalistic erudition with which their native users imbued them, in order to demonstrate that wisdom ultimately reveals the truth of the Christian religion. Kircher believed that Hermetic wisdom is "encoded" in hieroglyphs and the Kabbalah in its various forms, in contradistinction to what he considered to be Rabbinic and Egyptian superstitions that contaminated this sacred knowledge with astrology and magic. By rehabilitating the Hebrew Kabbalah, Kircher saw himself of service to the universalist ideology of the early modern Catholic Church. For that purpose, he delved into many non-Egyptian and non-Kabbalistic traditions such as the Chaldean Oracles, Pythagorean verses, and Orphic hymns, in addition to learning languages and writing systems which

Sciences: Prophecies and the Ottoman Court in the Fifteenth and Early Sixteenth Centuries," in *Falnama: The Book of Omens*, eds Massumeh Farhad and Serpil Bağcı, London, Thames and Hudson, 2009, p. 231-243; Noah Gardiner, "Esotericism in a Manuscript Culture: Ahmad al-Buni and his Readers through the Mamluk Period," PhD dissertation, Univ. of Michigan, 2014, p. 156-157, p. 322-325; Matthew Melvin-Koushki, "The Quest for a Universal Science: The Occult Philosophy of Ṣāʾin al-Dīn Turka Iṣfahānī (1369-1432) and Intellectual Millenarianism in Early Timurid Iran," PhD dissertation, Yale University, 2012; Marinos Sariyannis, "Studying Ottoman Views of the Supernatural: The State-of-the-Art and a Research Agenda," *Acaʾib: Occasional Papers on the Ottoman Perceptions of the Supernatural*, 1 (2020a), p. 5-20, p. 9-10, p. 12-16; Marinos Sariyannis, "Knowledge and Control of the Future in Ottoman Thought," *Acaʾib: Occasional Papers on the Ottoman Perceptions of the Supernatural*, 1 (2020b), p. 49-84; Jean-Charles Coulon, "Building al-Būniʾs Legend: The Figure of al-Būni through ʿAbd al-Raḥmān al-Bisṭāmīʾs *Shams al-āfāq*," *Journal of Sufi Studies*, 5/1 (2016), p. 1-26; Liana Saif, "From *Ġāyat al-ḥakīm* to *Šams al-maʿārif*: Ways of Knowing and Paths of Power in Medieval Islam," in "Islamicate Occultism: New Perspectives," eds Matthew Melvin-Koushki and Noah Gardiner, special double issue of *Arabica*, 64/3-4 (2017), p. 297-345; Yousef Casewit, *The Mystics of al-Andalus: Ibn Barrajān and Islamic Thought in the Twelfth Century*, Chicago, University of Chicago, 2017, p. 150-159.

4 Daniel Stolzenberg, "Utility, Edification, and Superstition: Jesuit Censorship and Athanasius Kircher's Oedipus Aegyptiacus," in *The Jesuits II: Cultures, Sciences, and the Arts 1540-1773*, eds John W. O'Malley, Gauvin Alexander Bailey, Steven J. Harris, T. Frank Kennedy, Toronto, University of Toronto Press, 1999, p. 336-354, p. 336.

can reveal the wisdom within through comparison and combination.[5] Since it is knowledge that does not stem from the exercise of reason, the Kabbalah, according to Kircher, is in essence a revelatory knowledge, adding that just as the Greeks have philosophy, the Chaldeans astrology, Persians magic, Gaels druidism, Indians "gymnosophistae," Egyptians "psontomphaneci," the Hebrews have the Kabbalah.[6]

This article argues that Classis V in Tomus II.1, Caps. I-X, and Classis VII, Cap. VI in Tomus II.2 contain Kircher's most comprehensive engagement with the Islamic science of letters. The evidence offered of this reception and appropriation of this science affords us a glance into the way it was understood through an early modern Christo-Latinate lens. I argue that "Cabala" becomes a comparative heuristic tool in Kircher's construction of a universal language in service of the Church, subsuming the Islamic science of letters as the *Cabala Saracenica*. In addition to identifying some of the sources of his *Cabala Saracenica*, this article unpacks the role of Arabic language in Kircher's Kabbalistic aspirations by placing the science of letters within his sacred philology, in addition to the linguistic-mathematical universalism he calls *Theotechnia Hermetica*.

The identified sources of Kircher's treatment of the *Cabala Saracenica* span three relevant Islamic genres of writings: 1) Occult-lettrist single-author works, represented by the aforementioned *Šams al-āfāq fī ʿilm al-ḥurūf wa-l-awfāq* by ʿAbd al-Raḥmān al-Bisṭāmī; 2) Sacred histories, illustrated by Kircher's use of *Qiṣaṣ al-anbiyāʾ* ('Stories of the Prophets') by Muḥammad b. ʿAbd Allāh

5 Daniel Stolzenberg, *Egyptian Oedipus: Athanasius Kircher and the Secrets of Antiquity*, Chicago and London, The University of Chicago Press, 2013, p. 27, p. 36; Daniel Stolzenberg, "Four Trees, Some Amulets, and the Seventy-two Names of God: Kircher Reveals the Kabbalah," in *Athanasius Kircher: The Last Man Who Knew Everything*, ed. Paula Findlen, New York and London, Routledge, 2004, p. 149-169, p. 149-151; Joscelyn Godwin, *Athanasius Kircher: a Renaissance Man and the Quest for Lost Knowledge*, London, Thames and Hudson, 1979, p. 81-22; Wilhelm Schmidt-Biggemann, *Geschichte der christlichen Kabbala, Band 10,2*, Stuttgart-Bad Cannstatt, Fromann-Holzboog, 2012, p. 328-334, p. 344. Interestingly, a distinction is made by Giulio Bartolocci in "Morè Makòm: Index Materiarum Authorum & titulorum librorum M.S. Ebraicorum Bibliothecae Vaticane, Palatinae, & Urbinatis" (1661), between "kabbalistic books which are called Work of Creation and Work of the Chariot (*Maassè Bereschith, et Maassè Marchevà*), which deal with the external works of God (*de operibus dei ad extra*), the divine attributes, and the rewards and punishments owed to men according to their works" and "operatory" Kabbalah that produces marvels and "supernatural effects by the invocation of certain good names or evil spirits;" see Rome, Vatican Library, Vat. Lat. 13197-13199, vol. 1, fols 137-138, noted by Stolzenberg in "Four Trees, Some Amulets," fn. 35, p. 168.

6 Athanasius Kircher, *Oedipus Aegyptiacus*, Tomus II.1, Rome, 1653a, p. 211-212: "*Quod enim Graecis philosophi, Chaldaeis astrologie, Magi Persis, Gallis Druidae, Indis gymnosophistae, Aegyptiis psontomphanechi; hoc Hebraeis Cabalaei sunt*".

al-Kisāʾī (fl. in the 11th century); and 3) magic-divinatory compilations, represented by a hitherto overlooked MS, namely Rome, Vatican Library, Vat. Ar. 938.[7] What makes this mid-sixteenth century Ottoman manuscript special is that it was accessed by Kircher himself as evinced by the Latin title likely given by him:[8] "Monuments of the most foundational (*vetustissimae*) Egyptian and Arabic philosophy. Geometric, numerical, and hieroglyphic signs thoroughly explained. Physics and celestial knowledge are gathered from various [sources]".[9] One can immediately see how this title aligns perfectly with the concerns of the *Oedipus Aegyptiacus*. An Italian annotator has written above Kircher's title: "*Il vero titolo di questo libro è, le stoltezze de' Turchi intorno delle magie, e fattocherie, e non ciò che segue*" ("The true title of this book is [i.e., should be] *The Foolishness of the Turks concerning Magic and Witchcraft*, and not what follows").[10] In fact, this could be the very Arabic manuscript on the Saracenic Kabbalah that Kircher describes in one letter to Peiresc.[11] Despite the grandiose claims made by the title, this manuscript is in reality a messy compilation of a few complete, but not particularly ancient, treatises and multiple fragments of other works mostly concerned with occult and lettrist practices. Interspersed throughout the manuscript, we find fragments mostly in the same hand of the scribe Saʿīd b. ʿAlī b. ʿAmmār whose name is mentioned in the colophon of the constituent treatise entitled *Kitāb fī-hi šarḥ al-ḥurūf al-ʿarabiyya wa-l-hindiyya* ("A book containing the explication of Arabic and Indian letters").[12] The manuscript also contains Shīʿī or philo-ʿAlid content including texts in the genre of *malāḥim* (astro-meteorological and geopolitical predictions).[13] This demonstrates that Kircher's acquaintance with the science of letters and divine names was based on sources that represent a good

7 A description of this manuscript is found in Giorgio Levi Della Vida, *Elenco dei manoscritti arabi islamici della Biblioteca Vaticana: Vaticani Barberiniani, Borgiani, Rossiani*, Città del Vaticano, Biblioteca Apostolica Vaticana, 1935, p. 88–90. See also, Antonella Caruso, "L'arte talismanica nel codice Vaticano Arabo 938 B.", in *Yâd-nâma. In memoria di Alessandro Bausani*, éd. Biancamaria Scarcia Amoretti, 2 vols, Rome, Bardi Editori, 1991, 2: p. 29-58.

8 The handwriting on the title page of Rome, Vatican Library, Vat. Ar. 938, fol. 1^{r} can be compared with Kircher's handwriting seen in a letter dated to 3 December 1672 from Athanasius Kircher to an unknown recipient (Library of the Royal Canonry of Premonstratensians at Strahov), Prague, shelf mark DH I 22v; source: http://emlo-portal.bodleian.ox.ac.uk/collections/?catalogue=athanasius-kircher, accessed on 24/01/2022.

9 Vat. Ar. 938, fol. 1^{r}: "*Agyptiacae ac Arabicae vetustissimae philosophiae monumenta. Geometrica quadam numeralia ac hieroglyphica signa certissimi explanate. Nec non physica quadam, et syderalia ex multis collecta.*"

10 Vat. Ar. 938, fol. 1^{r}.

11 Stolzenberg, *Egyptian Oedipus*, p. 88.

12 Vat. Ar. 938, fol. 148^{v}.

13 Vat. Ar. 938, fols 4^{v}-6^{v}.

snapshot of Ottoman Islamic occultist and exegetical traditions, rather than on an arbitrary and uninformed knowledge of Islamic magic.

The identification of Kircher's Arabic sources, especially of his extensive discussion of what he calls the *Cabala Saracenica*, has challenged Kircher scholars. Hardly any of the Arabic sources cited by Kircher has been identified. In his discussion of Kircher's Kabbalah, Wilhelm Schmidt-Biggemann dedicates a small section to the *Cabala Saracenica* in his study of the Christian Kabbalah in the seventeenth century. He gives a general description of the content, noting Kircher's view of its inferiority compared to the Hebrew Kabbalah.[14] Daniel Stolzenberg highlights the anxiety triggered by Islamic magic and the *Cabala Saracenica* in the censors. Upon the publication of the *Oedipus Aegyptiacus*, the censors demanded that Kircher omit his discussion of practical Kabbalah, which they deemed full of "superstition", and insisted he cut down his discussion of the *Cabala Saracenica*.[15] Kircher's incorporation of both Hebrew and Arabic sources was deemed especially problematic, not least because they belonged to living communities of threatening Others, be it the Jewish minority of Europe or the Ottoman empire.[16]

Furthermore, scholarship has long acknowledged the importance of Arabic language and literature in Kircher's philological and antiquarian project. As Stolzenberg writes:

> In the wake of the Reformation, as the correct reading of scripture became a matter of increasingly high stakes, Hebrew, as well as Aramaic, Samaritan, Ethiopian, Armenian, and other languages that preserved versions of scripture and documents of the early church, became essential weapons of theological warfare. The desire of scholars to understand the Bible in historical context fed into a broader interest in the history of the Near East, inspiring the study of other Oriental languages, most importantly Arabic. Oriental philology was driven largely by an inward-looking impulse: Europeans' desire to understand their own heritage.[17]

14 Schmidt-Biggemann, *Geschichte der christlichen Kabbala*, p. 371-373.

15 Stolzenberg, *Egyptian Oedipus*, p. 132, p. 180-190; Stolzenberg, "Utility, Edification, and Superstition," p. 341-342; Stolzenberg, "Oedipus Censored: Censurae of Athanasius Kircher's Works in the Archivum Romanum Societatis Iesu," *Archivum Historicum Societatis Iesu* (2004), p. 3-52.

16 Stolzenberg, "Utility, Edification, and Superstition," p. 338.

17 Stolzenberg, *Egyptian Oedipus*, 2013, p. 22; see also, Godwin, *Athanasius Kircher: A Renaissance Man*, p. 18-23.

The place of Islamic magic has been explored – in a limited way – in relation to Kircher's relationship with the French astronomer and antiquary Nicolas-Claude Fabri de Peiresc (1 December 1580-24 June 1637), an influential patron of arts and letters.[18] To Kircher and his patrons, no manuscript epitomized his engagement with Arabic literature as much as the Barachias manuscript. According to Kircher, this mysterious Arabic treatise is concerned with "the manner of interpreting and deciphering the hieroglyphic letters of the Egyptian obelisks", with content on talismans and occult properties of natural things, composed by a certain "Rabbi Barachias Nephi of Babylon". Kircher promised to translate the Barachias manuscript from Arabic to Latin.[19] In a letter to Claude Saumaise, one of Europe's most skilled scholars of classical and Oriental literature, Peiresc describes the Barachias manuscript as "very worthy of publication". Saumaise's enthusiasm declined after he was able to read a few lines of Arabic text from the manuscript that Kircher had sent to Peiresc. Saumaise described them as "some words taken from the Koran", with "no resemblance to the inscriptions of the ancient Egyptians". Kircher never published his translation and the enthusiasm for the translation, and even for Kircher himself, declined. Nevertheless, Kircher refers to the manuscript's author in his other hieroglyphic studies under the name "Abenephius the Arab".[20] Indeed, one encounters Abenephius as a source of several Arabic excerpts in the *Oedipus Aegyptiacus*, largely concerned with descriptions of ancient Egyptian beliefs and constructions.[21]

So how and where did Kircher have access to Arabic sources on magic? Kircher's fluctuating relationship with Peiresc presented him with opportunities to study Arabic texts on magic. Interested in late antique magical gems – which had acquainted him with "those Greek sounds mixed into that Egyptian language" – Peiresc sent Kircher an Arabic magical seal from his own collection.[22] The former had also asked the Capuchin missionary Agathe de Vendôme to seek out works like the Barachias manuscript in the libraries of Cairo, and suggested to Cassien de Nantes that copies of the Barachias

18 Stolzenberg, *Egyptian Oedipus*, p. 11-12.

19 Stolzenberg, *Egyptian Oedipus,* p. 71; Alastair Hamilton, *The Copts and the West, 1439-1822: The European Discovery of the Egyptian Church*, Oxford, Oxford University Press, 2006, p. 204.

20 Stolzenberg, *Egyptian Oedipus*, p. 71, p. 80-88; Paula Findlen, *Athanasius Kircher: The Last Man*, p. 15-16.

21 Kircher, *Oedipus Aegyptiacus*, Tomus III, Rome, 1654, p. 64, 113, 196, 288; Kircher, *Oedipus Aegyptiacus*, Tomus I, Rome, 1652, p. 12, p. 72.

22 Miller, "Copts and Scholars," p. 133; Daniel Stolzenberg, "Four Trees, Some Amulets, and the Seventy-Two Names of God: Kircher Reveals the Kabbalah," in *Athanasius: The Last Man*, p. 149-170, p. 168, fn. 38.

manuscript and other Arabic works on the "hieroglyphs" might be found in the unexplored libraries of the Levant.[23]

Kircher himself moved to Malta in May 1637 to serve as the confessor of Landgrave Frederick of Hesse-Darmstadt and to teach mathematics at Malta's Jesuit College. He poured himself into creating "physico-mathematical" instruments and searching for manuscripts.[24] Isolated from his usual libraries, collections and a stimulating intellectual community, he sent letters to Rome, entreating his Jesuit superiors and patrons that he be released from his commitments in Malta. He wanted to travel "to Egypt or the Holy Land, in order to see those countries and improve his knowledge of Oriental languages and studies". He sought to examine "the countless antiquities surviving in Egypt" and explore its "very ancient libraries, most abundantly furnished with the rarest books, among them, manuscripts in Coptic, Arabic, Greek, Hebrew, and other languages – even papyri covered in hieroglyphs". His requests were granted eventually, and in 1638, Kircher returned to Rome.[25]

Frans Ciappara and Carmel Cassar provide examples of Muslims in Malta performing magical services for health, love, revenge, gambling, as well as divination to find stolen goods.[26] By comparison, in contemporaneous early Ottoman Egypt, astrologers and geomancers could be found in the courts of the Sultans and on the streets. Their practices often involved healing, and popular healers were often diviners and magicians. As Sherry Sayed Gadelrab points out:

> they had clients from a variety of educational and social backgrounds, ranging from poor women suffering infertility problems, to the Ottoman sultan himself. It is difficult, and almost impossible, to differentiate between the activities of "learned" versus "popular" healers. Both groups employed Galenic, prophetic, magical and folk medicine as the basis of their practices.[27]

23 Stolzenberg, *Egyptian Oedipus*, p. 80; Daniel Stolzenberg, "Une collaboration dans la Cosmopolis catholique: Abraham Ecchellensis et Athanasius Kircher," in *Abraham Ecchellensis, l'orientalisme et la science* (*XVII^e siècle*), ed. B. Heyberger, Brepols, Turnhout, 2010, p. 81-88.

24 Emanuel Buttigieg, "Knights, Jesuits, Carnival, and the Inquisition in Seventeenth-Century Malta," *The Historical Journal*, 55/3 (2012), p. 571-596, p. 572, p. 580-581.

25 Stolzenberg, *Egyptian Oedipus*, p. 1-3, p. 25; Findlen, *Athanasius Kircher: The Last Man*, p. 19-20.

26 Frans Ciappara, *Society and the Inquisition in Early modern Malta*, San Gwann, Publishers Enterprises Group, 2001, p. 266, p. 307; Cassar, *Witchcraft, Sorcery and the Inquisition*, p. 75.

27 Sherry Sayed Gadelrab, "Medical healers in Ottoman Egypt, 1517-1805," *Medical History*, 54/3 (July 2010), p. 365-386 (accessed online July 10, 2016). <http://www.ncbi.nlm.nih

Given this wider context, it is hardly surprising that Maltese inquisition trial documents record cases of Muslim slaves tried on charges of magic such as love magic, healing magic, gambling charms, divination to find treasure and to identify thieves, and counter-enchantment.[28] Records of such trials and other archival material present us with parchments, ciphers, talismans, wax figures, and instructions that reflect the permeation of al-Būnian lettrist magic and geomancy.[29]

It is thus likely that Kircher came upon some Islamic texts on magic and practitioners in Malta. Indeed, he claimed to have acquired there a copy of the magic-agronomic *al-Filāḥa al-Nabaṭiyya* ("The Nabataean Agriculture") by Ibn Waḥšiyya (*Abenuaschia*). He refers to it as the *Liber de cultura aegyptiorum* or *Liber de agricultura aegyptiorum.*[30] Kircher also knew (ps.) Ibn Waḥšiyya's cryptography manual *Šawq al-mustahām fī maʿrifat rumūz al-aqlām* ("The Infatuated Lover's Desire Concerning Knowledge of the Signs of Scripts") which was of great importance for his interpretation of the Egyptian hieroglyphs.[31]

Beyond Malta, another possible source for Kircher's Arabic material is the Maronite community. The College of Maronites in Rome was founded in 1584 to pursue an agenda involving the education of Arab Christians from Lebanon in order to propagate Tridentine Catholicism in their homeland. In addition, the College aimed to bring linguistic experts to Rome who would educate missionaries. After 1627, the Collegio Urbano, founded by Urban VIII to train missionaries under the auspices of the Congregation for the Propagation of the Faith, also brought students from the Near East. The College of Neophytes, established in 1577, offered education to Christian converts from Judaism primarily, but also those from Islam. These colleges formed a permanent community of Jewish and Muslim converts as well as eastern Christians, who taught

.gov/pmc/articles/PMC2890320/> 365-86 (accessed online July 10, 2016) http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2890320/.

28 Catherine Rider, "Common Magic," in *The Cambridge History of Magic and Witchcraft in the West*, ed. David J. Collins, Cambridge University Press, 2015, p. 310-319; Mary O'Neil, "Magical Healing, Love Magic, and the Inquisition in Late Sixteenth-Century Modena," in *New Perspectives on Witchcraft, Magic and Demonology*, ed. Brian P. Levack, New York and London, Routledge, 2001, p. 88-113; Carmel Cassar, "Witchcraft beliefs and social control in seventeenth-century Malta," *Journal of Mediterranean Studies*, 3/2 (1993), p. 316-334, p. 317, p. 326.

29 Liana Saif, "Magic and Divination Lost in Translation: A Cairene in a Maltese Inquisition," in *Magic in Malta: Sellem bin al-Sheikh Mansur and the Roman Inquisition, 1605*, eds Alex Mallett, Catherine Rider, Dionisius A. Agius, Leiden, Brill, 2022, p. 419-451.

30 Stolzenberg, *Egyptian Oedipus*, p. 157.

31 Athanasius Kircher, *Obeliscus pamphilius*, Rome, 1650, p. 110, p. 113; Stolzenberg, *Egyptian Oedipus*, p. 157; Isabel Toral-Niehoff and Annette Sundermeyer, "Going Egyptian in Medieval Arabic Culture," in *The Occult Sciences in Pre-Modern Arabic Literature*, eds Eva Orthmann and Nader el-Bizri, Würzburg, Ergon Verlag, 2018, p. 249-262, p. 257, p. 261.

languages and worked in the Vatican Library and their own college libraries. In his study of the Kabbala, we know Kircher consulted Hebrew manuscripts from the College of Neophytes.[32]

An ambitious study on the places whence Kircher got his sources on the science of letters and divine names, would begin to reveal the networks of magical knowledge exchange and economy that Kircher tapped into. To do so here is not possible, but what can be said is that the magic he obtained from his connections and travels is the one most dominant in the seventeenth century; namely, lettrist magic.

1 The Arabic Sources of the *Cabala Saracenica*

As noted earlier, Kircher discusses the *Cabala Saracenica* in two places: Tomus II.1, Classis V, wherein it is elaborated in ten chapters, and in Tomus II.2, Classis VII, in the sixth chapter. The title of Classis V is *De Cabala Saracenica et Agarena* which translates to "Saracenic and Agarene Kabbalah". The term "Saracen" historically referred to Arabs or Muslims. Susanne Akbari notes, "medieval constructions conflated categories of ethnicity and religion within a single term that served as a marker of both;" furthermore, the Saracen is a term rarely used to identify Christian Arabs.[33] "Agarene" was often used as a term for the descendants of Hagar, referring to Arabs or Ishmaelites. Isidore of Seville derived "Saracen" and "Agarene" from those of Sarah and Hagar, the wife and bondswoman of Abraham respectively.[34] Moreover, according to Augustine, Hagar symbolised the "earthly city" of sin.[35]

32 Stolzenberg, *Egyptian Oedipus*, p. 107-8; Kircher knew the Maronite scholar Ibrāhīm al-Hāqilānī, known in Europe as Abraham Ecchellensis. Al-Hāqilānī (b. Lebanon, 1605), first came to Rome in 1620 to study at the College of Maronites, afterwards taking a degree in philosophy at the Collegio Romano. In 1631 he left for the Levant and began a diplomatic career in the service of the Druze Emir Faḫr al-Dīn. Following Faḫr al-Dīn's execution by the Ottomans in 1635, he taught briefly at the University of Pisa. In 1636, al-Hāqilānī was summoned by the pope to teach Arabic and Syriac at the Sapienza University and participate in the Arabic translation of the Bible. See also, Anthony Grafton, "Kircher's Chronology," in *Athanasius Kircher: The Last Man*, p. 171-190, p. 180.

33 Suzanne Akbari, *Idols in the East: European Representations of Islam and the Orient, 1100-1450*. New York: Cornell University Press, 2009, p. 155.

34 Isidore of Seville, *Etymologia, Isidori Hispalensis Episcopi Etymologiarum sive Originum Libri xx*, ed. W.M. Lindsay, Oxford: Clarendon Press, 1989, IX.ii.6, p. 57; R.W. Southern, *Western Views of Islam in the Middle Ages*, Cambridge MA: Harvard University Press, 1962, p. 18.

35 Samuel Ottewill-Soulsby, "'Those same cursed Saracens': Charlemagne's campaigns in the Iberian Peninsula as religious warfare," *Journal of Medieval History* 42/4 (2016), p. 405-428.

In the first chapter of Classis v dedicated to the origins of the *Cabala Saracenica* (also described as "the superstition of the Arabs and the hieroglyphic philosophy of the Turks"),[36] Kircher gives a spurious historical background through which we can understand these markers:

> Just as there was a great dispute and controversy between the Hebrews and Samaritans of old, so there was a great strife and controversy between the Saracens and Agarenes regarding the superiority of origin. The Saracens, ambitiously tracing their origin from Sarah, the wife of Abraham, are intensely hated by the Agarenes, who, being descended from Hagar, the maidservant of Abraham, propagate their infamous and servile lineage. They are called spurious Ishmaelites and the worst idolaters. On the other hand, the Agarenes denominate [the Saracens] in this way: not calling them so because of Sarah, but from the Arabic word سارق *saracq*, meaning thieves and plunderers who afflict all. This dissension persisted until the year 660 AD, when, under the emperor Heraclius, the most wicked impostor Muhammad the Meccan spread the poison of his law throughout the world. Possessed by a demon and aided by a Jew named Selam and Sergius, a renegade monk, he compiled the Quran, a treasury of all wickedness. Initially, it consisted of certain verses without chapters, only verses without order and distinction. Later, his successor, Otman Caliph (Caliph Uṯmān), divided it into four books, each of which was further divided into chapters or surahs, totalling 211. The main authorities among them were Abubacher (Abū Bakr), Omar ('Umar b. al-Ḫaṭṭāb), Hali ('Alī b. Abī Ṭālib).[37]

36 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 361.

37 *Ibid.*, p. 362: *Uti olim Hebraeos inter et Samaritanos, ita magna Saracenos inter & Agarenos de primatu originis lis fuit et controversia. Saraceni a Sara uxore Abraham originem dum ambitiose deducunt, summo odio Agarenos, quod ab Agar ancilla Abrahae infamem et servilem originis suae stirpem propagent, infectantur; quos et spurios Ismaelitas et idololatras pessimos nominant. Agareni contra Saracenos non a Sara dictos, sed a verbo* سارق *saracq, quod furem et latrocinijs omnia infestantes, denominant. Duravit hoc dissidium usque ad annum Christi 660 quo sub Imperatore Heraclio nequissimus Impostor Mahumed Mecanus legis suae venenum Mundo propinavit. Qui a Daemone agitatus, Selam Iudaei et Sergij Monachi Apostatae subsidio usus, Alcoranum illum totius iniquitatis penuarium primo quidem Canticis quibusdam sine capitibus, solis sehedulis sine ordine et distinctione contentis, at postmodum ab Otman Calipha successore eius in quatuor libros, quorum singuli in alia capitula seu suratas, quae in universum sunt 211 divisium condidit, affeclis Abubacher, Omar, Hali ita Azar et Azipha libri magnae apud eos authoritatis referunt.*

Thus, Kircher condemns the *Cabala Saracenica* as a degenerate form of the Hebrew Kabbalah: "they gradually contaminated the brilliance and purity of the Hebrew Kabbalah with countless unheard-of superstitions, to the extent that their Kabbalah became a part of their magic and condemned arts."[38]

In Cap. I of Classis V, Kircher offers a genealogy of the Kabbalah with which he means the science of letters and divine names:

> According to the Hebrews, the Kabbalah was brought forth by Adam and transmitted successively to his descendants. The Arabs also claim the same. The foundation of the Hebrew Kabbalah lies in Mosaic Law and other sacred histories. The foundation of the Saracenic Kabbalah lies in the Qur'an, also known as Alphurqaan (*al-Furqān*). Furthermore, the Hebrew Kabbalah had its beginnings in the mystical letters or alphabet and the divine names derived from them. The Saracenic Kabbalah also drew its origins from the same [things]. The Hebrew Kabbalah looks into the various names of God and angels, which are contracted into amulets through numbers and symbols, to be used in their invocations to obtain some benefit from God. The Arabs engage in the same practice, but with much greater extravagance and superstition.[39]

Kircher's exposition of the *Cabala Saracenica* of Classis V, comprises ten chapters:

> Ch. 1: On the origins of the Saracenic Kabbalah (*De Cabalae Saracenicae origine*).
> Ch. 2: On the mystical alphabet of the Arab Saracens (*De Mystico alphabeto Arabum Saracenorum*).

38 *Ibid.*, p. 363: *Arabes Saracenos nullo non tempore Hebraeorum Simias egisse, mirum non est, cum immundus ille partus non nisi ab obstetricante manu Hebraei Selami, Mahumedis instructoris prodierit, idque doctrina eorundem Cabalistica sat superq; demonstrat. Tametsi nitorem et puritatem Hebraicae Cabalae innumeris, inauditisque superstitionibus ita paulatim contaminauerint, ut Cabalam eorum totius magicae, damnatarumque artium.*

39 *Ibid.*, p. 363: *Afferunt Hebraei Kabalam ab Adamo in filios suos successiva traditione propagatam; afferunt hic et Arabes. Kabala Hebraeorum fundamenta sua habet in lege Mosaica, coeterisque sacra historiae monumentis; Kabala Saracenica fundamentum suum habet in Alcorano, quem et Alphurqaan vocant. Iterum Kabala Hebraeorum a literis sive Alphabeto mystico, nominibusque divinis quae inde eruuntur, prima suae institutionis sumpsit exordia; sumpsit et ex ijsdem sua, Kabala Saracenorum. Kabala Hebraorum ex sacris textibus per numeros, et figuras in amuleta contractas, varia Dei, angelorumque nomina, quibus in invocationibus suis ad aliquod a Deo beneficium impetrandum utuntur, investigat; faciunt hoc idem multo copiosius et superstitosius Arabes.*

Ch. 3: On the divine names used by "Muhammedans," their properties, and their effects, extracted from their wisdom with extreme accuracy, [namely] from a treatise by a writer called Abulhassan (*De Nominibus divinis, Mahumedanis usitatis, eorumque proprietate et efficacia, ex eorum sententia, quae ex tractatu de dictis nominibus Abulhessan, summa fide extracta sunt*).
Ch. 4: On the names of God, with their numerical values shown (*De Nominibus Dei numerorum figuris exhibitis*).
Ch. 5: On the divine names, their numbers by which they are represented, and their apportions in relation to the seven planets and the twelve signs of the zodiac (*De Nominum divinorum, numerorumque quibus exhibentur, ad 7 planetas, et 12 signa Zodiaci approriatione*).
Ch. 6: On the structure of the mysterious names and their significations (*De Structura mysticorum nominum, eorumque significatione*).
Ch. 7: On the fabrication and uses of talismans and their refutation (*Fabrica et usus telesmatum, una cum refutatione*).
Ch. 8: On pronic numbers (*De numeris pronicis*)
Ch. 9: On the various transformations of names and letters in various figures (*De varia transformatione nominum, et literarum in figuras varias*).
Ch. 10: On the great talismans (*De Telesmatis magnis*).

Luckily, Kircher reveals several of the sources of his exposition on the Islamic science of letters.[40] These are:

1) *Historia sacra et profana Saracenorum* ("sacred and profane histories of the Saracens") by the author Amamo Abulhessan Aben Abdalla Kessadi.
2) *Narrationes visionum* (narrations of visions) by Aben Joseph Altokaphi.
3) *Liber arcanorum* (the book of secrets) by Abrahim Estath Babylonio.
4) *Liber computationis* (the book of computation) by Aben Rahmon.
5) *Liber divinae invocationis* (the book of the divine invocation) by Halymorchum.
6) *Liber de vita Eremitarum Saracenorum* (The book of the life of the Saracen Hermits) by Aben Omar Osman.
7) *Liber intitulatus Hesban elrammel* (the book entitled geomantic calculations) by an author from "the land of Fezza written in Nubian characters".
8) *Liber Sigillorum* (the book of sigils), anonymous.
9) *Magia Turcarum* (magic of the Turks), Hashmon Aben Buri.
10) Other fragments.

40 *Ibid.*, p. 363-364.

The works and authors in this list of sources are difficult to identify with precision. Kircher's transliterations are unreliable and the titles he provides may not be literal translations of the original titles, rather descriptions of the texts themselves, either due to errors in his source manuscripts or his own struggles with Arabic palaeography. Kircher's inexact transliterations and misattributions mean that the process of identifying his sources is neither easy nor straightforward. For example, in his list of sources, he attributes the *Narrationes visionum* to Aben Joseph Altokaphi. This name could be interpreted as that of al-Ḥaǧǧāǧ b. Yūsuf al-Ṯaqafī (40-95/661-714), the controversial military general, governor of ʿIrāq and viceroy under the Umayyad caliphate (661-750) with a reputation for ruthlessness toward his opponents. I am not, however, aware of any works on visions authored by this al-Ḥaǧǧāǧ. It is possible that Kircher mistook the author of the *Narrationes visionum* for another author better known to himself or his contemporaries, that is the mystic Ḥusayn b. Manṣūr al-Ḥallāǧ (*c.*858-922), known for his brutal execution as a result of his spiritual-political activism. If this is the case, one could speculate that Kircher's *Narrationes visionum* is, in fact, al-Ḥallāǧ's *al-Riwāyāt* ("Narrations"), twenty-seven meditative exhortations to renunciation and internal reflections on the Divine.[41] Al-Ḥallāǧ's *al-Riwāyāt* do not, however, contain any occultist or lettrist material, and I could not identify any parallels between this text and the *Oedipus Aegyptiacus*.[42] Although one cannot but wonder if this is referring to *Kitāb al-Ṭawāsīn* which describes symbols or codes that contain esoteric wisdom, which do look like magical script (fig. 1).[43]

The following analysis of his sources reveals that Kircher's objective is to systematise and standardise the knowledge he appropriates from a range of sources on the science of letters and divine names. One of the most important sources of the *Cabala Saracenica* is the one he refers to in the list as *Historia sacra et prophana Saracenorum* by Amamo Abulhessan Aben Abdalla Kessadi. This is Muḥammad b. ʿAbd Allāh al-Kisāʾī's (fl. in the 11th century) *Qiṣaṣ al-anbiyāʾ* ("Stories of the Prophets"). The author's *nisba* (genealogical attribution), al-Kisāʾī, becomes Kircher's Kessadi, presumably owing to a misreading based on the graphical similarity between *ʾī* and *dī* and guesswork at the correct vocalisation of the Arabic name. Finally, confusion with Abū l-Ḥasan al-Kisāʾī (d. 189/805), one of the transmitters of the seven canonical *qirāʾat*

41 al-Ḥallāǧ, *Kitāb al-Ṭawāsīn*, ed. Louis Massignon, Paris, Libraire Paul Geuthner, 1913, p. 111.

42 Louis Massignon, *La passion d'Al-Hosayn Ibn Mansour al-Hallaj*, 4 vols, Paris, Paul Geuthner, 1922, 2: p. 283-284.

43 al-Ḥallāǧ, *Kitāb al-Ṭawāsīn*, p. 79.

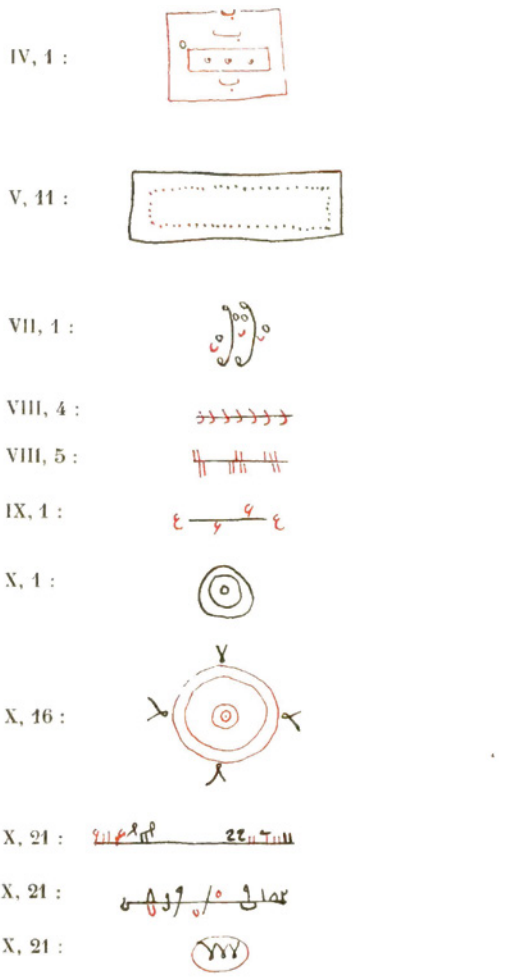

Planche contenant l'ensemble des schémas en deux couleurs illustrant le *ms. D* (*Shahîd 'Alî pâshâ 1342*) des Ṭawasīn, ff. 152, 156, 164, 165 (3 schémas), 166, 167 (4 schémas) [1].

1. Les comparer aux schémas illustrant le *ms. B* (*Qâdhî 'askar 1271*), et insérés dans le texte : IV, 1; V, 11; VII, 1; VIII, 4, 5; IX, 1; X, 1, 16 et 21 (où la répartition, d'ailleurs identique, des deux couleurs, n'a pu être reproduite).

FIGURE 1 collection of the symbolic figures from al-Ḥallāǧ, *Kitāb al-Ṭawāsīn*, ed. Louis Massignon, Paris, Libraire Paul Geuthner, 1913, p. 79

(Qur'anic readings), may have compelled Kircher or his manuscript source to substitute Abū l-Ḥasan for Muḥammad.

Although this text is by no means a lettrist or an occultist work, it contributes to Kircher's own prophetic narratives whereby he constructs a genealogy

of writing and the occult nature of letters and divine names. Kircher also cites "Abulhassen" and his sources (Aben Abasch = Ibn ʿAbbās, Vaab = Wahb ibn Munabbih, and Kab = Kaʿb al-Aḥbār) when discussing the life of the prophet Idrīs, who is widely identified with Hermes especially in occultist and esoteric milieus. Kircher, following al-Kisāʾī, notes that Idrīs was the first to use a reed for writing and that he inherited the revelations of Seth as well as receiving 30 folios (*ṣaḥīfa*) of his own.[44] Al-Kisāʾī's *Qiṣaṣ al-anbiyāʾ* is also the source of the story of Adam teaching Seth the letters and their esoteric significance in Classis v.[45] More significantly, Kircher takes from the *Qiṣaṣ al-anbiyāʾ*, almost verbatim, the abjad letter correspondence with the divine names.[46] Although al-Kisāʾī's *Qiṣaṣ al-anbiyāʾ* is not a widely referenced source in the corpus of Islamic literature on the science of letters, Kircher relies on it for its description of angels and other sections of the *Oedipus Aegyptiacus*.[47] Furthermore, in Classis VI, Cap. IV (*Systema Mundi ex mente Arabum*), Kircher reproduces and translates al-Kisāʾī's description of the creation of the heavens, their corresponding precious stones, and the angels that preside over each of them.[48] But instead of referring to al-Kisāʾī, he mentions Abuhassan Ben Abasch who is the narrator cited by al-Kisāʾī.[49]

In chapter III of the *Cabala Saracenica*, Kircher provides a list of a special set of non-Qur'anic names (such as Mušayṭiʿ). This follows the content of Ar. 938. This sequences of Qur'anic names make up what is referred to as *duʿāʾ Idrīs* (the Idrīs prayer) found in a treatise known as *Šarḥ al-arbaʿīn ism* (The Explanation of the Forty Names) attributed to Šihāb al-Dīn al-Suhrawardī (d. 587/1191).[50] The text in Ar. 938 follows a recension which gives each sequence of the prayer a corresponding *ʿajamī* (Syriac) name.[51]

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44 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 76-80; compare with al-Kisāʾī, *Qiṣaṣ al-anbiyāʾ*, 2 vols, Leiden, Brill, 1933, p. 81-87; see also, Kircher, *Oedipus Aegyptiacus*, Tomus II.2, Rome, 1653b, p. 145.

45 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 367-368; compare with al-Kisāʾī: p. 70-72.

46 *Ibid*., p. 364-367; compare with al-Kisāʾī: p. 69-70.

47 *Ibid*., p. 410-412; compare to al-Kisāʾī, p. 13.

48 *Ibid*., p. 420-421.

49 *Ibid*., p. 420-421; compare with al-Kisāʾī, p. 11-12.

50 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 369-371; compare with Vat. Ar. 938, fols 10v-14v.

51 See Łukasz Piątak, "Between philosophy, mysticism and magic. A critical edition of occult writings of and attributed to Shihāb al-Dīn al-Suhrawardī (1156–1191)", PhD Dissertation, University of Warsaw, 2018, p. 383-394.

In the same chapter, Kircher refers to Hali ben Aruth (possibly, ʿAlī ibn al-Ḥārith) describing the significance of the 99 divine names. He quotes this Hali:

> قال الله تعالى ولله الأسماء الحسنى فادعوه بها وله تسعة وتسعين إسماً مائة غير واحد من قرأها وأحصاها دخل الجنة.
>
> God, Most High, said: "and to God belong Beautiful Names, so call Him by them"; one hundred minus one. Those who read and count them, they will enter paradise.[52]

This is in fact the opening of a text on the properties of divine names found in Ar. 938 which turns out to be *Ḫawāṣṣ Asmāʾ Allāh al-ḥusnā* attributed to Šahāb al-Dīn al-Tabrīzī.[53]

More mysterious to Kircher's scholars than al-Kisāʾī is Aben Pharagi, the "Moroccan Nubian writer" ("Maroccanus Scriptor Nubianus") to whom Kircher ascribes a *Liber de adjurationibus*.[54] Kircher constantly refers to him as a source of Arabic-Islamic magic. For example, in Classis VII, Cap. VI, there we find seven planetary magic-square-talismans attributed to a certain Abenmorgun the Arab and Aben Pharagi.[55] These look more akin to planetary talismans found in Agrippa's *De Occulta philosophia libri III* that adopt planet-square correspondences (3×3 = Saturn; 4×4 Jupiter, etc.) widely adopted in the Islamic world and Europe.[56] In this chapter, Kircher outlines his approach to "natural magic". He explains that "natural magic" is the ability to connect terrestrial images to celestial ones, and "that one thing is attracted by another

52 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 372.

53 Vat. Ar. 938, fol. 33v-36v. For manuscripts of al-Suhrawardī's text, see The University of King Saud, 5/1577 ف 7477, and The National Library of Israel Jerusalem, Ms. Yah. Ar. 834, which is mentioned in Efraim Wust, *Catalogue of the Arabic, Persian and Turkish manuscripts of the Yahuda collection of the National Library of Israel*, eds Raquel Ukeles with Sagit Butbul, Khader Salameh, and Yusuf al-Uzbeki, Leiden, Brill, 2016, vol. I, p. 335.

54 *Ibid*., p. 395.

55 Kircher, *Oedipus Aegytiacus*, Tomus II.2, 1653b, p. 71.

56 Bink Hallum, "New Light in Early Arabic Awfāq Literature," in *Islamicate Occult Sciences in Theory and Practice*, p. 57-161; Rosa Comes, "The Transmission of Azarquiel's Magic Squares in Latin Europe," in *Medieval Textual Cultures: Agents of Transmission, Translation and Transformation*, eds Faith Wallis and Robert Wisnovsky, Berlin, de Gruyter, 2016, p. 159-198.

through natural affinity, or repelled by its dissimilarity".[57] To substantiate his argument, he also refers to the ninth-century astrologer Abū Maʿšar al-Balḫī (known in Latin as Albumasar), Haly the Arab, or the eleventh-century astrologer Abū l-Ḥasan ʿAlī b. Abī l-Riǧāl, and the theologian al-Ġazālī.[58] To the latter, Kircher attributes a *Liber de influentiis* wherein one reads, he tells us, that "whoever knows the chain that ties the upper world with the lower, knows the natural secrets and is able to perform miracles".[59] This natural magic remains reproachable:

> Since no handling of the hidden mysteries of nature can be done properly without the light of true faith, it is mixed with the errors and the diabolical practices of the people. Thus, they were led into the abyss of enormous superstition … All those who followed in their footsteps, especially the Arabs, who sought to propagate this art among the other nations of the world, have also fallen into the same abyss.[60]

In the *Oedipus Aegyptiacus*, he refers to a *Liber de imaginibus coelistibus* attributed, however, to Hali the Arab who, we are told, affirms the link existing between celestial and terrestrial forms and which explains the efficacy of natural magic (*fundamentum magicae naturalis*).[61]

In his monumental *Bibliotheca Magna Rabbinica*, published between 1675-1693 in Rome, Giulio Bartolocci identifies Aben Pharagi as Rabbi Nissim Abu Alpharagi, father of Guillelmus Raymundi de Moncada, a prominent Jewish convert into Christianity and expert in multiple languages including

57 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 418: *Est enim hoc praecipuum doctrinae magice caput praeceptumque, ut unum ab alio naturae affinitate alliciatur, vel eiusdem dissimilitudine repellatur*.

58 *Ibid*., p. 415-419.

59 *Ibid*., p. 419: *Qui norit, quomodo in arbore Sephirotico coniungantur Tiphereth et Malcuth mediante Ensuph, et exitus fiat sapientiae de MeAin; prosperabitur in verbis hisce, et altissimorum montium secreta sciet. Cognoscet quoque, quo vergant aenigmatica verba Algazielis Arabis Philosophi lib. de influentiis*.

60 Kircher, *Oedipus Aegyptiacus*, Tomus II.2, p. 70-71: *Verum cum nulla reconditorum naturae mysteriorum tractatio, si verae fidei lumen desit, sine naeuo et daemoniaci commercij commistione, recte transigi possit; hinc factum est, ut ij in enormium quoque superstitionum praecipitia deducti, animae corporisque felicitatem, quam tam sollicite quaerebant, tam studiose ambibant, ab humani generis hoste miserandum in modum illusi deiectique, perdiderint; atque in eandem abyssum omnes posteri, qui eorum vestigia sectantes, talibus illicite usi sunt; lapsi sunt, potissimum Arabum, qui prae omnibus hanc artem ab Aegyptijs haereditatem inter maxima mysteria collocatam ad coeteras Mundi nationes propagare contenderunt*.

61 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 418.

Arabic and Hebrew. He was also the teacher of Pico della Mirandola. To him, Bartolocci attributes a translation of Ali al-Haytin's *De imaginibus caelestibus*. Rabbi Nissim is reported to have made a solar-lion seal from it that uses the Saturn 3 × 3 magic square:

> When he had devoted himself to the arts of magic and the Kabbalah, he prepared with his own hand a golden plate, on which he had carved the head of a lion. On the back of this plate, he carried these characters with him and used them superstitiously. Moreover, these characters, wherever you take them, always make up the same number, namely 15.[62]

This Guillelmus Raymundi de Moncada is, in fact, known to historians by his pseudonym Flavius Mithridates who translated an original Arabic work on the talismans of the twenty-eight lunar mansions written by Abū ʿAlī b. al-Ḥasan b. al-Ḥātim, given the Latin title *De imaginibus caelestibus*. This treatise is found in a remarkable and lavish manuscript, Urb. Lat. 1384, which is a bilingual Arabic-Latin compendium created between 1478 and 1482. In addition to the treatise on the lunar mansions, it contains a Qur'ānic anthology, two explanatory prefaces and two Arabic-Latin glossaries.[63] In the preface to Mithridates's translation, indeed he mentions that his father is Rabbi Nissim Abu il Faragh.[64] This treatise is found in Rome, Vatican Library, Urb. Lat. 1384. In this preface, Mithridates does describe a solar-lion seal made by his father:

> I too saw only the head of a lion sculpted in a golden plate by the hand of my father, Rabbi Nissim Abu il Faragh, wrapped in fragrant silk with

62 Giulio Bartolocci, *Bibliotheca Magna Rabbinica*, Rome, 1693, p. 250: *Hic cum arti Magicae et cabalisticae deditus suisset, manuque, sua parasset laminam auream, in qua sculpserat caput Leonis, et a tergo hos characteres eam lamina secumgerebat, et superstitiose utebatur. Hi aute characteres quaquaversum accipias semper eunde numerum conficiunt nempe 15.*

63 See Mauro Perani (ed.), *Guglielmo Raimondo Moncada alias Flavio Mitridate*, Palermo, Officina di Studi Medievali, 2008; Benoît Grévin, "Editing an illuminated Arabic-Latin masterwork of the Fifteenth century. Manuscript Vat. Urb. Lat. 1384 as a philological challenge," in *Multilingual and Multigraphic documents and manuscripts of East and West*, eds Giuseppe Mandalà and Immaculada Pérez Martín, Piscataway, Gorgias Press, 2018, pp. 359–81; Benoît Grévin, "Between Arabic and Latin in Late Medieval and Renaissance Italy," in *Latin and Arabic: Entangled Histories*, ed. Daniel G. König, Heidelberg: Heidelberg University Publishing, 2019, p. 145-177, p. 161.

64 Kristen Lippincott and David Pingree, "Ibn al-Ḥātim on the Talismans of the Lunar Mansions," *Journal of the Warburg and Courtauld Institutes*, 50 (1987), p. 57-81, p. 67; Marc Oliveras, "El *De imaginibus caelestibus* de Ibn al-Ḥātim," *Al-Qanṭara* 30/1 (2009), p. 171-220.

> musk and nutmeg; and on the back, these characters were present. It was given to women for an easy childbirth, tied around the necks of those giving birth.[65]

Kircher in his *Arithmologia* (Pars III "Concerning the numbers and mystical seals of the Arabs and Hebrews, from which they made them," *de Arabum Hebraeorumque numeris, et mysticis sigillis, quae ex ijs conficiebant*, Cap. I) also describes a lion seal made from gold that he attributes to Aben Pharagi; however, the instructions for making it are markedly different and rather than being for easing birth, it is for good fortune in all things.[66] In this part, Kircher discusses the seven planetary magic squares in addition to others he also details in the *Oedipus Aegyptiacus*, including the series of Divine Names seals in Cap. VIII of Classis V which he claims to have "found in the book of seals which the Arabs call Majriti, that is, Margarita." The title of the book in which Kircher encounters these squares immediately evoke the Andalusian astronomer and mathematician Maslama b. Qāsim al-Maǧrīṭī (d. 394/1004), who has historically been widely accepted to be the author of *Ġāyat al-Ḥakīm*, despite discrepancy between the *Ġāya*'s date and al-Maǧrīṭī's. No authentic work by him on the science of letters and divine names has been yet discovered. These seals are five 4 × 4 magic squares of 5 divine names: ʿAzīz, Ḥakīm, Wāsiʿ, Badīʿ, and Allāh which fill the first rows of the squares. The rest of the cells are occupied with number correspondences to the letters of these divine names, except those for Allāh and ʿAzīz which contain the letters of these names rearranged. Such squares are ubiquitous. Nevertheless, the squares for Ḥakīm, Wāsiʿ, and Badīʿ can be found in *Šams al-maʿārif al-kubrā*, many versions of which would have been available during Kircher's lifetime.[67] Elsewhere in the

65 *Ibid*., p. 67: *Ego quoque vidi caput tantum leonis in lamina aurea sculptum manu patris mei, Rabi Nissim abu il Faragh, involutum in bombice odorifera musco et nuce muscata; et a tergo hi characteres erant. Quod facilem partum mulieribus dedit, collo parientium alligatum.*

66 Athanasius Kircher, *Arithmologia*, Rome, 1665, p. 167.

67 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 394; Kircher, *Arithmologia*, p. 153-158. See Maribel Fierro, "Bāṭinism in al-Andalus. Maslama b. Qāsim al-Qurṭubī (d. 353/964)," *Studia Islamica*, 84 (1996), p. 87-112; Godefroid de Callataÿ and Sébastien Moureau, "Again on Maslama Ibn Qāsim al-Qurṭubī, the Ikhwān al-Ṣafāʾ and Ibn Khaldūn: New Evidence from Two Manuscripts of *Rutbat al-ḥakīm*," *Qantara*, 37/2 (2016), p. 329-372. For a comprehensive list of the Šams manuscripts with their dates when possible, see Jean Charles-Coulon, "La magie islamique et le « corpus bunianum » au Moyen Âge", Université Paris IV – Sorbonne, 2013, pp. 1051-1071. For these specific squares, see Istanbul, Hacı Selim Ağa Yazma Eser Kütüphanesi, MS 528, fol. 84v, and fol. 97r. An interesting manuscript in the Vatican library, namely Vat. Ar. 543, contains magic squares attributed to *Šams al-maʿārif* and refers to *al-Durra al-muntaḫaba fī l-adwiya al-muǧarraba*, also found in Vat. Ar. 938.

Arithmologia – Pars II, Cap. I – Kircher discusses the planetary magic squares and refers to the *Astronomia* by Abuhali the Arab when describing the Saturn 3 × 3 magic square.[68] Considering that Ibn al-Ḥātim's treatise is on the magic of the lunar mansions, not planetary magic-squares, it does not seem that Kircher knew, at least intimately, Mithridates's translation of this treatise.

Nevertheless, a close comparison between material Kircher attributes to Aben Pharagi and the contents of the manuscript Vat. Ar. 938 reveals some significant correspondence. For example, in Cap. VIII of Classis V, Kircher attributes a unique magical figure associated with Saturn (in the shape of an octagram, represented as two overlapping squares) to Aben Pharagi. It is also presented in Pars II, Cap. I of the Arithmologia and there too it is attributed to Aben Pharagi.[69] This is actually found in Vat. Ar. 938. He then discusses a 3 × 3 Saturn magic square with a grid composed by interlocking divine names with the sides of the square flanked by the names of the archangels (Gabriel/Ǧibrīl, Esrafel/Isrāfīl, Michael/Mīkāʾīl, Esrael/ʿUzrāʾīl). This particular square is ubiquitous in the science of letters and divine names, known in various forms as *muthallath al-Ġazālī* (the 3 × 3 square of al-Ġazālī) which is discussed extensively in Vat. Ar. 938 (Figure 2).[70]

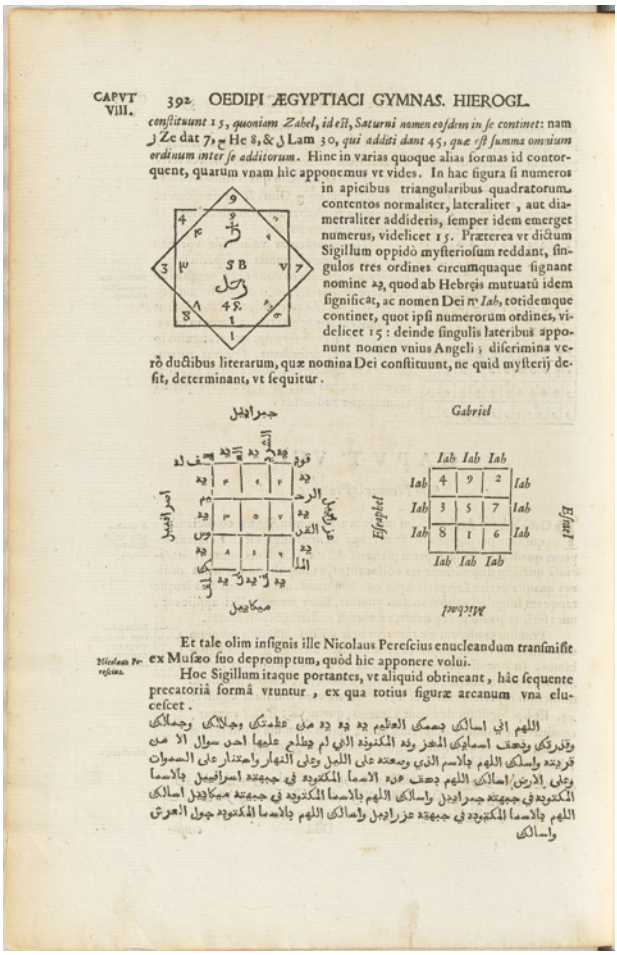
It is worth stressing that Kircher was not concerned with faithful transference of information; his objective was to construct a coherent view of what he understood as Islamic Kabbalah from a manuscript that is disorderly and his other sources. This is necessary for assembling a Kabbalist-Hermetic complex to be fitted within a universal system of hermeneutics and exegesis. The way Kircher reconstructs the science of letters under the name of Aben Pharagi encapsulates this perfectly. Citing the mysterious author, Kircher gives a description of Solomon's *ḫātam al-ṭāʿa* (the seal of obedience). This is found in several places in Vat. Ar. 938: One is found in the treatise within this manuscript entitled *Kitāb fī-hi šarḥ al-ḥurūf al-ʿarabiyya wa-l-hindiyya* ("A book containing the explication of Arabic and Indian letters"). In the colophon of this text, the date is given as Monday 6th of Ǧumādā al-awwal, 953/ 5th of July, 1546), the name of the jurist (*faqīh*) for whom the manuscript was copied is given as Šihāb al-Dīn Aḥmad b. Ṣalāḥ, and the scribe is named as Saʿīd b. ʿAlī b. ʿAmmār.[71] Passages from the treatise are copied *verbatim* as confirmed by

68 Kircher, *Arithmologia*, Rome, 1665, p. 65.

69 Kircher, *Arithmologia*, Rome, 1665, p. 150-1.

70 Vat. Ar. 938, fols 17^{v}-24^{r}, esp. 18^{r}. On al-Ġazālī's magic square see Hallum, "New Light on Early Arabic *Awfāq* Literature," p. 102-103.

71 Vat. Ar. 938, fols 135^{r}-148^{v}, esp. fol. 148^{v}. The *faqīh*'s last name is given without diacritics: العمحور.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conſtituunt 15, *quoniam Zabel, id eſt, Saturni nomen eoſdem in ſe continet*: nam ز Ze dat 7, ح He 8, & ل Lam 30, *qui additi dant* 45, *quæ eſt ſumma omnium ordinum inter ſe additorum*. Hinc in varias quoque alias formas id contorquent, quarum vnam hic apponemus vt vides. In hac figura ſi numeros in apicibus triangularibus quadratorum contentos normaliter, lateraliter, aut diametraliter addideris, ſemper idem emerget numerus, videlicet 15. Prætereà vt dictum Sigillum oppidò myſterioſum reddant, ſingulos tres ordines circumquaque ſignant nomine יהוה, quod ab Hebræis mutuatũ idem ſignificat, ac nomen Dei יי *Iah*, totidemque continet, quot ipſi numerorum ordines, videlicet 15: deinde ſingulis lateribus apponunt nomen vnius Angeli; diſcrimina verò ductibus literarum, quæ nomina Dei conſtituunt, ne quid myſterij deſit, determinant, vt ſequitur.

جبرائيل

Gabriel

Iah Iah Iah

Iah	4	9	2	Iah
Iah	3	5	7	Iah
Iah	8	1	6	Iah

Iah Iah Iah

Et tale olim inſignis ille Nicolaus Pereſcius enucleandum tranſmiſit ex Muſæo ſuo depromptum, quòd hic apponere volui.

Nicolaus Peireſcius.

Hoc Sigillum itaque portantes, vt aliquid obtineant, hâc ſequente precatoriâ formâ vtuntur, ex qua totius figuræ arcanum vnà eluceſcet.

اللهم اني اسالك بسمك العظيم يه يه يه من عظمتك وجلالك وجمالك وقدرتك وبحق اسمايك المخزونه التي لم يطلع عليها احد سوال الا من قربته واسالك اللهم بالاسم الذي وضعته على الليل وعلى النهار واستدار على السموات وعلى الارض اسالك اللهم بحق هذه الاسما المكتوبه في جبهته اسرافيل بالاسما المكتوبه في جبهته جبرائيل واسالك اللهم بالاسما المكتوبه في جبهته ميكائيل اسالك اللهم بالاسما المكتوبه في جبهته عزرائيل واسالك اللهم بالاسما المكتوبه حول العرش واسالك

FIGURE 2 Saturn's talisman and the 3 × 3 magic square in the *Oedipus Aegyptiacus* (left) and Vat. Ar. 938, fol. 184 (right)

Kircher's own marginal notes at these places in the manuscript.[72] One depiction of the Seal in Vat. Ar. 938 looks as follows:

Another depiction is found in a treatise on the nations of Ǧinn and related magic where a different version of the Seal of Solomon with divine names is given, this time to be used for banishing epileptic fits and curses.[73]

Kircher combines both, presenting an amalgamation of these two versions of the diagram, which he attributes to Aben Pharagi.

72 Vat. Ar. 938, fol. 143^{r-v}.

73 Vat. Ar. 938, fols 156^{v}-175^{v}, fol. 164^{r}.

FIGURE 3 Solomon's Ring of Obedience in Vat. Ar. 938, fol. 143v

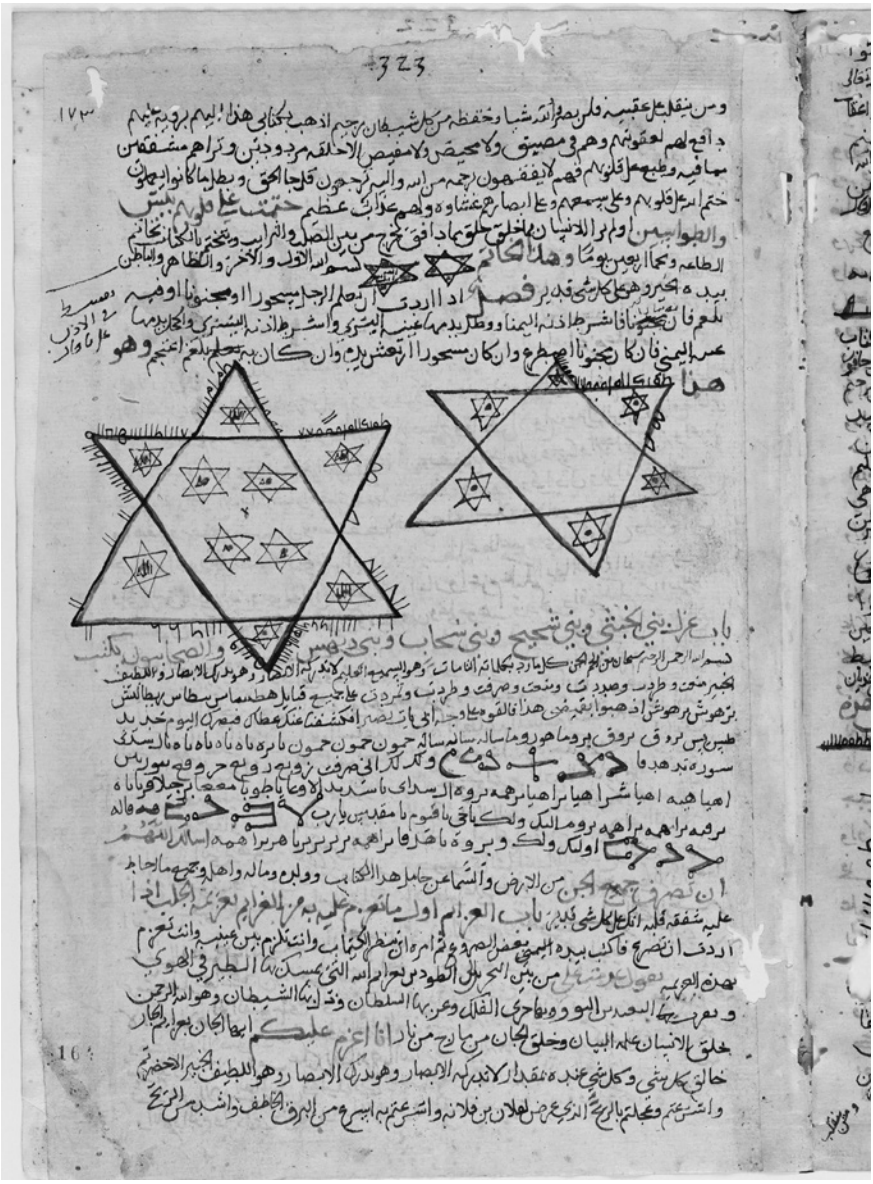


FIGURE 4 The Seal of Solomon to banish epileptic fits and curses in Vat. Ar. 938, fol. 164r

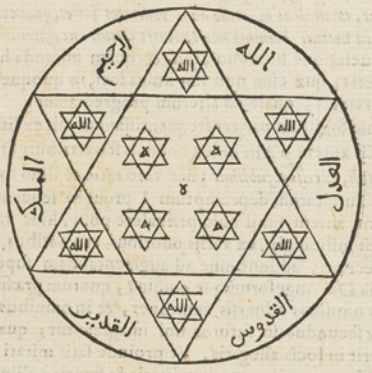
gnitum, quo durante, nullum periculum ab illis imminere, ſtolidè credunt. Innumera alia hoc loco adducere poſſem huius farinæ teleſmata, ſed hæc ad concipiendam huius gentis Philoſophiam ridiculam, curioſis ſufficiant.

CAPVT X.

De Teleſmatis magnis.

Teleſma in formam ſtellæ ſexangulæ compoſitum, dictum ſigillum Salomonis.

HAbent & Mahumedani duo alia teleſmata, magni apud ipſos nominis & famæ: quorum prius in formam ſtellæ ſexangulæ خاتم سليمان *Sigillum Salomonis*; alterum ſub forma literæ ع *Ain* effigiatum, سمهورش *Schamhauraſch* vocant. Vtrumque inſignes vires (verius nugas) obtinere aſſerunt; aiuntque Salomonem illud ab Angelis accepiſſe, & in ſigillo ſuo geſtaſſe. Et cùm Deus eius ope, vt illi aſſerunt, Vniuerſum ſex dierum ſpacio condiderit, hinc ſingulis ſex angulis totidem Dei nomina inſerunt; hoc ipſo oſtendentes, Deum pro alia atque alia creaturarum productione, alijs & alijs nominibus vſum eſſe. Quorum vim qui nouerit, eum in ijſdem rerum ſeriebus, ijſdem nominibus inſignitis, magna & prodigioſa perpatraturum exiſtimant.



Verùm quia huiuſmodi ſymbolum nullo non tempore à ſapientibus veteribus Arabibus in pretio fuit, apponam hìc verba Abenpharagi in libro de ſigillis, capite, quod incipit. Abenpharagi.

باب فضايل خاتم الطاعة وهو اسم الله الاعظيم الذي كان مكتوب على خاتم سليمان
بن داوود ع م قال بن عبط بن علي في عده خاتم اذا اشهد الله وملايكته حملة عرشه
وسكان

FIGURE 5 Kircher's rendering of Solomon's seal in *Oedipus Aegyptiacus*, II.1:397

Likewise, in Cap. IX of Classis V on the transformations of names and letters into various magical figures, the contents of which is attributed to Aben Pharagi, Kircher presents three figures. I have not been able to identify the source of the first figure, but the other two are found in a treatise entitled *Kitāb al-Durra al-muntaḫaba fī l-adwiya al-muǧarraba* ("The Book of the Chosen Pearl on Proven Remedies") preserved in Vat. Ar. 938.[74] This magico-medical work is attributed to the Moroccan Sufi Shaykh Aḥmad Zarrūq (846/1442-899/1493). Ḥaǧǧī Ḫalīfa in his bibliographic dictionary *Kašf al-ẓunūn* ("The Dispelling of Doubts") attributes it to Naṣr b. Naṣr, noting that it was dedicated to Dāwūd son of al-Malik al-Manṣūr, likely to be al-Nāṣir Dāwūd, the Ayyubid Sultan of Damascus (r. 1229-1248) son of Šaraf al-Dīn al-Muʿaẓẓam ʿĪsā.[75] The colophon dates the completion of this copy to Saturday 22nd of Ṣafar 953/24th of April 1546, copied for the aforementioned jurist Aḥmad b. Ṣalāḥ.[76] There we find two non-lettrist talismanic figures that require astrological timing, which Kircher transforms into figures constructed with divine names (fig. 6).

Although Kircher describes the lower of the two figures in his presentation as "representing the form of a locust" (*referens formam bruchi*) and understands it to be used against locust swarms activated by demonic means, the corresponding figure is described completely differently in Vat. Ar. 938 where it is recommended for healing gangrene (*inʿiṭān*). This could also suggest that Kircher is integrating material from other sources at his disposal. Kircher perhaps paid more attention to the images and figures he encountered in his Arabic sources than he did to the texts. As explored below, Kircher's metaphysics is visually stimulated and encoded in the geometry of written language, shapes, and instruments. Regarding the first image in this chapter, Kircher attributes it to Aben Pharagi, and it is a talisman in the shape of a human body on which several names are inscribed in addition to the 3 × 3 magic square.[77] Such anthropomorphic talismans are very common in lettrist treatises, including those integrated into Ar. 938 and found in magical texts attributed to al-Ġazālī.[78]

Aben Pharagi seems to be in this case the mouthpiece of miscellaneous lettrist magical practices from Vat. Ar. 938 and other sources of which I am not yet aware. For example, Cap. VI of Classis V revolves around the magical practices

74 Vat. Ar. 938, fols 46r-73v.

75 Ḥaǧǧī Ḫalīfa, *Kašf al-ẓunūn ʿan asāmī l-kutub wa-l-funūn*, 2 vols, Beirut, Dār iḥyāʾ al-turāṯ al-ʿarabī, ND, 1: p. 744.

76 Vat. Ar. 938, fol. 73v.

77 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 395.

78 See for example, *Sharḥ Ḫātim al-Ġazālī*, Paris, BnF, Ar. 2674, fol. 14r; Vat. Ar. 938, fol. 32r.

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ط ب ز ج و ه ا, & *primam nominis huius literam* ط *Tha pones supra caput eius,* & ب *Be supra brachium dextrum,* & د *Dal supra brachium sinistrum,* & ز *Ze supra humerum dextrum,* & ج *Gim supra humerum sinistrum,* & ه *He supra cor,* & و *Vau supra coxam dextram,* & ح *Hha supra coxam sinistram,* & ا *Aleph supra verenda; deinde leges super eam adiurationem solitam* & *voce vehementi inuocando Reges, sc. dæmones; deinde ponas supra caput nomen Taikal,* & *supra brachiũ dextrum Becadrial,* & *supra brachium sinistrum Dastal,* & *supra latus dextrum Zalphat,* & *supra latus Tatikal* & *sinistrum Halisch,* & *supra ventrem Batatmisch,* & *supra pedem dextrum Vakim,* & *supra sinistrum Hadait; & videbis mirabilia magna.*

Teleſmatis explicatio.

Atque hoc eſt teleſma ſuperſtitioſo ritu adornatum; in quo ſingulæ literæ ſingulis membris appropriatæ ſunt, & vt ipſi putant, à Deo ordinatæ, atque in Alcorano fundatæ; nomina verò barbara ſingulis membris appoſita indicant Genios, veriùs Cacodæmones, qui dictis membris præſident. Caput, manus, & brachia rotunda ſunt, & indicant tres Mundos, Superiorem, Sidereum, Elementarem, ex quibus influxus fit in omnia, & potiſſimùm in hominem Mundum minorem. Hinc oculos, os, nares exprimunt nominibus Dei ال يه, quæ nomina Hebraica ſunt, & idem ſonant, quod יה *Iah* & אל *El*, hoc eſt, *Deus*; dextra manus nomen impoſitum habet رحيم *Rahhim*, id eſt, *miſericors*; ſiniſtra nomen عدل *Adal*, id eſt, *iuſtus*; quo indicant, omnia in Mundo miſericordiâ & iuſtitiâ Dei adminiſtrari. Reliqua vide apud citatum Abenpharagi, ex quo omnia deſumpſimus; quàm enim hæc vltima recta ſunt, tam iniqua & abominanda ſunt ea, quibus formas huiuſmodi conficiunt. quæ omnia reſpondent ijs, quæ Claſſi præcedente de myſtico Cabalicorum homine dicta ſunt.

Teleſma ſecundum referens figurã Scorpij.

Secundum teleſma figuram Scorpij habet, ex nominib⁹ diuinis البديع الحليم القدوس الرحيم القدير quæ idem ſonant ac *miſericors, ſanctus, mitis, miſericors, potens*; nomen verò ſupra poſitum الحكم *Elhbokem*, Dei nomen eſt in Scorpium influens, vti ſuprà ex tabula ſecunda videre poteris, cui & figuræ ♏ reſpondent. Hoc itaque teleſma ſuperſtitioſo ritu, vt prius conſecratum, ponunt in angulis domus vel locis vbi Scorpij dominantur; putantque nullum ibidem ampliùs hoc poſito Scorpium iri; aut ſi fuerint, nullum vnquam nocumentum allaturum, quamdiu incorruptum manſerit.

Teleſma tertium referens formam Bruchi.

Tertium teleſma ridiculâ ſuperſtitione figuram Bruchi obtinet, contra bruchorum, erucarum, & locuſtarum nocumenta; quæ cùm in Africa ingentes clades arboribus & hominibus inſerant, hoc in ſtigante dæmone excogitarunt contra ipſas teleſma diuinis, veriùs barbaris & ſuperſtitioſis nominibus, inſigni-

FIGURE 6 Talismanic figure for healing gangrene in Vat. Ar. 938, fol. 55r (left), and Kircher's rendering of the same figure in *Oedipus Aegyptiacus*, II.1:396 (right)

based on the alphabetical system which contains nine words that reflect the digit units of the abjad. It is sometimes referred to as the *ayqaġ* system, referring to the first word made up of *alif, yā', qāf,* and *ġayn* that represent respectively the units 1, 10, 100, 1000. This system is a very common element in lettrist practices, found in al-Būnī's *Šams al-maʿārif al-kubrā* and al-Bisṭāmī's *Šams al-āfāq*.[79] Kircher includes three talismans based on this system. He also attributes this discussion to Aben Pharagi, giving these "words" correspondences including divine names and *numeri mystici* that are not found in the aforementioned sources.[80] Cap. IX also has content attributed to Aben Pharagi's *De Adjurationibus* not found in Vat. Ar. 938.[81]

Elsewhere, Kircher adopts this same approach with another author when he cites Abuhali ben Schabat as the source of four tables in Cap. VI of Classis V. Three of these correspond to tables found in Vat. Ar. 938; some from Ibrāhīm b. Nawawī Asbāṭ's *Kitāb Asrār al-ḥurūf*.[82] Then in Cap. VII, Kircher cites Abrahamo Aben Schaddad as the source for a discussion of letters, parts of which are taken verbatim from the anonymous *Kitāb fī-hi šarḥ al-ḥurūf al-ʿarabiyya wa-l-hindiyya*, on the margins of which Kircher's notes are visible.[83]

The influence of Vat. Ar. 938 on Kircher's understanding of the science of letters extends beyond data explicitly attributed to Aben Pharagi and Ibn Asbāṭ al-Baʿlabakkī. For example, Cap. III of Classis V is almost entirely identical to a treatise in Vat. Ar. 938 concerned with magical properties and uses of angelic divine names and their corresponding divine names. Kircher, however, removes the magical instructions included in the Arabic.[84]

As noted earlier, Vat. Ar. 938 is a miscellaneous compilation of mostly lettrist and divinatory fragments. Kircher, however, was also familiar with the influential lettrist work by ʿAbd al-Raḥmān al-Bisṭāmī's (d. 858/1454) known as *Šams*

79 ʿAbd al-Raḥmān al-Bisṭāmī's (d. 858/1454) *Šams al-āfāq fī ʿilm al-ḥurūf wa-l-awfāq* ("The Sun Horizons on the Science of Letters and Magic Squares"), British Library, Additional MS 7494, fol. 54^{r-v}.

80 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 379-384.

81 *Ibid.*, p. 395.

82 Tables 1, 2, and 3 are constructed from Vat. Ar. 938, fol. 94^{r}, fol. 100^{r}, fol. 109^{r}, fol. 112^{r}, fol. 120^{v}, fol. 144^{r}; compared to Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 384-388: It seems that Kircher's description of Aben Pharagi as a "Moroccan Nubian" writer is based on a misreading too. In Vat. Ar. 938 includes a treatise entitled *Kitāb Asrār al-ḥurūf* ("The Book on the Secrets of Letters"). The author, Ibrāhīm Ibn al-Nūrī Asbāṭ al-Baʿlabakkī, is described in the manuscript as "the Moroccan Sheikh". In this case, I contend that Kircher misread Nūrī (نوري) as Nūbī (نوبي), 'Nubian', Rome, Vatican Library, Vat. Ar. 938, fols 93^{v}-107^{r}, esp. fol. 93^{v}.

83 Vat. Ar. 938, fol. 135^{r}.

84 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, p. 369-371; Vat. Ar. 938, fol. 10^{v}-14^{v}.

al-āfāq fī ʿilm al-ḥurūf wa-l-awfāq, completed in 1432 in the Anatolian town of Larende (now Karaman), south of Konya. This is an encyclopaedic work, deeply influenced by al-Būnī's lettrist cosmology and practices, intended to make the science of letters accessible to cosmopolitan intellectual classes and political elite.[85] In the final chapter of Classis V, we encounter what is known as *ḥirz ʿAlī* (the sacred sigil of ʿAlī) (fig. 7), a well-known *ḥirz* found in al-Bisṭāmī's work. Kircher's description of this *ḥirz* is identical to that found in *Šams al-āfāq*.

Elsewhere, Kircher incorporates this *ḥirz* into another famous round diagram known as *Ǧannat al-asmāʾ* (The Paradise of Names) attributed to the Imam ʿAlī b. Abī Ṭālib. The most well-known discussion of the *Ǧannat al-asmāʾ* is in a treatise attributed to al-Ġazālī.[86] Once again, however, Kircher cites his fictional (or rather composite) character Aben Pharagi as the source of his *Ǧannat al-asmāʾ*.[87]

To complete his view of Islamic magic through the lens of the Kabbalah, Kircher dedicates a small chapter to "the geomancy of the Arabs" (*De Geomantia Arabum*) in the section of the *Oedipus Aegyptiacus* on *Magia Hieroglyphica*. Kircher records what he has gleaned from his readings of the only work on geomancy listed as one of his sources in the *Cabala Saracenica*. He gives a brief and basic summary of the geomantic figures and a description of how they are created and manipulated, adding an image of a tree fabricated from the geomantic figures, which he likens to the Kabbalistic Tree of the Sephirot. This is the geomantic tree one can see in texts such as *Iǧtimāʿ al-šaml fī ṭarīq ʿilm al-raml* ("The Reunion: The Path to Geomancy") by Maḥmūd b. Abī l-Fatḥ al-Ṣūfī, the Egyptian astronomer who flourished in the late fifteenth-early sixteenth century.[88]

Many Islamic geomantic texts claim that this art was revealed to the Prophet Idrīs (associated with Hermes) and in other texts it is the Prophet Daniel.[89] It was associated with the Indian sage, Ṭumṭum al-Hindī whose teachings were transmitted to Ḫalaf al-Barbarī (d. 634) and from him to a series of practitioners and disciples, reaching the father of Islamic geomancy, according to many

85 Noah Gardiner, "The Occultist Encyclopedism of ʿAbd al-Raḥmān al-Bisṭāmī," *Mamluk Studies Review*, 20 (2017), p. 3-38; Jean-Charles Coulon, "Building al-Būni's Legend: The Figure of al-Būni through *ʿAbd al-Raḥmān al-Bisṭāmī's Shams al-āfāq*," *Journal of Sufi Studies*, 5/1 (2016), p. 1-26.

86 I am grateful to A.O.M. for sharing this manuscript with me.

87 Kircher, *Oedipus Aegyptiacus*, Tomus II.1, 1653a, p. 377.

88 Çorum İl Halk 3084, p. 57; this manuscript is dated to 966/1559. I am grateful to A.O.M. who generously shared a copy of this manuscript with me.

89 Rome, Vatican library, Vat. Ar. 1106 is primarily a geomantic miscellany containing *Kitāb al-Qurʿa ar-ramliyya* by Daniel, including works on natural, invocatory, and lettrist magic, referring to Āṣaf ibn Barḫiyā, Ibn Sīnā, and al-imam al-Kūmī.


CLASS. V. CABALA SARACENICA. 399 CAP. X.

Hoc Sigillum ſolitâ ſuperſtitione multùm venerantur, multumque geſtantibus conferre aſſerunt ad amoris allectamenta. Sed audiamus verba Zain abadaal:

Zain abadaal.

Hoc eſt, *Qui conſideraverit, & ſpeculatus fuerit ſuper figuram ع Ain ſingulis diebus ſeptimanæ, & legerit notam Maieſtatis Dei in rebus manifeſtis, & explicaverit unitatem ſecreti eius, & eleuaverit memoriam ſuam, & cultodierit faciem ſuam ab inuidia proximi ſui; amabitur is ab omnibus qui viderint eum. Et ſi quis tempeſtatibus & procellis ligatus fuerit, ſalvabit eum Deus, & currere faciet fluvina ſapientiæ in pectus eius, & docebit eum myſteria abſcondita ſcientiæ, & ſubtilem ſignificationem eorum. Iterum, ſi quis poſuerit figuram eius in tabula plumbea, & vſus fuerit miniſterio 38 Sapientum qui ſcientiis viribusque inſtructi ſunt, id; hora diei Abraham, pax ſuper eum, & cogitet hunc verſum* الشرهة *Alſchariphet, eſt enim verbum Dei excelſi, &c.* Sed ſuperſtitioſum effectum conſultò reticemus.

Porrò qui ſcripſerit hanc literam ع Ain ſupra hanc figuram in hora prima diei Sabbati, Luna percurrente extremitatem Manſionis ſuæ, & ſepeliuerit figuram in quocunque loco voluerit, vaſtabitur locus ille, & nemo eum unquam inhabitabit.

Eee Tem-

FIGURE 7 The sacred sigil of ʿAlī in Kircher's *Oedipus Aegyptiacus*, II.1: p. 399 (left), and the same diagram in ʿAbd al-Raḥmān al-Bisṭāmī's (d. 858/1454) *Šams al-āfāq fī ʿilm al-ḥurūf wa-l-awfāq* ("The Sun Horizons on the Science of Letters and Magic Squares"), British Library, Additional MS 7494, fol. 125^{v} (right)

Islamic medieval and early modern sources, Abū ʿAbd Allāh Muḥammad b. ʿUṯmān al-Zanātī (fl. before 1230) who was from the North African Berber tribe of Zanāta that thrived in Tunis and Morocco.[90] Authors often cite the following

90 Emilie Savage-Smith, "Geomancy in the Islamic World," in *Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures*, ed. Helaine Selin, Dordrecht, Kluwer, 1997, p. 361-363; Emilie Savage-Smith and Marion B. Smith, *Islamic Geomancy and a Thirteenth-Century Divinatory Device*, Malibu (CA), Undena, 1980; Emilie Savage-Smith and Marion B. Smith, "Islamic Geomancy and a Thirteenth-Century Divinatory Device: Another Look," in *Magic and Divination in Early Islam*, ed. Emilie Savage-Smith, Aldershot, Ashgate, 2004, p. 211-276; Blanca Villuendas Sabaté, "Arabic Geomancy in Jewish Hands:

ḥadīṯ to argue for the legitimacy of geomancy and its attribution to Idrīs or Daniel: "Among the prophets, one used to draw lines (*yaḫuṭṭu*), if [the lines of] whosoever were in keeping with his lines, it was right".[91] Kircher adopts this in a brief mention of "another daughter born from geomancy" (*ex geomantia nata alia filia*) used by the "Turks" as a divinatory tool, namely, *Qurʿat Ǧaʿfar al-Ṣādiq*, the rhapsodomancy of the Imam Ǧaʿfar al-Ṣādiq.[92] Ḥaǧǧī Ḫalīfa classifies *al-qurʿa* as a major divinatory science alongside geomancy and astrological elections amongst others.[93] He defines the science of rhapsodomancy (*ʿilm al-qurʿa*) as "the science whereby future events are inferred by writing letters in a particular figure from which the coming to be of a thing is deduced; it is like geomancy whereby its (i.e., the future thing's) circumstances are deduced, but its (i.e., rhapsodomancy's) significations are weaker than those of geomancy."[94]

What becomes clear from this survey of sources, is the appropriative and creative way Kircher presents to his patrons and readers a seemingly comprehensive view of the science of letters and geomancy. However, as we shall see next, the *Cabala Saracenica* is at its core an othering tool in which Muslims occupy an ambiguous and ambivalent position at once preserving and corrupting perennial divine wisdom, bearing ancient sacred traditions but mired in misunderstanding. Kircher uses the *Cabala Saracenica* as a demonstration of Kabbalah gone wrong, irreparably degenerated into the superstitions of the Muslim Other, as elaborated next.

Kircher's interest in the science of letters and divine names continued in the decade following the publication of the *Oedipus Aegyptiacus*, as demonstrated in his *Arithmologia* (Rome, 1665). There he refers to the *Oedipus Aegyptiacus*

Specimens from the Cairo Genizah," in *Geomancy and Other Forms of Divination*, eds Alessandro Palazzo and Irene Zavattero, Florence, SISMEL, 2017, p. 271-290; Matthew Melvin-Koushki, "Persianate Geomancy from Ṭūsī to the Millennium: A Preliminary Survey," in *Occult Sciences in Premodern Islamic Culture*, p. 151-199; Melvin-Koushki, "In Defense of Geomancy: Sharaf al-Dīn Yazdī Rebuts Ibn Khaldūn's Critique of the Occult Sciences," in *Islamicate Occultism*, p. 346-403.

91 The Hadith from Sunan Abu Dawud is actually number 3909, accessed from this link: https://sunnah.com/abudawud:3909. The Hadith from Muslim is actually number 537e, accessed from this link: https://sunnah.com/muslim:537e.

92 Kircher, *Oedipus Aegyptiacus*, Tomus II.2, 1653b, p. 493-495. Manuscripts of a text entitled *Qurʿat Ǧaʿfar al-Ṣādiq* exist; For example, Üniversitesi Dil ve Tarih-Coğrafya Fakültesi, no. 38689, dated to 1249/1833 (fol. 66^{v}). I am grateful to A.O.M. for sharing a copy of this manuscript with me.

93 Ḥaǧǧī Ḫalīfa, *Kašf*, 2:15.

94 Ḥaǧǧī Ḫalīfa, *Kašf*, 2:1326: وهو علم يعرف به الاستدلال على الأحوال الحادثة في الاستقبال بكتابة الحروف على شكل من الأشكال ثم يستدل بوقوعه على وقوع المطلوب وهو كالرمل فتعتبر أحواله فيه أيضاً لكن دلالاته أضعف من دلالة الرمل.

and *The Nabatean Agriculture*: "for, as we show in our Oedipus, Part II, Synt. VI on *Cabala Saracenia*, and Synt. XI on Hieroglyphic Magic, the Egyptians devised specific and secret numbers which they attribute to the seven principal gods, mentioned in de Cultura Aegyptiorum by the Arab Abenuaschia".[95] Elsewhere, Kircher refers to Abensina (Ibn Sina), Abenrois (Ibn Rušd), Abenragel as those whose alphanumeric system follows the Hebrew one.[96] Another Vatican manuscript worth mentioning is Vat. Ar. 1254.[97] It is a collection of Arabic and Turkish astrological and magical treatises with other variously dated treatises. One of those is dated to the noon of 29th of Šaʿbān 1082 (30th of December 1671), on the virtues of *Abū Ayyūb al-Anṣārī* (d. 674). It also includes an undated treatise on the science of letters, concerned with alphanumerical correspondences including the 28 lunar mansions and the elements; these are features we find in Ar. 938 and would have interested Kircher, including the aforementioned *ayqaġ* system and al-Suhrawardī's work on the forty names.[98]

2 Kircher's *Theotechnia Hermetica and Lettrist Universalism*

To understand the place of Kircher's Arabic sources in his philological and metaphysical project, it is important to establish his general approach to the occult sciences in relation to early modern Hermetic enthusiasm, linguistic-mathematical universalism, and oriental philology.

In her *Giordano Bruno and the Hermetic Tradition*, Frances Yates considers Kircher a "reactionary Hermetist" whose great passion for Egyptian hieroglyphs "continues the Renaissance tradition of interpretation of the hieroglyphs as symbols containing hidden truths, expanding it with enormous labour and pseudo-archaeology".[99] She sees Kircher as a "late climax"

95 Athanasius Kircher, *Arithmologia* (Rome, 1665), p. 160-61: *Hebraorum Cabalisticae haud fecus ac Arabes Arithmotiae Pithagorius simiae, omnia sua secretiories philosophiae, verius superstitionis monumenta hisce repluerent. Legerant enim isti multa de arcanissima numerorum dispositione Aegyptiis usitata. Legerant apud Arabes admiranda de 7 planetarum sigillis, eorumque numerica constitutione mysteria; unde nil non egerunt, quam ut tanto superstitionis thesauro potirentur. Nam quemaemodum in nostro Oedipo Part II. Synt. VI. de Cabala Saracenica, et Synt. XI. de Magia hieroglyphica ostendimus, Aegyptij excogitarant certos quosdam & arcanos numeros, quos 7 principalibus Dijs dedicabant, quorum in suo de cultu Aegyptiorum libello meminit "Abenuafchia Arabs".*

96 Kircher, *Arithmologia* (Rome, 1665), p. 44.

97 It is described in Giorgio Levi Della Vida, *Elenco dei manoscritti arabi islamici della Biblioteca Vaticana*, p. 195.

98 Vat. Ar. 1254, fols. 201^{v}-229^{r}.

99 Frances Yates, *Giordano Bruno and the Hermetic Tradition*, Routledge and Kegan Paul, 1964. Reprint, London and New York: Routledge Classics, 2002, p. 452.

of Renaissance Egyptology through which "Hermetic religion" was explored, with *Oedipus Aegyptiacus* as its "final burst".[100] She reads Kircher through the lens of Ficinian fifteenth-century occult philosophy, and as such, he is understood as a proponent of natural/astral magic; in other words, a *Picatrix*-type of magic.[101] This leads Yates to conclude that "Kircher certainly did some kind of natural magic".[102]

Stolzenberg offers a corrective and stresses that Renaissance Hermetic and Neoplatonic revivalism – represented by Ficino – was a particular "philosophical" project. In reality, Kircher was a seventeenth-century antiquarian seen as an expert in ancient erudition – of the Orient specifically – who mobilized the "exoticism" of occult philosophy to satisfy his curiosity and that of his patrons, while preserving its wisdom in the service of Christian universalism.[103] The main difference between Kircher and Ficino is that the latter sought to legitimize Platonism, astrology, and astral magic by means of the *prisca theologia* and Hermes Trismegistus. By contrast, Kircher, Stolzenberg argues, used the concept of the *prisca theologia* to establish the transmission and survival of hieroglyphic writings and doctrines regardless of their illicitness, which he would translate and decode in his works in order to establish his own legitimacy as a philologist and expounder of ancient erudition.[104] Indeed, Kircher believed that the study of languages neutralizes the superstitions and heterodoxies that they inherently carry, enabling the linguist and philologist to retain the universal wisdom that can be found in different cultures.[105]

Kircher intended to write a work entitled *Characterum literarum linguarumque totius universi historia universalis* ("Universal history of the whole

100 *Ibid.*, p. 453.

101 *Ibid.*, p. 52-54, p. 404, p. 410. Giovanni Cipriani sees Kircher as a "Ficinian Hermeticist," see Giovanni Cipriani, *Gli obelischi egizi. Politica e cultura nella Roma barocca*, Florence, Olschki, 1993; Dino Pastine, *Nascita dell'idolatria. L'Oriente religioso di Athanasius Kircher*, Florence, La Nuova Italia, 1978, p. 22-27; R.J.W. Evans, *The Making of the Habsburg Monarchy 1550-1700, An Interpretation*, Oxford, Clarendon Press, 1979, p. 433-442; Erik Iversen, *The Myth of Egypt and its Hieroglyphs in European Tradition*, Princeton, Princeton University Press, 1993, p. 92-102; Valerio Rivosecchi, *Esotismo in Roma barocca: studi sul padre Kircher*, Rome, Bulzoni, 1982; Gian Franco Frigo, "Il ruolo della sapienza egizia nella rappresentazione del sapere di Athanasius Kircher," in *Athanasius Kircher. L'idea di scienza universale*, ed. Alessandro Bertinetto and Federico Vercellone, Milano, Mimesis, 2007, p. 91-105.

102 Yates, *Giordano*, p. 459.

103 Stolzenberg, *Egyptian Oedipus*, p. 50-51; Tina Asmussen, *Scientia Kircheriana: Die Fabrikation von Wissen bei Athanasius Kircher*, Affalterbach, Didymos-Verlag, 2016, p. 112-114.

104 Stolzenberg, *Egyptian Oedipus*, p. 137-138.

105 Stolzenberg, "'Universal History of the Characters of Letters and Languages': An Unknown Manuscript by Athanasius Kircher," *Memoirs of the American Academy in Rome*, 56/57 (2011/2012), p. 308-309.

universe of characters, letters and languages"), as outlined in a manuscript by him that was studied and edited by Stolzenberg. It promises to be a six-volume work dedicated to languages, hieroglyphs, cryptography, steganography, Kabbalah, "superstitious" magic, the art of Ramon Lull, and divination. In the first volume, Kircher proposes to write:

> The universal history of languages, their origin, variety, corruption, from the mixing of peoples, the affinity of one to another, and also the characters of each language; together with the grammatical rules and vocabularies of all languages flourishing in this age in the entire world, arranged briefly, efficiently, and by a new and extraordinary method for teaching anyone in a short time, together with other marvellous things relating to this subject.[106]

In his synopsis of the volumes of his *Historia universalis*, Kircher mentions "Arabs" only in the fifth volume on "Disquisitorius Magicus" in which,

> all the foundations of the superstitious Kabbalah of characters are demolished. The action of figures and seals is refuted against Goclenius, Gaffarel, Burggrav, Mizauld, and other abusers of characters; the invalidity of amulets taken from the superstitious workshop of the Hebrews, Arabs, Chaldeans, Persians, Indians, Africans and Europeans is clearly demonstrated.[107]

While *Philosophicus mysticus* is reserved for the Kabbalah of the Hebrews, to the Egyptians is given mystery, symbols, and parables, to Ramon Lull belongs "the Great Art," and "divine goodness" favours the *Steganography* of Johannes Trithemius (1462-1516).[108] As for the Arabs, in a letter addressed to Peiresc (Rome, 3 December 1636), Kircher articulates what he thinks about a number of Arabic authors and rues the amount of error, astrology, and superstition that permeate their works. He singles out particularly Salamas ben Kandadi's *Liber seu hortus mirabilium orbis terrae*, that is *Kitāb al-Bustān fī ʿaǧāʾib al-arḍ wa-l-buldān* ("The Garden: The Wonders of Earth and (its) Lands") by Salāmīš b. Kund Ġadī al-Ṣaliḥī which was published in Rome in 1585.[109] Referring to him as Jospeh Ben Altifasi Ben Salams in Classis VIII, Cap. I on the pyramids,

106 *Ibid.*, p. 305-306.

107 *Ibid.*, p. 318 (Lat., 310).

108 *Ibid.*, p. 317-318 (Lat. 310).

109 Bibliothèque Nationale, Paris, Fonds français, no. 9538 (Rome, 3 December 1636), fols 236-238. John Edward Fletcher, *A Study of the Life and Works of Athanasius Kircher, 'Germanus Incredibilis'*, ed. Elizabeth Fletcher, Leiden, Brill, 2011, p. 410, fn 83. For the

Kircher reproduces and translates a section from this work (*Hortus mirabilium mundi*) on "Ancient Remains and the great constructions of the land of Egypt" (*De antiquitatibus Aegypti*), wherein the pyramids and their connection to Hermes are described. This chapter in the Arabic texts contains descriptions of many ancient Egyptian talismans which Kircher does not include in his translation.[110] *Kitāb al-Bustān* is an important source for Kircher's history of Egypt, alongside Ǧalāl al-Dīn al-Suyūṭī's (d. 911/1505) writings on Egypt.[111]

Kircher's *Polygraphia nova et universalis ex combinatoria arte detecta* ("new and universal polygraphy discovered through the art of combinations"), first published in Rome in 1663, offers us insights into the principles of his unrealised *Historia Universalis*.[112] In this work, Kircher seeks to create a *lingua omnium*, and although he uses only Latin, Italian, French, Spanish, and German, he insists that all known languages can be reduced to four basic dictionaries: 1) Hebrew, Greek, Latin, Italian, French, Spanish, German, Bohemian, Polish, Lithuanian, Hungarian, Belgian, English, and Irish. 2) Chaldean, Arabic, Armenian, Persian, Turkish, Tartar, and Chinese. 3) Abyssinian and Ethiopian, Nubian, Egyptian, Congolese, Angolan, and Bantu. 4) Mexican, Peruvian, Brazilian, and other American tongues.[113]

In the seventeenth century, the disciplines of biblical hermeneutics, human history, oriental philology and antiquarianism became means to substantiate a "modern" identity, in contrast to the "ancients".[114] One way Kircher renders languages and mathematics sacred, even devotional, is by using the legend of Hermes as an ancient anchor to his Christian linguo-metaphysics that he refers to as *Theotechnia Hermetica*, a term that appears in a page from the *Turris Babel*.[115] Kircher preached, so to speak, his *Theotechnia Hermetica* with his translations and "applied marvels".[116] Kircher saw mathematics, like the *lingua omnium*, as a universal system of describing relationships and truths through

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text of *Kitāb al-Bustān fī ʿaǧāʾib al-arḍ wa-l-buldān*, see Biblioteca Medicea Laurenziana, Orientali 92, fol. 24^{r-v} and fol. 27^{r}; Bibliothèque nationale de France, Arabe 2212.

110 Kircher, *Oedipus Aegyptiacus*, Tomus II.2, p. 300; compared to *Kitāb al-Bustān fī ʿaǧāʾib al-arḍ wa-l-buldān* Bibliothèque nationale de France, Arabe 2212, fol. 27^{r}.

111 Stolzenberg, *Egyptian Oedipus*, p. 157-159; Anthony Grafton, "Kircher's Chronology," in *Athanasius Kircher: The Last Man*, p. 180.

112 The word "polygraphia" was used by Johannes Trithemius in the title of the first edition of the earliest printed treatise on cryptography; George E. McCracken, "Athanasius Kircher's Universal Polygraphy," *Isis*, 39/4 (November, 1948), p. 215-228.

113 McCracken, "Athanasius Kircher's Universal Polygraphy," p. 219; Benedek Láng, *The Real Life Cryptology*, Amsterdam, Amsterdam University Press, 2018, p. 120-124.

114 Findlen, *Athanasius Kircher: The Last Man*, p. 20-21.

115 Godwin, *Athanasius Kircher: A Renaissance Man*, p. 35-36, p. 43.

116 Adalgisa Lugli, "Inquiry as Collection: The Athanasius Kircher Museum in Rome," *RES: Anthropology and Aesthetics*, 12 (Autumn, 1986), p. 109-124, p. 123.

quantities and ratios. If the wonders of languages and their hidden secrets are displayed in manuscripts and obelisks, mathematics is more edifying when it manifests in technology. Stolzenberg writes: "Under Kircher's care, the mathematician's studio gradually transmogrified into the *Musaeum Kircherianum*, one of Europe's most famous collections of natural history, antiquities, scientific instruments, machines, and other wonders."[117]

Kircher shared a universalism anchored in ideological agendas with trends observable among the Ottomans. Recent scholarship has shown that there existed a rich occult-embracing intellectual scene that fostered works on astral and natural magic, the science of the stars, the science of letters, geomancy, oneiromancy, and other forms of divination. This was nourished further by an Ottoman *mirabilia* tradition under which are subsumed occult ideas and objects, in addition to ghost stories.[118] Astrology and the science of letters particularly were mobilised for the establishment of Ottoman imperial ideology from the late fifteenth to the sixteenth century.[119] Concerning its significance to Islamic thought more generally, Noah Gardiner writes that the science of letters

117 Stolzenberg, *Egyptian Oedipus*, p. 13. See also, Findlen, *Athanasius Kircher: The Last Man*, p. 5.

118 Sariyannis, "Studying Ottoman Views of the Supernatural," p. 11-14; Sariyannis, "Knowledge and Control of the Future," p. 55-57; Jan Schmidt, "The Occult Sciences and their Importance in Ottoman Culture: Evidence from Turkish Manuscripts in Dutch Public collections," *The Journal of Ottoman Studies*, 23 (2003), p. 254; A. Tunç Şen, "Practicing Astral Magic in Sixteenth-Century Ottoman Istanbul: A Treatise on Talismans Attributed to Ibn Kemāl (d. 1534)," *Magic, Ritual, and Witchcraft*, 12/1 (Spring, 2017), p. 66-88, p. 66-67; A. Tunç Şen, "Astrology in the Service of the Empire: Knowledge, Prognostication, and Politics at the Ottoman Court, 1450s-1550s," PhD dissertation, University of Chicago, 2016; Özgen Felek, *Kitabu'l-Menamat – Sultan III. Murad'in Ruya Mektuplari*, Tarih Vakfi Yurt Yayinlari, 2014; Özgen Felek, "(Re)creating Image and Identity: Dreams and Visions as a Means of Murad III's Self-Fashioning," in *Dreams and Visions in Islamic Societies*, eds Özgen Felek and Alexander Knysh, New York, SUNY, 2012, p. 249-272; Cornell Fleischer, "Secretaries Dreams: Augury and Angst in the Ottoman Scribal Service," in *Armagan: Festschrift für Andreas Tietze*, Prague, Enigma, 1994, p. 77-88; Birsen Bulmuş, *Plague, Quarantines and Geopolitics in the Ottoman Empire*, Edinburgh, Edinburgh University Press, 2012, p. 68-96; Emin Lelić, "Physiognomy ('ilm-i firāsat) and Ottoman Statecraft: Discerning Morality and Justice." In *Islamicate Occultism: New Perspectives*, eds Matthew Melvin-Koushki and Noah Gardiner, special double issue of *Arabica*, 64/3-4 (2017a), p. 609-646; Emin Lelić, "Ottoman Physiognomy ('ilm-i firâset): A Window into the Soul of an Empire," PhD Dissertation, University of Chicago, June 2017b; Tuna Artun, "Bâyezîd-i Kîmyâ'î: Osmanlı Kimya Metinlerinde Sultan II. Bayezid," *TUBA/JTS*, 39 (2013), p. 181-186.

119 Matthew Melvin-Koushki, "Toward a Neopythagorean Historiography: Kemālpaşazāde's (d. 1534) Lettrist Call for the Conquest of Cairo and the Development of Occult-Scientific Imperialism," in *Islamicate Occult Sciences*, p. 380-381 et p. 386-388.

> in its most influential late-medieval expressions, is above all a cosmological discourse and as such is deeply concerned with issues of the nature of time and change over time. For Sufi arch-lettrists such as Muḥyī l-Dīn Ibn ʿArabī (d. 638/1240) and Aḥmad al-Būnī (d. 622/1225 or 630/1232-1233), for example, the turnings of the heavenly spheres that mark time in the world and continuously shape the sublunary realm through their influences are consubstantial with cyclical effluxes of the divine names and the letters of God's creative speech.[120]

Gardiner exemplifies the historiographical aspect of lettrist cosmology with the thought of al-Bisṭāmī who, in his *Naẓm al-sulūk fī musāmarat al-mulūk* ("The Discipline of Manners in the Entertainment of Royals"), employs the science of letters to formulate a grand narrative of human history as Islamic salvation history.[121] In his widely-copied *Šams al-āfāq fī ʿilm al-ḥurūf wa-l-awfāq*, he aims to survey lettrist literature, to disclose lettrist knowledge, and to make it more accessible.[122] As shown earlier, evidence from the *Oedipus Aegyptiacus* shows Kircher to be familiar with some diagrams found in al-Bisṭāmī's *Šams al-āfāq*. Furthermore, al-Bisṭāmī's lettrist view tallies well with Kircher's hieroglyphic and Kabbalistic vision. This includes the role played by an esoteric understanding of characters and languages in a universal history of prophetic wisdom. In the eighth and final *faṣl* (chapter) of the *Naẓm's* introduction, al-Bisṭāmī discusses "the universal characters" (*ḥurūf al-umam*) written right-to-left and vice versa, the history of writing in Arabic, and twelve major writing-systems (*kitābāt*) across various languages, including their astrological correspondences. He also describes twenty-three scripts (*al-aqlām al-samāwiyya wa-l-aḥruf al-raqmiyya al-nabawiyya*/The Heavenly Scripts and the Prophetic Alphanumeric Values) across various languages which correspond to certain prophets and saints. He includes the primordial Syriac script of Adam and the Arabic script, and a variety of cipher alphabets attributed to various sages such as Hermes Trismegistus. According to al-Bisṭāmī, the science of letters is not limited to the Arabic language and/or script but rather applies to all languages.[123]

Beyond the shared universalism anchored in ideological agendas, one of the remarkable similarities between Kircher and al-Bisṭāmī is a metaphysics based on a view of languages as carriers of erudition that can be distilled out of and

120 Gardiner, "Lettrism and History," p. 230-231.
121 *Ibid.*, p. 231.
122 *Ibid.*, p. 233.
123 *Ibid.*, p. 237-238.

separated from their respective religious and confessional specificities, as we saw in Kircher's *Theotechnia Hermetica*. In al-Bisṭāmī's *Naẓm*, nine peoples are discussed: Sabians, Egyptians, Copts, Greeks, Jews and the *ummat al-ḥukamā'* (the community of sages) who were able to receive revelations and wisdom from the universal intellect associated with Hermetic knowledge. Prophets such as Idrīs (identified with Hermes) were the fountains of philosophical knowledge and occult sciences to these ancient societies. Through some of these prophets, an alphanumerical cosmos came to be, as a result of which the science of letters developed as a constituent of an esoteric historiography that serves a universal Islamic vision.[124]

Conclusion

In the seventeenth century the mathematical and linguistic sciences were undergoing an "exacting turn" which focused on producing universal mathematical principles on the basis of "reason," "objectivity," and precision.[125] The ground was being prepared for the rise of scientific communities, learned societies and institutions that regulated the production of scientific knowledge.[126] As Near Eastern and other philologies emerged as Enlightenment science, the multiplicity of languages posed an ever-growing challenge to the legitimacy of Latin as the universal language of learning and even drove calls for its replacement.[127] Although Kircher's mathematical and philological ambitions

124 *Ibid*., p. 245-247.

125 For the manifestation of the tensions between an anti-occultist scientific discourse and one more amenable to hermetic and magical content in the context of music, see David Yearsley, "Alchemy and Counterpoint in an Age of Reason," *Journal of the American Musicological Society*, 51/ 2 (Summer, 1998), p. 201-243. For example, the composer and music theorist Johann Mattheson (1681-1764) was upset by the magic and "mediocre ideas".

126 Leibniz (1646-1716), whose star was rising in the final years of Kircher's life, wrote to Kircher in 1670 about the differences between the Jesuit's *Ars magna sciendi* and his own *Dissertatio de arte combinatoria* (Leipzig, 1666) and noted the "reformist" bent of Kircher's work. Kircher's reconstructionist intentions, however, did not fit into the principles of reason and contradiction that Leibniz stressed in his works, principles that were beginning to define scientific knowledge. After reading Kircher's works on hieroglyphs, Leibniz concluded "he understands nothing." Leibniz, G. W., *Die philosophischen Schriften*, ed. C.I. Gerhardt, 7 vols. Berlin, Weidmann, 1890, 6: p. 612; Leibniz, G. W., *Philosophical Papers and Letters*, ed. and trans. Leroy E. Loemker. Dordrecht, Kluwer Academic Publishers, p. 646; Findlen, *Athanasius Kircher: The Last Man*, p. 6.

127 McCracken, "Athanasius Kircher's Universal Polygraphy," p. 217; Stolzenberg, *Egyptian Oedipus*, p. 125.

are representative of the shifts witnessed by his generation, his project to demonstrate and establish the theological and Hermetic pretensions of his *technia* was ultimately unsuccessful.[128]

This article identified several Arabic occult and lettrist sources from which Kircher constructed what he referred to as the *Cabala Saracenica* in his *Oedipus Aegyptiacus*. Three major sources are highlighted: Muḥammad b. ʿAbd Allāh al-Kisāʾī's (fl. in the 11th century) *Qiṣaṣ al-anbiyāʾ*, where he got some letter-divine names correspondences and some prophetic narratives; the Arabic manuscript Vat. Ar. 938, which is a miscellany of magical and lettrist texts from which he reconstructed and reproduced several magical and lettrist practices; and ʿAbd al-Raḥmān al-Bisṭāmī's *Šams al-āfāq fī ʿilm al-ḥurūf wa-l-awfāq*. This article has shown that Kircher's approach to authority is idiosyncratic and inconsistent, at times inventing authors' names to whom he attributes various ideas from different texts, as likely to be the case with Aben Pharagi.

Kircher offers us the first systematic Christo-Latinate orientalist treatment of the Islamic science of letters based on a number of Arabic sources, some named in his *Oedipus Aegyptiacus*, manuscripts which he could have obtained during his travels such as his stint in Malta, or from his patrons and the libraries he had access to in Rome and elsewhere. As this article has shown, Kircher considered the content of these Arabic sources to be an inferior form of the Hebrew Kabbalah. More superstitious than legitimate, it, nonetheless, offered an intriguing portal into the Arabic language, and associated characters and numbers; as well as – and perhaps above all – a chance to show off his linguistic skills.

The *Oedipus Aegyptiacus* is best understood as an antiquarian treatise,[129] centred on a form of sacred philology in the service of Christian universalism. Magic, however, was too close for comfort and Kircher complained to his patron Peiresc that books on Arabic magic were difficult to publish in Rome. This applied even to his own work on the topic as noted above.[130] The objectives of this article pertain to magic and the science of letters and divine names; however, alchemy is another dimension that is worth exploring in the *Oedipus Aegyptiacus*. In Classis X (Tomus II.2) on *alchimia hieroglyphica*, Kircher extensively relies on "Haled Arabs," probably a reference to the legendary alchemist

128 On this misconception, see John Hedley Brooke, *Science and Religion: Some Historical Perspectives*, Cambridge, Cambridge University Press, 2014, p. 26-32.

129 Stolzenberg, *Egyptian Oedipus*, p. 42.

130 *Ibid.*, p. 180, p. 187.

Ḫālid b. Yazīd.[131] In general, a more thorough and systematic study of Kircher's use of Arabic sources across his oeuvre remains necessary in order to gain a fuller understanding of Kircher's orientalism and seventeenth-century European engagements with Islamic sources more generally. This will help expand our knowledge of Arabo-Latin scientific exchanges and of the history of European and Islamicate occult sciences.

Bibliography

Sources

Ḥaǧǧi Ḫalīfa, *Kašf al-ẓunūn ʿan asāmī l-kutub wa-l-funūn*, 2 vols, Beirut, Dār iḥyāʾ al-Turāṯ al-ʿarabī, ND.

Isidore of Seville, *Etymologia, Isidori Hispalensis Episcopi Etymologiarum sive Originum Libri XX*, ed. W.M. Lindsay, Oxford, Clarendon Press, 1989.

al-Kisāʾī, Muḥammad b. ʿAbd Allah, *Qiṣaṣ al-anbiyāʾ*, ed. Isaac Eisenberg, 2 vols, Leiden, Brill, 1933.

Leibniz, Gottfried Wilhelm, *Die philosophischen Schriften*, ed. C.I. Gerhardt, 7 vols, Berlin, Weidmann, 1890.

Leibniz, Gottfried Wilhelm, *Philosophical Papers and Letters*, ed. and trans. Leroy E. Loemker, Dordrecht, Kluwer Academic Publishers, 1989.

Stolzenberg, Daniel, "'Universal History of the Characters of Letters and Languages': An Unknown Manuscript by Athanasius Kircher," *Memoirs of the American Academy in Rome* 56/57 (2011/2012), p. 305-321.

Studies

Akbari, Suzanne, *Idols in the East: European Representations of Islam and the Orient, 1100-1450*, New York, Cornell University Press, 2009.

Acevedo, Juan, *Alphanumeric Cosmology from Greek into Arabic: The Idea of Stoicheia through the Medieval Mediterranean*, Tübingen, Mohr Siebeck, 2020.

Artun, Tuna, "Bâyezîd-i Kîmyâ'î: Osmanlı Kimya Metinlerinde Sultan II. Bayezid", Türklük bilgisi araştırmaları/Journal of Turkish Studies, 39 (2013), p. 181-186.

Asmussen, Tina, *Scientia Kircheriana: Die Fabrikation von Wissen bei Athanasius Kircher*, Affalterbach, Didymos-Verlag, 2016.

Binbaş, İlker Evrim, *Intellectual Networks in Timurid Iran: Sharaf al-Dīn ʿAlī Yazdī and the Islamicate Republic of Letters*, Cambridge, Cambridge University Press, 2016.

Brincat, Joseph M., *Malta 870-1054: al-Ḥimyarī's Account and its Linguistic Implications*. Malta, Said International, 1995.

131 Kircher, *Oedipus Aegyptiacus*, Tomus II.2, 1653b, p. 406-408, p. 411-414, p. 424-425.

Brooke, John Hedley, *Science and Religion: Some Historical Perspectives*, Cambridge, Cambridge University Press, 2014.

Bulmuş, Birsen, *Plague, Quarantines and Geopolitics in the Ottoman Empire*, Edinburgh, Edinburgh University Press, 2012.

Buttigieg, Emanuel, "Knights, Jesuits, Carnival, and the Inquisition in Seventeenth-Century Malta," *The Historical Journal*, 55/3 (2012), p. 571-596.

Caruso, Antonella, "L'arte talismanica nel codice Vaticano Arabo 938 B.," in *Yâd-nâma. In memoria di Alessandro Bausani*, ed. Biancamaria Scarcia Amoretti, 2 vols, Rome, Bardi Editori, 1991, 2: p. 29-58.

Casewit, Yousef, *The Mystics of al-Andalus: Ibn Barrajān and Islamic Thought in the Twelfth Century*, Chicago, University of Chicago, 2017.

Cassar, Carmel, "Witchcraft beliefs and social control in seventeenth-century Malta," *Journal of Mediterranean Studies*, 3/2 (1993), p. 316-334.

Cassar, Carmel, *Witchcraft, Sorcery and the Inquisition: a Study of Cultural Values in Early Modern Malta*, Malta, Mireva, 1996.

Ciappara, Frans, *Society and the Inquisition in Early modern Malta*, San Gwann, Publishers Enterprises Group, 2001.

Cipriani, Giovanni, *Gli obelischi egizi. Politica e cultura nella Roma barocca*. Florence, Olschki, 1993.

Comes, Rosa. "The Transmission of Azarquiel's Magic Squares in Latin Europe," in *Medieval Textual Cultures: Agents of Transmission, Translation and Transformation*, eds Faith Wallis and Robert Wisnovsky, Berlin, de Gruyter, 2016, p. 159-198.

Coulon, Jean-Charles, "La magie islamique et le « corpus bunianum » au Moyen Âge", thèse soutenue à l' Université Paris IV-Sorbonne, 2013.

Coulon, Jean-Charles, "Building al-Būnī's Legend: The Figure of al-Būnī through ʿAbd al-Raḥmān al-Bisṭāmī's *Shams al-āfāq*," *Journal of Sufi Studies*, 5/1 (2016), p. 1-26.

Coulon, Jean-Charles, *La Magie en terre d'Islam au Moyen Âge*, Paris, CTHS, 2017.

Dols, Michael W., "The Theory of Magic in Healing," in *Magic and Divination in Early Islam*, ed. Emilie Savage-Smith, Aldershot, Routledge, 2004, p. 87-102.

Evans, R.J.W., *The Making of the Habsburg Monarchy 1550-1700, An Interpretation*. Oxford, Clarendon Press, 1979.

Felek, Özgen, "(Re)creating Image and Identity: Dreams and Visions as a Means of Murad III's Self-Fashioning," in *Dreams and Visions in Islamic Societies*, eds Özgen Felek and Alexander Knysh, New York, SUNY, 2012, p. 249-272.

Felek, Özgen, *Kitabu'l-Menamat – Sultan III. Murad'in Ruya Mektuplari*, Istanbul, Tarih Vakfi Yurt Yayınları, 2014.

Fernández, Antoni Bordoy, *Raimundo Lulio y la filosofía del siglo XIII*, Madrid, Liceus, 2012.

Findlen, Paula (ed.), *Athanasius Kircher: The Last Man Who Knew Everything*, New York and London, Routledge, 2004.

Fisher, Humphrey, *Slavery in the History of Muslim Black Africa*, New York, New York University Press, 2001.

Fleischer, Cornell, "Secretaries Dreams: Augury and Angst in the Ottoman Scribal Service," in *Armagan: Festschrift für Andreas Tietze*, ed. Ingeborg Baldauf et Suraiya Faroqhi, Prague, Enigma, 1994, p. 77-88.

Fleischer, Cornell, "Ancient Wisdom and New Sciences: Prophecies and the Ottoman Court in the Fifteenth and Early Sixteenth Centuries," in *Falnama: The Book of Omens*, eds Massumeh Farhad and Serpil Bağcı, London, Thames and Hudson, 2009, p. 231-243.

Fletcher, John Edward, *A Study of the Life and Works of Athanasius Kircher, 'Germanus Incredibilis'*, ed. Elizabeth Fletcher, Leiden, Brill, 2011.

Frigo, Gian Franco, "Il ruolo della sapienza egizia nella rappresentazione del sapere di Athanasius Kircher," in *Athanasius Kircher. L'idea di scienza universale*, ed. Alessandro Bertinetto and Federico Vercellone, Milano, Mimesis, 2007, p. 91-105.

Gadelrab, Sherry Sayed, "Medical healers in Ottoman Egypt, 1517-1805," *Medical History*, 54/3 (2010), p. 365-86 (accessed online July 10, 2016). <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2890320/>.

Gardiner, Noah, "Esotericism in a Manuscript Culture: Ahmad al-Buni and his Readers through the Mamluk Period," PhD dissertation, Univ. of Michigan, 2014.

Gardiner, Noah, "Lettrism and History in ʿAbd al-Raḥmān al-Bisṭāmī's *Naẓm al-sulūk fī musāmarat al-mulūk*," in *Islamicate Occult Sciences in Theory and Practice*, eds Liana Saif, Francesca Leoni, Matthew Melvin-Koushki, and Farouk Yahya, Leiden, Brill, 2020, p. 230-266.

Gardiner, Noah, "The Occultist Encyclopedism of ʿAbd al-Raḥmān al-Bisṭāmī," *Mamluk Studies Review*, 20 (2017), p. 3-38.

Godwin, Joscelyn. *Athanasius Kircher: A Renaissance Man and the Quest for Lost Knowledge*. London, Thames and Hudson, 1979.

Godwin, Joscelyn, *Athanasius Kircher's Theatre of the World*, London, Thames and Hudson, 2015.

Grafton, Anthony, "Kircher's Chronology," in Findlen, Paula (ed.), *Athanasius Kircher: The Last Man*, p. 171-187.

Grévin, Benoît, "Editing an illuminated Arabic-Latin masterwork of the Fifteenth century. Manuscript Vat. Urb. Lat. 1384 as a philological challenge," in *Multilingual and Multigraphic documents and manuscripts of East and West*, eds. Giuseppe Mandalà and Immaculada Pérez Martín, Piscataway (NJ), Gorgias Press, 2018, p. 359-81.

Grévin, Benoît, "Between Arabic and Latin in Late Medieval and Renaissance Italy," in *Latin and Arabic: Entangled Histories*, ed. Daniel G. König, Heidelberg, Heidelberg University Publishing, 2019, p. 145-177.

Gril, Denis, "La science des lettres," in *Les Illuminations de la Mecque: Textes Choisis*, ed. Michel Chodkiewicz, Paris, Sindbad, 1989, p. 385-487.

Hallum, Bink, "New Light in Early Arabic Awfāq Literature," in *Islamicate Occult Sciences in Theory and Practice*, eds Liana Saif, Francesca Leoni, Matthew Melvin-Koushki, and Farouk Yahya, Leiden, Brill, 2021, p. 57-161.

Hamilton, Alastair, *The Copts and the West, 1439-1822: The European Discovery of the Egyptian Church*, Oxford, Oxford University Press, 2006, p. 204.

Iversen, Erik, *The Myth of Egypt and its Hieroglyphs in European Tradition*, Princeton University Press, 1993.

Jamil, Nadia, and Jeremy Johns, "A new Latin-Arabic document from Norman Sicily (November 595 H/1198 CE)," in *The Heritage of Arabo-Islamic Learning: Studies Presented to Wadad Kadi*, eds Maurice A. Pomerantz and Aram Shahin, Leiden, Brill, 2015, p. 111-168.

Láng, Benedek, *The Real Life Cryptology*, Amsterdam, Amsterdam University Press, 2018.

Lelić, Emin, "Physiognomy (ʿilm-i firāsat) and Ottoman Statecraft: Discerning Morality and Justice," in *Islamicate Occultism: New Perspectives*, eds Matthew Melvin-Koushki and Noah Gardiner, special double issue of *Arabica*, 64/3-4 (2017), p. 609-646.

Lelić, Emin, "Ottoman Physiognomy (ʿilm-i firâset): A Window into the Soul of an Empire." PhD Dissertation, University of Chicago, June 2017.

Levi Della Vida, Giorgio, *Elenco dei manoscritti arabi islamici della Biblioteca Vaticana: Vaticani Barberiniani, Borgiani, Rossiani*, Città del Vaticano, Biblioteca Apostolica Vaticana, 1935.

Lory, Pierre, "La magie des lettres dans le *Šams al-maʿārif* d'al-Būnī," *Bulletin d'Études Orientales*, 39-40 (1987-1988), p. 97-111.

Lory, Pierre, *La Science des Lettres en Islam*, Paris, Dervy, 2004.

Lugli, Adalgisa, "Inquiry as Collection: The Athanasius Kircher Museum in Rome," *RES: Anthropology and Aesthetics*, no. 12 (1986), p. 109-124.

Luttrell, Anthony, *The Making of Christian Malta: From the Early Middle Ages to 1530*, Aldershot, Routledge, 2002.

Massignon, Louis, *La Passion d'Al-Hosayn Ibn Mansour al-Hallaj*, 4 vols, Paris, Paul Geuthner, 1922.

McCracken, George E., "Athanasius Kircher's Universal Polygraphy," *Isis*, 39/4 (1948), p. 215-228.

Melvin-Koushki, Matthew, "The Quest for a Universal Science: The Occult Philosophy of Ṣāʾin al-Dīn Turka Iṣfahānī (1369-1432) and Intellectual Millenarianism in Early Timurid Iran," PhD dissertation, Yale University, 2012.

Melvin-Koushki, Matthew, "Toward a Neopythagorean Historiography: Kemālpaşazāde's (d. 1534) Lettrist Call for the Conquest of Cairo and the Development of Occult-Scientific Imperialism," in *Islamicate Occult Sciences*, p. 380-419.

Melvin-Koushki, Matthew, "Persianate Geomancy from Ṭūsī to the Millennium: A Preliminary Survey," in *Occult Sciences in Premodern Islamic Culture*, p. 151-199.

Melvin-Koushki, Matthew, "In Defense of Geomancy: Sharaf al-Dīn Yazdī Rebuts Ibn Khaldūn's Critique of the Occult Sciences," in *Islamicate Occultism: New Perspectives*, eds Matthew Melvin-Koushki and Noah Gardiner, special double issue of *Arabica* 64/3-4 (2017), p. 346-403.

Miller, Paul N., "Copts and Scholars: Athanasius Kircher in Peiresc's Republic of Letters," in Findlen, Paula (ed.), *Athanasius Kircher: The Last Man*, p. 133-148.

Oliveras, Marc, "El *De imaginibus caelestibus* de Ibn al-Ḥātim," *Al-Qanṭara* 30/1 (2009), p. 171-220.

O'Neil, Mary, "Magical Healing, Love Magic, and the Inquisition in Late Sixteenth-Century Modena," in *New Perspectives on Witchcraft, Magic and Demonology*, ed. Brian P. Levack, New York and London, Routledge, 2001, p. 88-113.

Ottewill-Soulsby, Samuel, "'Those same cursed Saracens': Charlemagne's campaigns in the Iberian Peninsula as religious warfare," *Journal of Medieval History*, 42/4 (2016), p. 405-428.

Pastine, Dino, *Nascita dell'idolatria. L'oriente religioso di Athanasius Kircher*, Florence, La Nuova Italia, 1978.

Perani, Mauro (ed.), *Guglielmo Raimondo Moncada alias Flavio Mitridate*, Palermo, Officina di Studi Medievali, 2008.

Piątak, Łukasz, "Between philosophy, mysticism and magic. A critical edition of occult writings of and attributed to Shihāb al-Dīn al-Suhrawardī (1156-1191)", PhD Dissertation, University of Warsaw, 2018.

Priani, Ernesto, "Ramon Llull," *The Stanford Encyclopedia of Philosophy* (Spring 2017 Edition), ed. Edward N. Zalta, URL = https://plato.stanford.edu/archives/spr2017/entries/llull/.

Rahal, Ahmed, "La Tradition Talismanique en Tunisie," in *Coran et Talismans: Textes et Pratiques Magiques en Milieu Musulman*, ed. Constant Hamès, Paris, Karthala, 2007, p. 113-146.

Rider, Catherine, "Common Magic," in *The Cambridge History of Magic and Witchcraft in the West*, ed. David J. Collins, Cambridge, Cambridge University Press, 2015, p. 303-331.

Rivosecchi, Valerio, *Esotismo in Roma barocca. Studi sul padre Kircher*, Rome, Bulzoni, 1982.

Rubio, Josep E., "Thought: The Art," in *Raimundus Lullus: An Introduction to his Life, Works and Thought*, eds Alexander Fidora and Josep E. Rubio, Turnhout, Brepols, 2008, p. 243-311.

Sabaté, Blanca Villuendas, "Arabic Geomancy in Jewish Hands: Specimens from the Cairo Genizah," in *Geomancy and Other Forms of Divination*, eds Alessandro Palazzo and Irene Zavattero, Florence, SISMEL, 2017, p. 271-290.

Saif, Liana, *The Arabic Influences on Early Modern Occult Philosophy*, Basingstoke, Palgrave Macmillan, 2015.

Saif, Liana, "From *Ġāyat al-ḥakīm* to *Šams al-maʿārif*: Ways of Knowing and Paths of Power in Medieval Islam," *Arabica* 64/3-4 (2017), p. 297-345.

Saif, Liana, and Francesca Leoni, "Introduction," in *Islamicate Occult Sciences in Theory and Practice*, ed. L. Saif et al., Leiden, Brill, 2021, p. 1-42.

Saif, Liana, "Magic and Divination Lost in Translation: A Cairene in a Maltese Inquisition," in *Magic in Malta: Sellem bin al-Sheikh Mansur and the Roman Inquisition, 1605*, eds Alex Mallett, Catherine Rider, Dionisius A. Agius, Leiden, Brill, 2022, p. 419-451.

Sariyannis, Marinos, "Studying Ottoman Views of the Supernatural: The State-of-the-Art and a Research Agenda," *Aca'ib: Occasional Papers on the Ottoman Perceptions of the Supernatural*, 1 (2020a), p. 5-20.

Sariyannis, Marinos, "Knowledge and Control of the Future in Ottoman Thought." *Aca'ib: Occasional Papers on the Ottoman Perceptions of the Supernatural*, 1 (2020b), p. 49-84.

Savage-Smith, Emilie, "Geomancy in the Islamic World," in *Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures*, ed. Helaine Selin, Dordrecht, Kluwer, 1997, p. 361-363.

Savage-Smith, Emilie and Marion B. Smith, *Islamic Geomancy and a Thirteenth-Century Divinatory Device*, Malibu (CA), Undena, 1980.

Savage-Smith, Emilie and Marion B. Smith, "Islamic Geomancy and a Thirteenth-Century Divinatory Device: Another Look," in *Magic and Divination in Early Islam*, ed. Emilie Savage-Smith, Aldershot, Ashgate, 2004, p. 211-276.

Schmidt, Jan, "The Occult Sciences and their Importance in Ottoman Culture: Evidence from Turkish Manuscripts in Dutch Public collections," *The Journal of Ottoman Studies* 23 (2003), p. 219-254.

Schmidt-Biggemann, Wilhelm, *Geschichte der christlichen Kabbala, Band 10,2*, Stuttgart-Bad Cannstatt, Frommann-Holzboog, 2012.

Şen, A. Tunç, "Astrology in the Service of the Empire: Knowledge, Prognostication, and Politics at the Ottoman Court, 1450s-1550s," PhD dissertation, University of Chicago, 2016.

Şen, A. Tunç, "Practicing Astral Magic in Sixteenth-Century Ottoman Istanbul: A Treatise on Talismans Attributed to Ibn Kemāl (d. 1534)," *Magic, Ritual, and Witchcraft*, 12/1 (2017), p. 66-88.

Southern, Richard William, *Western Views of Islam in the Middle Ages*, Cambridge MA, Harvard University Press, 1962.

Stolzenberg, Daniel, "Une collaboration dans la *cosmopolis* catholique: Abraham Ecchellensis et Athanasius Kircher," in *Abraham Ecchellensis, l'orientalisme et la science (XVII^e siècle)*, ed. Bernard Heyberger, Brepols, Turnhout, 2010, p. 81-88.

Stolzenberg, Daniel, *Egyptian Oedipus: Athanasius Kircher and the Secrets of Antiquity*. Chicago and London, The University of Chicago Press, 2013.

Stolzenberg, Daniel, "Four Trees, Some Amulets, and the Seventy-two Names of God: Kircher Reveals the Kabbalah," in *Athanasius Kircher: The Last Man*, p. 149-169.

Stolzenberg, Daniel, "Utility, Edification, and Superstition: Jesuit Censorship and Athanasius Kircher's Oedipus Aegyptiacus," in *The Jesuits II: Cultures, Sciences, and the Arts 1540-1773*, eds John W. O'Malley, Gauvin Alexander Bailey, Steven J. Harris, T. Frank Kennedy, Toronto, Buffalo, London, University of Toronto Press, 1999, p. 336-354.

Stolzenberg, "Oedipus Censored: Censurae of Athanasius Kircher's Works in the Archivum Romanum Societatis Iesu," *Archivum Historicum Societatis Iesu* (2004), p. 3-52.

Subtelny, Maria, "Kāshifī's Asrār-i qāsimī: A Late Timurid Manual of the Occult Sciences and its Safavid Afterlife," in *Islamicate Occult Sciences*, ed. L. Saif et al., Leiden, Brill, 2021, p. 267-316.

Toral-Niehoff, Isabel and Annette Sundermeyer, "Going Egyptian in Medieval Arabic Culture," in *The Occult Sciences in Pre-Modern Arabic Literature*, eds Eva Orthmann and Nader el-Bizri, Würzburg, Ergon Verlag, 2018, p. 249-262.

Wettinger, Godfrey, "The Arabs in Malta," in *Malta: Studies of its Heritage and History*, Malta, Mid-Med Bank, 1986, p. 87-104.

Wettinger, Godfrey, *Slavery in the Islands of Malta and Gozo ca. 1000-1812*, Malta, Malta Publishers Enterprises Group, 2002.

Wust, Efraim, *Catalogue of the Arabic, Persian and Turkish manuscripts of the Yahuda collection of the National Library of Israel*, eds Raquel Ukeles with Sagit Butbul, Khader Salameh, and Yusuf al-Uzbeki, Leiden, Boston, Brill, vol. 1 2016.

Yates, Frances, *Giordano Bruno and the Hermetic Tradition*, London, Routledge and Kegan Paul, 1964, Reprint, London and New York, Routledge Classics, 2002.

Yearsley, David, "Alchemy and Counterpoint in an Age of Reason," *Journal of the American Musicological Society* 51/2 (Summer, 1998), p. 201-243.

Archival Sources

Athanasius Kircher, *Oedipus Aegyptiacus, Tomus II.1* (Rome, 1653a).

Athanaius Kircher, *Oedipus Aegyptiacus, Tomus II.2*, (Rome, 1653b).

Athanasius Kircher, *Oedipus Aegyptiacus, Tomus I* (Rome, 1652).

Athanasius Kircher, *Oedipus Aegyptiacus, Tomus III* (Rome, 1654).

Athanasius Kircher, *Ars Magna Lucis et Umbrae*, 2 vols (Rome, 1646).

Athanasius Kircher, *Musurgia universalis* (Rome, 1650).

Athanasius Kircher, *Obeliscus pamphilius* (Rome, 1650).

Athanasius Kircher, *Arithmologia* (Rome, 1665).

Al-Būnī, *Šams al-maʿārif*, Istanbul, Hacı Selim Ağa Yazma Eser Kütüphanesi, MS 528.

Al-Būnī, *Šams al-maʿārif*, Istanbul, Hacı Selim Ağa Yazma Eser Kütüphanesi, MS 528.

Al-Būnī, *Šams al-maʿārif*, Rome, Vatican library, Vat. Ar. 543.

al-Suhrawardi, *Kitāb Šarḥ asmāʾ al-arbaʿīn*, Jerusalem, The National Library of Israel, Yah. Ar. 834.

al-Suhrawardī, *Kitāb Šarḥ asmāʾ al-arbaʿīn*, The University of King Saud, 5/1577 ف 7477.

Rome, Vatican Library, Vat. Ar. 938.

Rome, Vatican Library, Vat. Ar. 1106.

Rome, Vatican Library, Vat. Ar. 1254.

Šarḥ Ḥātim al-Ġazālī, Paris, BnF, Ar. 2674.

Salamas ben Kandadi, *Liber seu hortus mirabilium orbis terrae*, Paris, Bibliothèque nationale, Fonds français, no. 9538 (Rome, 3 December 1636).

Salāmīš b. Kund Ġadī al-Ṣaliḥī, *Kitāb al-Bustān fī ʿaǧāʾib al-arḍ wa-l-buldān*, Florence, Biblioteca Medicea Laurenziana, Orientali 92.

Salāmīš b. Kund Ġadī al-Ṣaliḥī, *Kitāb al-Bustān fī ʿaǧāʾib al-arḍ wa-l-buldān*, Paris, Bibliothèque nationale de France, Arabe 2212.

Malta, AIM Proc. Crim. 26A.

Maḥmūd b. Abī al-Fatḥ al-Ṣūfī, *Iǧtimāʿ al-šaml fī ṭarīq ʿilm al-raml*, Çorum, İl Halk 3084.

Qurʿat Ǧaʿfar al-Ṣādiq, Ankara, Üniversitesi Dil ve Tarih-Coğrafya Fakültesi, no. 38689.