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DOI: <https://doi.org/10.3989/alqantara.2016.013>

Other titles: La transferencia del conocimiento secreto: tres diálogos árabes de alquimia

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ZORA URL: <https://doi.org/10.5167/uzh-142109>

Published Version



Originally published at:

Forster, Regula (2016). The Transmission of Secret Knowledge: Three Arabic Dialogues on Alchemy. *Al-Qantara*, 37(2):399-422.

DOI: <https://doi.org/10.3989/alqantara.2016.013>

The Transmission of Secret Knowledge: Three Arabic Dialogues on Alchemy

La transferencia del conocimiento secreto: tres diálogos árabes de alquimia

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Arabo-Islamic alchemy enjoyed considerable popularity until well into the 19th and 20th centuries. It can be considered both as a predecessor of modern chemistry and as a natural philosophy whose purpose is to explain the world. Yet one of the unresolved questions concerning alchemy is how one was supposed to learn it, since it was an art that was meant to be kept secret and only revealed to a few select individuals. While the practicalities of the learning experience remain obscure, it is noteworthy that Arabic alchemical literature often makes use of the literary form of the dialogue, a genre strongly associated with teaching and learning. This paper focuses on three Arabic dialogues on alchemy; namely, *Masā'il Khālīd li-Maryānus al-rāhib* ("Khālīd's questions to the monk Maryānus"), *Kitāb Mihrārīs al-ḥakīm* ("The book of the wise Mihrārīs") and *Risālat al-ḥakīm Qaydarūs* ("The epistle of the wise Qaydarūs"), and discusses how the transfer of secret knowledge is represented. I will focus on the literary frames of these texts, their *mise-en-scène*, the master-disciple relation as represented within them, and the question of interaction between unequal partners.

Key words: Alchemy, Arabic prose literature, Dialogue (literary form), Khālīd ibn Yazīd,

La alquimia arabo-islámica gozó de considerable popularidad hasta los siglos XIX y XX. Puede ser considerada como una precursora de la química moderna y como una filosofía natural cuyo objetivo es explicar el mundo. Sin embargo una de las cuestiones no resueltas acerca de la alquimia es cómo se supone que debía aprenderse, puesto que se trataba de un arte que debía mantenerse en secreto y sólo podía ser relevada a unos cuantos elegidos. Mientras que los aspectos prácticos de la experiencia de aprendizaje siguen siendo oscuros, cabe destacar que, a menudo, la literatura alquímica árabe hace uso del diálogo, género literario íntimamente ligado a la enseñanza y al aprendizaje. Este trabajo se basa en tres diálogos árabes de alquimia: *Masā'il Jālid li-Maryānus al-rāhib* (Preguntas de Jālid al monje Maryānus), *Kitāb Mihrārīs al-ḥakīm* (El libro de Mihrārīs, el sabio) y *Risālat al-ḥakīm Qaydarūs* (La epístola del sabio Qaydarūs). Por otro lado, y centrándonos en el marco literario de estos textos, se discutirá cómo se representa la transferencia del conocimiento secreto, su puesta en escena, la relación maestro-discípulo, y la cuestión de la interacción entre estas partes desiguales.

Palabras clave: Alquimia, prosa literaria árabe, diálogo (forma literaria), *Jālid ibn*

Kitāb al-Dhahab, Kitāb Mihrārīs al-ḥakīm, Knowledge transfer, Literary frame, *Masā'il Khālid li-Maryānus al-rāhib*, Master and disciple, *Risālat al-ḥakīm Qaydarūs*, Robert of Chester, *Testamentum Morieni, Tractatus Micreris*.

Yazīd, Kitāb al-Dahab, Kitāb Mihrārīs al-ḥakīm, transferencia de conocimiento, marco literario, *Masā'il Jālid li-Maryānus al-rāhib*, maestro y discípulo, *Risālat al-ḥakīm Qaydarūs*, Robert of Chester, *Testamentum Morieni, Tractatus Micreris*.

As noted in the introduction to this monographic section, alchemy was an important art and science in the medieval (and early modern) Arabo-Islamic world; this can be deduced not only from travelogues¹ but also from the large number of extant manuscripts containing texts dealing with the subject. There remains, however, an important question: how did one become an alchemist? How could one learn the “divine art”? Sources on this topic are scarce. We can assume that learning from books was extremely difficult as alchemists used a language full of metaphors, allegories and symbols. Furthermore, most works explicitly state that alchemical knowledge should be kept secret and that only a few well-chosen people should have access to it.

While the practicalities of the learning experience remain obscure, it is noteworthy that Arabic alchemical literature often employs the literary form of the dialogue, a genre frequently connected with teaching and learning² and previously used in Greek alchemical writings.³ Although there is an impressive number of Arabic dialogues on alchemy, these texts and their literary forms remain largely unstud-

¹ See for example Polak, *Persien*, vol. 1, p. 286 and Salmon, “Note”.

² The dialogue form has been most thoroughly studied by scholars of philosophy, as for example by Sedley, Dancy, Heal and Smiley (eds.), *Philosophical dialogues*; Jacobi (ed.), *Gespräche lesen*; Höhle, *Der philosophische Dialog*; Meyer (ed.), *Zur Geschichte des Dialogs*; Forster, “Inszenierung und Grenzen”. For didactic dialogues in general see for example Buck, “Das Lehrgespräch”; Hilsenbeck, *Lehrdialog*; Cardelle de Hartmann, *Lateinische Dialoge 1200-1400*, pp. 58-103. For dialogues in Arabic literature see for example Wagner, *Die arabische Rangstreitdichtung*; van Ess, “Disputationspraxis”; Daiber, “Masā'il wa-adjwiba”; Holmberg, “The Public Debate”; Heinrichs, “Rose versus Narcissus”; Leemhuis, “A Koranic Contest Poem”; Wagner, “Munāzara”; Holes, “The Dispute”; Hämeen-Anttila, “The essay and debate”; Belhaj, *Argumentation et dialectique*; and Forster, “Transmission of Knowledge through Literature”. – I am dealing with the form of dialogue in Arabic literature more extensively in my Habilitationsschrift entitled *Wisensvermittlung im Gespräch. Eine Studie zu klassisch-arabischen Dialogen*, submitted at Freie Universität Berlin in 2014, which will hopefully be published soon.

³ See Berthelot, *Collection*, vol. 2, pp. 56-69 and vol. 3, pp. 289-299; Hallum, *Zosimus Arabus*, p. 242, esp. note 1.

ied.⁴ This article focuses on three Arabic dialogues on alchemy and discusses how the transfer of ‘secret’ knowledge is represented, focusing on the literary frames of these texts, their *mise-en-scène*, the master-disciple relation as represented within them, and the question of interaction between unequal partners. It should be recalled that these are literary texts, and I do not intend to suggest that alchemical instruction did in fact function in the way it is presented in these texts, but I will try to demonstrate through a close reading of these works that they share a common idea of how alchemical education should ideally be achieved.

The texts under discussion are *Masā’il Khālīd li-Maryānus al-rāhib* (“Khālīd’s questions to the monk Maryānus”), *Kitāb Mihrārīs al-ḥakīm* (“The book of the wise Mihrārīs”) and *Risālat al-ḥakīm Qaydarūs* (“The epistle of the wise Qaydarūs”). They all share a connection with the Umayyad prince Khālīd ibn Yazīd (d. c. 85/704), the alleged founder of Arabic alchemy.⁵ It seems probable that all three texts date from the ninth or tenth centuries CE. They present dialogues between one (or two) master(s) of alchemy and their adept.

Masā’il Khālīd li-Maryānus al-rāhib

Masā’il Khālīd li-Maryānus al-rāhib depicts a conversation between the Byzantine monk Maryānus and the Umayyad prince Khālīd b. Yazīd. Therefore the Arabic text must be later than Khālīd, and as it is cited as a classical text by later Arabic writers on alchemy⁶, I tend to date it to the ninth or tenth century CE.⁷ The work was translated into Latin under the title *Testamentum Morieni* as the very first text on alchemy to be known in the Latin West, probably in 1144 by Robert of

⁴ An exception is Hallum, *Zosimus Arabus*, pp. 242-274.

⁵ Ullmann has demonstrated that the historical Khālīd probably had nothing to do with alchemy, see Ullmann, “Ḥālīd”. On Khālīd see also Martelli and Bacchi, “Il principe”.

⁶ E.g. al-Ḥalabī (fl. after the twelfth century CE), al-Simāwī (fl. mid-thirteenth century CE), and al-Jildakī (d. 743/1342), see Ullmann, *Die Natur- und Geheimwissenschaften*, p. 193 and Al-Hassan, “The Arabic Original”, p. 231.

⁷ In the MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 65v we find a citation from the *Muṣḥaf al-ḥayāt* (see MS. Istanbul, Süleymaniye, Fatih 3435, fol. 111r). Should this citation belong to the original text of the *Masā’il*, it could be dated to the (late) tenth century CE with some certainty. I wish to thank Juliane Müller, Berlin, for the hint.

Chester, who is more famous for his translation of the Qur'ān by order of Peter the Venerable.⁸

Approximately ten relatively complete manuscripts of the Arabic text are currently known,⁹ but only the introduction has been edited (in 2004).¹⁰ I therefore refer here to a manuscript kept in Istanbul for the whole text.¹¹

The literary frame

Masā'il Khālid represents a dialogue between two people: the Umayyad prince Khālid and the Greek monk Maryānus. In the lengthy introduction,¹² the narrator, a client (*mawlā*) of Khālid, reports that one day a man comes to see the prince and says that he knows a monk who possesses the secrets of alchemy that Khālid greatly covets. Khālid sends for the famous monk, who lives as a hermit and is old and weak but still handsome and who wears a cilice, the cloth typically worn by ascetics of all faiths – a description that suggests great trustworthiness. The monk is brought to Khālid, who gives him comfortable lodgings and visits him twice daily. Khālid at first talks about the behaviour of kings and Greek tales and only mentions alchemy after some days have passed, adding that he would not harm Maryānus in any way. But he has misjudged the monk; as a hermit, Maryānus has left the world behind and is therefore unafraid of any king or prince. The monk explains that if he reveals his knowledge it would not be out of fear but rather because he thinks that Khālid would prove an able and worthy disciple. Khālid's client is subsequently ordered to write down their conversation – which is how it came to be in the form of the present book.

⁸ The Latin text of the *Testamentum Morieni* is extant in different redactions, of which the oldest one, edited by Stavenhagen, *A Testament*, is closest to the Arabic text known today. Robert added a preface of his own; however, his author-/translatorship have been disputed, see for example Kahn, "Note"; Lemay, "L'authenticité"; Cardelle de Hartmann, *Lateinische Dialoge 1200-1400*, p. 79.

⁹ Al-Hassan, "The Arabic Original", p. 231.

¹⁰ Al-Hassan, "The Arabic Original", pp. 218-230.

¹¹ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fols. 61-74. For a discussion of this MS., see Ritter, "Philologica XIII", p. 100.

¹² MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fols. 61v-63v = ed. Al-Hassan, "The Arabic Original", pp. 218-228. See also Dolgusheva, *Zwei arabische Dialoge*, esp. pp. 45-47.

After this introduction the narrator disappears almost completely; only at two points does he mention an action by the protagonists other than to indicate who is speaking (“he said” [*qāla*]). The reader is told that at the beginning the prince smiles because Maryānus promises to reveal his secrets to him.¹³ And after about two thirds of the text¹⁴ Maryānus hangs his head because Khālid wants to know where he can find the philosophers’ stone. These two bodily reactions mark important passages in the text: the promise of the secrets of alchemy and the explanation of where to find the stone.

While the introduction is rather long, we are not told how the colloquy ended as the dialogue closes with Maryānus’ statement that he has not concealed anything followed by a colophon obviously added by the scribe:

I have not concealed from you any difficulty, may God give you success in that of which He approves.

And praise may be to His supporter and blessings on His prophet Muḥammad and all his family.¹⁵

Master-disciple-relation

In this dialogue one encounters a setting typical of Arabic dialogues on the natural and occult sciences; namely, that of a disciple asking questions and a master answering. However, the situation becomes somewhat more complicated as the student here is a prince. Even if the monk is unafraid of the prince, as he states in the introduction, the rules of conduct and politeness must still be observed.

At the very beginning, both interlocutors use their first names – Khālid and Maryānus – to address one another. This is, in Classical Arabic, not very polite; one would expect the use of the *kunya*. This usage might therefore signal that this is not an exchange between unequal partners, but between equals. Later on, however, Maryānus more frequently uses Khālid’s title and calls him “prince” (*amīr*).¹⁶ Khālid

¹³ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 63r = ed. Al-Hassan, “The Arabic Original”, p. 227.

¹⁴ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 70r.

¹⁵ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 74v.

¹⁶ See for example MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fols. 68v, 70r, 73r.

himself uses the title “sage” (*ḥakīm*) only twice: first when he asks about the alchemical procedure (*tadbīr*)¹⁷ – here the title is obviously used to flatter Maryānus and render him more willing to answer. Khālid uses the title a second time when he is unhappy with an answer and wants a more appropriate explanation.¹⁸ The use of the title therefore marks the speaker’s discontent.

This is not the only moment when Khālid is unhappy with the answer he is given. He often insists that Maryānus should answer him; he refers to God and his help and then renews his question,¹⁹ or he flatters Maryānus by saying that he has spoken well merely in order to ask more pointedly about what he really wants to know.²⁰ Once he simply interrupts Maryānus by calling him by his name.²¹ Maryānus usually answers all his questions eventually; there is only one instance in which he does not: when Khālid wants further explanations about the location of the philosophers’ stone and how the stone can be part of every human being, Maryānus states that he has said everything already.²²

Representation of knowledge transfer

In *Masā’il Khālid*, Khālid asks questions and Maryānus answers. These answers can be very long and sometimes touch on subjects other than those asked about. This is quite typical for dialogues of the *masā’il wa-ajwiba* type, i.e., questions and answers,²³ but it is intriguing that here the disciple insists on having his questions answered. Unlike most disciples in this kind of literature, Khālid is not content with whatever answer he is given. It is significantly he who sets the topics – the Umayyad prince is not someone who allows others to take the lead, not even in a field where he requires a teacher.

¹⁷ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 70v.

¹⁸ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 65r.

¹⁹ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fols. 68v, 70v, 74v.

²⁰ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 64r (= ed. Al-Hassan, “The Arabic Original”, p. 230) and 68v.

²¹ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 68r.

²² MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 70r.

²³ For the genre of *masā’il wa-ajwiba*, see Daiber, “Masā’il wa-adjwiba”.

Maryānus does not make use of any logical arguments, but he does use rhetorical strategies, especially comparisons and citations of ancient authorities,²⁴ such as Zosimus,²⁵ Hermes Trismegistus²⁶ or Mary the Copt.²⁷ By adducing these authorities Maryānus presents himself as the legitimate heir of a much older scientific tradition, which obviates the need to argue in terms of Aristotelian logic. Most of his comparisons are conventionally used in alchemical writings, such as, for example, the comparison of the alchemical process with the genesis of the embryo.²⁸ But some of his comparisons seem to be more original; for example, when Khālid complains that the sages used many terms to depict the *prima materia* and doubts that it can be one thing only when it has so many names, Maryānus compares the alchemical process to the work of a tailor.²⁹ The tailor takes one piece of cloth, cuts it into several pieces and then sews a single shirt out of it. This is the way the alchemical art commences with a single matter that is dis- and re-assembled to become the real ‘philosophical’ gold. The multitude of names is merely a measure of protection against the ignorant masses. Here the dialogue touches on the problem of the alchemists’ allegorical language: a problem central to the transmission of alchemical knowledge. While Maryānus defends allegorical language as indispensable for protecting secret knowledge that is not intended for the general public, his pupil insists on clear explications without the use of codes or symbols. Khālid is ultimately successful in this critique as the *Masā’il* adopt a language more easily comprehensible than that used in many other alchemical works.

Kitāb Mihrārīs al-ḥakīm

Kitāb Mihrārīs al-ḥakīm is also known as *Kitāb al-Dhahab* (“The Book of the Gold”).³⁰ It is a dialogue between Mihrārīs and his pupil

²⁴ For these citations of authorities see also Dolgusheva, *Zwei arabische Dialoge*, esp. pp. 71-77.

²⁵ See for example MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fols. 66r, 68r, 69v.

²⁶ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fols. 64v, 65r, 69v.

²⁷ See for example MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 66v, 67r, 68v.

²⁸ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 71r.

²⁹ MS. Istanbul, Süleymaniye, Şehit Ali Paşa 1749, fol. 65v.

³⁰ See Ullmann, *Die Natur- und Geheimwissenschaften*, pp. 177-178.

Marwārīd. Sezgin suggests that it might derive from a Greek original, but this remains unproven. Dolgusheva assumes that it was written in the first half of the tenth century CE.³¹ I think that it may well be early as Mihrārīs is mentioned in the (late) tenth century CE in al-Nadīm's *Fihrist*.³² The dialogue was translated into Latin as *Tractatus Micreris*, probably in the fourteenth century, by an anonymous translator.³³ The Arabic manuscript I have used is incomplete at the beginning but a comparison with the Latin shows that only two of the pupil's questions and one answer by Mihrārīs are missing.³⁴

The literary frame

In comparison with *Masā'il Khālīd*, the introduction of *Kitāb Mihrārīs* is relatively short. The only information regarding its contents is contained in the title and – slightly varied – in the colophon. The title reads as follows:

The book of Mihrārīs, the Indian sage, the keeper of the treasure house (*ṣāhib khizāna*) of Solomon, David's son; and this is the end of the questions that Marwārīd asked, from what was translated (*nuqilat*) for Khālīd b. Yazīd b. Mu'āwiya.³⁵

³¹ Dolgusheva, *Zwei arabische Dialoge*, esp. p. 12.

³² In Flügel's classic edition (Ibn al-Nadīm, *Kitāb al-Fihrist*, vol. 2, p. 353) as well as in the new edition by Sayyid (Ibn an-Nadīm, *Kitāb al-Fihrist*, vol. 4, p. 447), his name is presented in a corrupt form (Mihdāris), but see Dodge's translation (Ibn al-Nadīm, *The Fihrist*, p. 850).

³³ See Cardelle de Hartmann, *Lateinische Dialoge 1200-1400*, pp. 78-79 and p. 710 (nr. A5). The Latin text was printed by Heilmann, *Theatrum Chemicum*, pp. 90-101.

³⁴ MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fols. 250v-256v; a few more manuscripts are known to be extant in Istanbul (Üniversite Kütüphanesi, A 6079), Cairo (Dār al-kutub, 58m), Teheran (Kitābkhāna-yi Malik, 1569/1; private collection of Muḥammad Ḥusayn Asadī), and Dublin (Chester Beatty Library, 5002, fol. 110 and 137-138 [excerpts]), see Sezgin, *Geschichte*, p. 106; Ullmann, *Die Natur- und Geheimpwissenschaften*, p. 177; Ullmann, *Katalog*, pp. 183, 196-198.

³⁵ MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fol. 250v. This information is slightly varied in the colophon (fol. 256v), where Mihrārīs is called *ṣāhib bayt al-ḥikma* ("keeper of the house of wisdom") instead of *ṣāhib khizāna* ("keeper of the treasure house"), implying that Solomon had a "house of wisdom" (i.e. a private library) just like the 'Abbāsīd caliphs (for the 'Abbāsīd *bayt al-ḥikma*, which was sometimes also called *khizānat al-ḥikma*, see Gutas and van Bladel, "Bayt al-Ḥikma"). – The Latin version leaves out any reference to India or Solomon, only giving the names of teacher and student: *Incipit tractatus Micreris suo discipulo Mirnefindo* ("Here begins the treatise of Micreris for his disciple Mirnefindus"), ed. Heilmann, *Theatrum Chemicum*, p. 90.

Mihrārīs here is presented as an Indian sage in charge of Solomon's treasure. As Solomon had a reputation not only for being wise but – in the Islamic Middle Ages – also for his magical powers,³⁶ being his treasure keeper immediately makes Mihrārīs an authority in the field of occult sciences. Additionally, his connection with India – which in Classical Arabic literature was famous for its wisdom³⁷ – adds to his reputation as a sage. Khālīd b. Yazīd on the other hand, the Umayyad prince playing an active part in *Masā'il Khālīd*, gives this text if not more authority then at least more importance; this is not just any text but one considered significant by the famous Khālīd himself.

Throughout the dialogue itself we hear the narrator's voice only when there is a change in interlocutor – 'the student said', 'Mihrārīs said'. Only once does the narrator explain that the student finished thanking his master and then continued with his questioning.³⁸ This dialogue therefore nearly approaches the form of a drama,³⁹ but it has one serious shortcoming: it is divided into chapters, and Mihrārīs himself states at the end of every chapter what topic he will continue with in the next chapter. Orality is betrayed here, probably due to a process of reshaping and redaction that was unsatisfactorily done.⁴⁰

Master-disciple relation

Like *Masā'il Khālīd*, *Kitāb Mihrārīs* presents an asymmetric relationship between two interlocutors: on one side is the Indian sage, who is often called by name, and on the other side is his pupil, whose name, Marwārīd, is only mentioned in the title. In addition, the master usually addresses his pupil in the second person singular, while the student

³⁶ For Solomon and his magical powers which are especially prominent in *tafsīr* literature and in the stories of the prophets (*qiṣaṣ al-anbiyā'*), see for example Walker and Fenton, "Sulaymān"; Soucek, "Solomon".

³⁷ The most prominent and perhaps most important example for India as the origin of wisdom obviously is Ibn al-Muqaffa's *Kalīla wa-Dimna* (ed. Cheikho, esp. pp. 19-44), see for example de Blois, *Burzoy's Voyage*, esp. pp. 40-60.

³⁸ MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fol. 254v.

³⁹ For the problem of the form of literary dialogues (dramatic, narrated or indirect, and mixed) see Hösle, *Der philosophische Dialog*, pp. 166-186.

⁴⁰ Steinschneider mentions an even more advanced (and orally unacceptable) division (see Steinschneider, *Die arabischen Übersetzungen*, § 109), but he might be talking about a different text (see Ullmann, *Die Natur- und Geheimwissenschaften*, p. 178).

sometimes uses the title “honoured master” (*al-mu‘allim al-ṣāliḥ*).⁴¹ Though the relationship is asymmetrical the disciple is not particularly polite and is allowed to express his doubts.⁴²

Julius Ruska has described the dialogue of the Latin version of this text as monotonous, since it is always the student who asks questions and the teacher who replies.⁴³ This analysis is certainly correct for the Arabic version as well. Furthermore, it is noteworthy that the disciple only proposes a topic of his own in his very first question. Throughout the rest of the dialogue he restricts himself to asking questions that relate to the answer he has just received from his teacher, but he never starts a completely new topic of his own. By this technique the text stresses the asymmetric relationship even more, but at the same time the text becomes rather coherent: a feature that is not at all typical of Arabic alchemical literature. This aspect is further accentuated by the fact that Mihrārīs’ answers are usually clear and he never tries to evade the questions. Unlike Khālid in *Masā’il Khālid*, Marwārīd therefore never needs to flatter his master in order to obtain answers to his questions.⁴⁴ Finally, it is noteworthy that the student sometimes speaks at length, while Mihrārīs at times offers very short answers. All these points taken together make it clear that *Kitāb Mihrārīs* is not a typical question-answer dialogue. In fact, this work is far more pleasing to read than many similar texts.

Representation of knowledge transfer

As was likewise the case with Maryānus, Mihrārīs’ authority is never questioned in the dialogue. He therefore never needs to use logical arguments but instead relies on comparisons and references to alchemical authorities, whom he cites by name – like Ostanēs, Hippocrates, Hermes

⁴¹ See for example MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fols. 251r, 254v, 255v. – The title “teacher” (*mu‘allim*) is quite commonly used in Arabic alchemical literature, see Forster, “Auf der Suche”, pp. 217-218.

⁴² MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fol. 253v.

⁴³ Ruska, *Turba Philosophorum*, p. 323.

⁴⁴ See for example MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fols. 251r, 253r, 254r.

and Zosimus - or anonymously.⁴⁵ Contrary to the norm, these authorities are portrayed as contemporaries⁴⁶ rather than as ancient sages: a strategy by which the author prompts the reader to recall that Mihrārīs is being presented here as a contemporary of Solomon. The disciple, however, does not accept all the testimonies of the authorities unquestioned. Sometimes he remarks that he does not understand them, he doubts that they are meaningful, or that he finds it difficult to trust the authorities when they all hold different opinions.⁴⁷ Mihrārīs' comparisons all seem to be quite conventional; for example, when he compares the 'first matter' with the egg and its three parts (i.e., egg yolk, white and shell).⁴⁸ Like Khālīd in the *Masā'il*, the student here also complains about the way the alchemical authorities hide their knowledge by using coded language – and like Maryānus, Mihrārīs defends this practice as necessary to protect the alchemists' secrets from the unworthy masses.⁴⁹ But not only is it difficult to learn about alchemy, it is also dangerous to reveal its secrets – a fact stated in many alchemical treatises.⁵⁰ The solution Mihrārīs presents is to ask for the help of God, who appears here in a rather Islamised form.⁵¹ As he prays to God, the master refers his student to a greater authority, and in doing so, he also makes it clear that nothing more can be expected from himself.

This dialogue shows a very smooth transfer of knowledge; it portrays an intelligent pupil with an already extensive knowledge, who asks sensible questions that are always connected to what was previously discussed. His teacher, for his part, has no inclination to deliver long speeches and usually simply answers the questions. He only rarely remarks that the student ought to have known something already. As a whole, the work is a portrayal of a very cooperative oral interaction.

⁴⁵ See for example MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fols. 251r, 252v, 256v. See also Dolgusheva, *Zwei arabische Dialoge*, pp. 39-43.

⁴⁶ As for example Hippocrates who is presented as one of Marwārīd's teachers, see MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fol. 256v.

⁴⁷ MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fols. 252v, 256r, 256r-256v.

⁴⁸ MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fol. 250v. – It seems noteworthy that the egg and its parts are compared to religion in a tenth century Ismā'īlī text (Ja'far b. Maṣṣūr al-Yaman, *Kitāb al-'Ālim wa-l-ghulām*, § 153).

⁴⁹ MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fol. 253v.

⁵⁰ MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fol. 253v.

⁵¹ See for example MS. Istanbul, Süleymaniye, Nuruosmaniye 3633, fols. 254v, 255r, 256r, 256v.

Risālat al-ḥakīm Qaydarūs

The title *Risālat al-ḥakīm Qaydarūs* is misleading in two ways; first, this text is not an epistle (*risāla*) but a dialogue; secondly, the sage Qaydarūs is one of two alchemists concerned. In fact, the *Risāla* portrays a dialogue between the king Marqūnus and two alchemists: Qaydarūs and Mītāwus. Like the two dialogues previously discussed in this article, this text also claims to have a connection with Khālīd b. Yazīd. But unlike the others, this work seems never to have been translated into Latin. The Arabic version probably dates from between the mid-ninth and mid-tenth centuries CE.⁵² It is extant in two manuscripts which were both used for a recent edition of the work.⁵³ The *Risāla* was cited by later alchemical authors, such as Ibn Umayl (fl. tenth century CE), al-Sīmāwī (fl. mid-13th century CE) and al-Jildakī (d. 743/1342), so we can assume that it was more widely read than the paucity of known and extant manuscripts suggests.⁵⁴

The literary frame

The introduction of the *Risāla* is slightly more informative than that of *Kitāb Mihrārīs*, but much more information is provided by the long frame story of *Masā'il Khālīd*. It begins as follows:

This is the epistle of the sage Qaydarūs, in reply to the questions asked by the king Marqūnus, in the presence of Mītāwus, the seer,⁵⁵ and the assembly of the wise (*al-ḥukamā'*), on the divine art (*al-ṣan'a al-ilāhīya*).⁵⁶

⁵² See Müller, *Zwei arabische Dialoge*, pp. 138-139. The *terminus ante quem* can be established because of the citations in Ibn Umayl's (fl. tenth century CE) *Kitāb al-Mā' al-waraqī wa-l-arḍ al-najmīya*.

⁵³ Müller, *Zwei arabische Dialoge* (with German translation) based on MS. Dublin, Chester Beatty Library, Ar 4496, fols. 31v-37v and MS. Dublin, Chester Beatty Library, Ar 4501, fols. 97r-100r.

⁵⁴ See Müller, *Zwei arabische Dialoge*, pp. 67-69.

⁵⁵ MS. Dublin, Chester Beatty Library, Ar 4501, fol. 97r clearly reads *qāṭir* ("dripping?"), while MS. Dublin, Chester Beatty Library, Ar 4496, fol. 31v does not have an epithet. Following Vereno, *Studien*, pp. 330-331 and his interpretation of *qāṭir*, Müller, *Zwei arabische Dialoge*, pp. 94-95 and esp. p. 121 reads *nāzīr* ("seer"), which seems to refer to a high member of Ancient Egypt's priesthood class.

⁵⁶ Ed. Müller, *Zwei arabische Dialoge*, p. 94.

The *Risāla* represents a colloquy between not two but three participants. The group of sages plays no role whatsoever in the rest of the text and is only mentioned here in the title as an audience. Their presence indicates that we are in the *majlis*, the reception room of the king.⁵⁷ This implies that alchemy is not an entirely secret subject but one that can be discussed in the semi-public sphere of a king's court. Moreover, we learn that this discussion is taking place in Egypt where the king has ordered the alchemists to join him.⁵⁸

In what follows, we are given ample information about the fate of the book but not of the colloquy. The *Risāla*, we are told, was found in a temple, written in a mysterious script, and the text was commented upon or translated – the verb used, i.e. *fassara*, can mean both – for Khālid b. Yazīd.⁵⁹ The temple and the mysterious script signal a hermetic context,⁶⁰ while the Umayyad prince once more guarantees the text's importance for those who are interested in alchemy.

As for its form, *Risālat al-ḥakīm Qaydarūs* is nearly a dramatic dialogue;⁶¹ the speakers are introduced by 'he said' (*qāla*) or 'the wise said' (*qāla l-ḥakīm*), etc. When the setting switches in the second part of the text from a discussion between the king and both alchemists to a private discussion between the king and Mītāwus, the change is not announced by the narrator, but rather the reader must deduce it from what is said, especially as the wise Mītāwus invites the king to come right next to him.⁶²

Master-disciple-relation

In *Risālat al-ḥakīm Qaydarūs* the king sets the agenda; he orders the sages to come and talk to him – an order the alchemists cannot dis-

⁵⁷ For the *majlis* and its conception as a place for dialogues see Forster, "Mittelalterliche arabischsprachige Dialoge", p. 140 and the contributions in the volume edited by Lazarus-Yafeh, Cohen, Somekh and Griffith, *The Majlis*.

⁵⁸ Ed. Müller, *Zwei arabische Dialoge*, p. 94-93 (the Arabic text is set in Arabic reading direction, but the page numbering follows Western reading conventions).

⁵⁹ Ed. Müller, *Zwei arabische Dialoge*, p. 94.

⁶⁰ For these motifs, see Forster, *Das Geheimnis*, pp. 52-53 and 100 and especially Braun's contribution to this monographic section.

⁶¹ See for the form of literary dialogues the literature mentioned in note 38 above.

⁶² Ed. Müller, *Zwei arabische Dialoge*, p. 80: "He said: May the king come up to me." See for a discussion of this passage also Müller, *Zwei arabische Dialoge*, pp. 124-125.

obey.⁶³ Although the king is the disciple, he is the one to ask the questions, and he can decide who should answer. In some instances he even asks the second alchemist whether the first's answer is acceptable.⁶⁴ The ruler's power here becomes a corrective, and thereby empowers the student to doubt his teachers. Accordingly, the sages show considerable respect to the king; they address him in the third person singular or by his title of "king" (*malik*). The king, on the other hand, uses their first names⁶⁵ rather than a title like "sage" (*ḥakīm*) or the polite form of the *kunya*. The text consequently stresses the asymmetry of power over the requirements of politeness.

Representation of knowledge transfer

The *Risāla* introduces a dialogue in which, in principle, the king asks questions and the two sages answer. In the second part, the king speaks to Mītāwus in private while Qaydarūs is absent. When the sages do ask questions, which they rarely do, such inquiries are not for the purpose of obtaining knowledge but rather to ensure that the king has understood their explanations.⁶⁶ It is always the king who decides what topic should be discussed, for how long, and who can propose a change of subject.⁶⁷ He even sometimes rephrases a question when he is not satisfied with an answer. In doing so, he usually turns to the sage who has not yet expressed his view on the topic in question.⁶⁸ It is therefore clearly the king who leads the discussion, and he can change topics as suits him. Accordingly, linked transitions between several statements are rather rare.⁶⁹ The sages usually reply in a short, clear manner; long monologues so typical of dialogues between masters and disciples are absent here. Sometimes the answers contain more information than what was asked for,⁷⁰ but only very rarely are they irrelevant with regard to the questions.⁷¹

⁶³ Ed. Müller, *Zwei arabische Dialoge*, pp. 94-93.

⁶⁴ For example ed. Müller, *Zwei arabische Dialoge*, pp. 92, 86, 87.

⁶⁵ See also Müller, *Zwei arabische Dialoge*, p. 124.

⁶⁶ See for example ed. Müller, *Zwei arabische Dialoge*, p. 90.

⁶⁷ See for example ed. Müller, *Zwei arabische Dialoge*, pp. 93, 92.

⁶⁸ See for example ed. Müller, *Zwei arabische Dialoge*, pp. 91, 85, 83.

⁶⁹ But see for example ed. Müller, *Zwei arabische Dialoge*, pp. 91-88.

⁷⁰ See for example ed. Müller, *Zwei arabische Dialoge*, pp. 89, 84, 81.

⁷¹ See ed. Müller, *Zwei arabische Dialoge*, pp. 89-88.

Like the two texts previously discussed, the *Risāla* does not employ any logical argumentation. However, the two alchemists use many citations of ancient authorities to stress the importance of their knowledge.⁷² Sometimes they cite the sages to explain the different names of a substance or an alchemical operation,⁷³ to elucidate how to proceed with a certain process,⁷⁴ or to assert that it is possible to use less of a given substance than usually recommended.⁷⁵ When Mītāwus insists that sages are never subject to the vice of jealousy (*ḥasad*)⁷⁶ because they are all ascetics⁷⁷ he implies two things at the same time; first, he is claiming that both he and his colleague Qaydarūs should be seen as belonging to a noble lineage of sages (both are referred to as sages frequently throughout the text), and secondly, because sages cannot be jealous, any doubts the king Marqūnus might have about their willingness to share their knowledge must be unfounded.

The continuity of the alchemical tradition is evoked yet again in a different context when Mītāwus criticises the king for asking a question that no sage would ever wish to answer. Mītāwus, however, has no choice when facing the king and his power and must supply the information required of him.⁷⁸ In addition to the citations of authorities, Mītāwus once uses a comparison to convince the king: that the alchemical process of dyeing works just like the dyeing of clothes.⁷⁹ Interestingly, the king is not convinced by the sage's rhetoric and remains doubtful about this part of the alchemical process.

A very interesting instrument for the transfer of knowledge is the use of illustrations. Illustrations tend to be rather scarce in Arabo-Islamic alchemical manuscripts,⁸⁰ but one of the two manuscripts of

⁷² See for example ed. Müller, *Zwei arabische Dialoge*, pp. 92, 91, 84.

⁷³ See for example ed. Müller, *Zwei arabische Dialoge*, pp. 82, 74, 72.

⁷⁴ See for example Müller, *Zwei arabische Dialoge*, pp. 82, 81, 78-77.

⁷⁵ See for example ed. Müller, *Zwei arabische Dialoge*, p. 71.

⁷⁶ Jealousy is a key concept in Arabo-Islamic alchemy and especially in *Risālat al-ḥakīm Qaydarūs*, see also Müller, *Zwei arabische Dialoge*, pp. 126-127.

⁷⁷ Ed. Müller, *Zwei arabische Dialoge*, p. 92.

⁷⁸ Ed. Müller, *Zwei arabische Dialoge*, p. 79.

⁷⁹ Ed. Müller, *Zwei arabische Dialoge*, pp. 80-79.

⁸⁰ See Berthelot, *La chimie au moyen âge*, vol. 3, pp. 47-50; Berlekamp, "Painting as Persuasion", p. 58, note 64; Hallum, *Zosimus Arabus*, p. 268; Müller, *Zwei arabische Dialoge*, p. 66. For a general overview on Islamic scientific illustrations, see Hoffman, "The Beginnings".

Risālat al-ḥakīm Qaydarūs actually contains three illustrations.⁸¹ While the first two illustrations (figure 1) show alchemical apparatuses,⁸² the third one (figure 2) should not be confused with a spot of black ink. Rather, the text makes it clear that this is to be considered an illustration, since here, as with the other two illustrations, the text refers to the picture by explicitly mentioning it: ‘according to this figure’ (*‘alā ḥādhā l-mithāl*). The spot of ink consequently becomes a fully-fledged illustration depicting the colour a composite should acquire after calcination. While the other extant manuscript of the *Risāla* contains no illustrations, nor any hint that there should have been any, here the illustrations are well integrated into the text. This means, however, that the redactor of this version was far more interested in the alchemical contents of the text than in the literary fiction of an oral dialogue, as generally, illustrations seem to require a different mediality, i.e., the written from, not the spoken word of the dialogue.⁸³

⁸¹ MS. Dublin, Chester Beatty Library, Ar 4501, fols. 98v, 99r, 99v. See for a discussion of the first two illustrations Müller, *Zwei arabische Dialoge*, p. 66.

⁸² An apparatus for distillation and a “philosophers’ sieve” (*munkhal al-ḥukamā’*), see also Müller, *Zwei arabische Dialoge*, p. 66.

⁸³ In principle, illustrations can be inserted into a dialogue: Plato for example seems to suggest that one of the interlocutors in his *Menon* actually draws a sketch (*Opera*, vol. 3, ed. Burnet, 82b-85b), but here, there is no indication of actual painting.⁴



CBL Ar 4501, ff.98b-99a.jpg

MS. Dublin, Chester Beatty Library, Ar 4501, fols. 98v–99r (an apparatus for distillation on the right and a “philosophers’ sieve” on the left).

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قال الماتم ابله باخرج الاناء من فامينموام بتحركه بان سمعت المركب
 في جوده صلابه فخذ ادراد جام يفتح الاناء واخ لجهه وان سمعت
 جسده فيه ليناً بار حده الى فامينه وزده مفداً ثلث الايام
 وهي ثمانية ايام فالجم يكون لونه وحاله فاليكوز اسود رزينا
 بر فاقلبا جوهر امصور اعلى هذا المثال [redacted] فالجم انقول
 انت يا فيدوسم فالحد وايم الملط وقال الخور انتظر الى ما
 يلزمه الى طاعة الملط فالجم يسمى المركب الاسود فالقنصيا
 الكتماد فالولما يسمى بذ اللد فالبلونه انه اذا كان اسود سموه
 بكل لوز اسود بلذا كان ابيض سموه بكل ابيض ولذا كان احمر
 سموه بكل احمر واذا كان احمر سموه بكل احمر ولذا الخ لسموه بكل ماد
 ولذا انقهد سموه بكل حجر واذا انكلسر سموه بكل كلكر ورر مالا
 فالولما حدث السواد فيه ولم يدخل تركيبه شيء اسود
 فالاحسن الملط والطح في الفول فالاعلمني بذ اللد فالباغرض
 السواد فيه لموت ذهنه فيه وغزارة الذهب فيه ان الاول
 سموه الحجر الذهبان والحجر المذهب واسماوه كثره قالوا وما
 النديامات الذهب فيه يا مفتاوسر فالامات الذهب فيه
 النسر الناريد الغيد المفتت به في اول التركيب كانه هو الذي يميته

هذا

في
هو النسر

CBL Ar 4501, f.99b.jpg

MS. Dublin, Chester Beatty Library, Ar 4501, fol. 99v (the black colour a composite should acquire after calcination is depicted as an ink spot in line 5).

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Conclusion

While *Masā'il Khālīd* has a long introduction giving many details about the frame of the dialogue, the other two texts are much shorter in this respect. Surprisingly, the colloquies depicted in *Masā'il Khālīd* and *Risālat al-ḥakīm Qaydarūs* are not private ones; the discussions take place in the semi-public sphere of the *majlis*, the reception room, and alchemy therefore loses something of its character as a secret science that should be well protected from the masses.

The relationships between the alchemical experts and their students are not always simply asymmetric but are modified by the fact that knowledge and power are unevenly divided, as is the case with Khālīd in *Masā'il Khālīd* and Marqūnus in *Risālat al-ḥakīm Qaydarūs*, who are both of considerably higher social status than their alchemical masters. While neither Khālīd nor Maryānus are overly polite, their teachers use the titles of their students. Khālīd himself only uses his teacher's title when he wants to know something particularly important. The means of addressing one another becomes a rhetorical strategy. *Risālat al-ḥakīm Qaydarūs* insists on the distance between the king and his subjects, as both alchemists use the king's title or even the third person. The text stresses their role as subjects over their function as teachers.⁸⁴ Politeness cannot readily be observed in *Kitāb Mihrārīs*, but it is the student who sometimes addresses his teacher by his title. A close reading of these texts therefore reveals that they follow a literary model of dialogue, but at the same time, they seem to portray an ideal of interaction in alchemical education.

The authority of the master is never contested in principle. Therefore, the masters never use logical arguments, but they sometimes cite authorities in the field of alchemy or use comparisons as rhetorical instruments. By referring to authorities the teachers (and the authors) construct a larger context and – except for *Kitāb Mihrārīs* – a historical continuity. Although comparison is a classical feature of argumentation, the alchemical masters are not always successful in their use of this rhetorical strategy; Mihrārīs' student is quite reluctant to accept his

⁸⁴ Similarly, Bertaina has shown for the dialogue between the patriarch Timothy I and the 'Abbāsīd caliph al-Mahdī, that Timotheos is very polite, arguing that "the dialogue's language exemplifies the proper courtesy that is to be shown in a work of learned literature" (Bertaina, *Christian and Muslim Dialogues*, p. 155).

teacher's comparisons, and the king Marqūnus insists on having his questions answered without elaborate rhetoric. Here, the form of literary dialogue leads to the creation of much more comprehensible texts for actual readers.

Both *Masā'il Khālīd* and *Risālat al-ḥakīm Qaydarūs* are structured by the questions of the pupils – namely the prince and the king – who set the agenda and rule the colloquy. *Kitāb Mihrārīs*, on the other hand, shows a completely different development of topics since the student only reacts to his master's answers and asks questions closely related to them. This leads to a rather coherent text. All the same, a redactor seems to have doubted the efficiency of this structure and therefore added a division into chapters that effectively destroys the fiction of orality.

The history of alchemy has been a somewhat neglected field of study even though alchemy was an important science both in Late Antiquity and in medieval times. Islamic and especially Arabic alchemy is of utmost importance as it constitutes a neglected link between a late antique tradition that is almost completely lost and the European Middle Ages: a period when there were no known alchemical texts before the translations from the Arabic. Furthermore, a close reading of Arabic alchemical texts as undertaken in the present article can show what elements were seen as essential for the process of transferring the secret knowledge of the 'divine art'. In the personal interaction between the master and his disciple the terms of transmission are discussed; while the authority of the teacher himself is never questioned, everything else seems to have been adaptable to the specific situation and needs of those involved. Despite the many symbols and the difficult language of alchemy, alchemical knowledge was seen as essentially teachable and learnable.

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Recibido: 01/06/2015

Aceptado: 02/09/2016