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# A Matter of Philosophers and Spheres: Medieval Glosses on Artephius's *Key of Wisdom*

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The article examines the two Latin versions of Artephius's *Clavis sapientiae* (*Key of Wisdom*) that have been preserved in early modern collections of alchemical texts. A comparative analysis of the two versions shows that one of them has undergone a process of textual manipulation. In particular, an interpolation of short philosophical passages concerning the doctrine of prime matter has relevant interpretative implications. These additions appear to be grounded in the early thirteenth-century philosophical debate on cosmology and the first Latinate reception of Aristotle's metaphysics.

The name of Artephius, supposedly the most esteemed pupil of Apollonius of Tyana, is mentioned frequently throughout the Middle Ages and Early Modernity.<sup>1</sup> Roger Bacon claimed that Artephius lived to the venerable age of 1,025 due to his knowledge concerning the prolongation of life.<sup>2</sup> In the sixteenth century, the Italian physician and mathematician Gerolamo Cardano warned against the reprehensible practices elaborated by Artephius: “let's trample down the magical foolishness of what has been claimed by Artephius – the most celebrated in this discipline – as the sorcerers were not only cunning, but also lunatic judges.”<sup>3</sup> Works authored

<sup>1</sup> I owe my deepest gratitude to Michela Pereira, Paola Carusi, and Didier Kahn for their help with my encounter with Artephius. In particular, I thank Paola Carusi for having shared with me a first draft of her critical edition of the Arabic version of the *Clavis* and Didier Kahn for his help and advice on my initial survey of the manuscript tradition of the works ascribed to Artephius. I am grateful also to Neil Lewis and Cecilia Panti for the many discussions we had on Grosseteste and the first entrance of Averroes into the Latin West.

<sup>2</sup> See Roger Bacon, *Opus majus (Scientia experimentalis)*, ed. John Henry Bridges, vol. 2 (Oxford and Edinburgh: Clarendon Press, 1897), 212: “Illi tamen de quibus facta est mentio, qui per annorum centenarios vitam protraxerunt, habuerunt hujusmodi medicinam secundum magis et minus praeparatam. Nam Artephius, qui legitur vixisse mille viginti et quinque annis, habuit meliorem medicinam quam bulbucus senex, in quo renovata fuit juvenus per sexaginta annos.”

<sup>3</sup> Gerolamo Cardano, *De rerum varietate*, book 16 (Avignon: M. Vincentius, 1558), 787: “Itaque magicae stultitiae maximi in ea arte Artefii subiiciantur placita, ut non solum dolosos, sed etiam mentecaptos magos fuisse diuidices.”

by or ascribed to Arterphius were common sources for medieval and early modern practitioners of alchemy.

Notwithstanding this impressive history of influences and criticisms, little is known about Arterphius.<sup>4</sup> Two very influential works are ascribed to him: the *Clavis sapientiae* (*Key of Wisdom*) and the *Liber secretus* (*Secret Book*). While the *Liber secretus* is actually a sixteenth-century forgery, the *Clavis sapientiae* had a lasting and complex influence on the Latinate tradition since the Middle Ages.<sup>5</sup>

An initial survey of the manuscript tradition suggests that a large number of texts ascribed to Arterphius (and variants of this name) were already available in the Middle Ages. Among these works, a *Liber ad filium suum* (incipit: “Scito fili quod hunc librum tibi scripsi cui numquam”), a *Liber metheaurorum* (incipit: “Primum o Theophile huius libri constat eulogium aperire”), and a *Liber Alphidii philosophi* (incipit: “Ut enucleatius intelligas me loquentes volo”) are preserved in manuscripts dating from the thirteenth and the fourteenth centuries.

Notwithstanding the richness of works ascribed to Arterphius, his name is mainly connected to the *Clavis sapientiae*. Though this work was widely known in the Early Modern era, it appeared already in the thirteenth century. Robert Grosseteste was familiar with the *Clavis* and used it in his treatise *De artibus liberalibus*, dated from the beginning of that century. And, as Cecilia Panti has argued, the *Clavis* appears to have influenced also Grosseteste’s treatise *De luce*.<sup>6</sup>

The origins of the *Clavis* remain largely a mystery. While Giorgio Levi Della Vida showed that the *Clavis* entered the Latinate tradition as a translation from the Arabic *Miftah al-hikma*, it is difficult to pin down a firm date of translation.<sup>7</sup> The first alchemical text made available in Latin was Morienus’s *Liber de compositione alchemiae*, translated by Robert of Chester in the 1140s, probably in

<sup>4</sup> A recent attempt at reconstructing both the historiography and historical profile of Arterphius has been made by Sébastien Moureau in his “Note on Arterphius” published as an appendix to “*Elixir atque fermentum*: New Investigations about the Link between Pseudo-Avicenna’s Alchemical ‘De anima’ and Roger Bacon: Alchemical and Medical Doctrines,” *Traditio* 68 (2013): 277–325, on 324–5. In his reconstruction, Moureau claims that Roger Bacon, in his reference to Arterphius in the *Opus maius*, could have not been referring to the *Clavis*, as the context of Bacon’s reference is the doctrine of the prolongation of life, which is not mentioned in the *Clavis*.

<sup>5</sup> On the production of the *Liber secretus*, see Robert Halleaux, “Le mythe de Nicolas Flamel, ou les mécanisme de la pseudépigraphie alchimique,” *Archives internationales d’histoire des sciences* 33 (1983): 234–55, on 251.

<sup>6</sup> See Giles E.M. Gasper, Nicola Polloni, Sigbjørn Sønnesyn, Anne Lawrence-Mathers, and Nader El-Bizri, “The Use of the Stars: Alchemy, Plants, and Medicine,” in *Knowing and Speaking: Robert Grosseteste’s De artibus liberalibus ‘On the Liberal Arts’ and De generatione sonorum ‘On the Generation of Sounds’*, ed. Giles E.M. Gasper, Cecilia Panti, Tom C.B. McLeish, and Hannah Smithson (Oxford: Oxford University Press, 2019), 167–95. Cecilia Panti had already argued that Grosseteste used Arterphius in *De luce*. See Robert Grosseteste, *La luce*, ed. Cecilia Panti (Pisa: Pisa University Press, 2011), on 76, 92 and 146.

<sup>7</sup> See Giorgio Levi Della Vida, “Something More about Arterphius and His *Clavis Sapientiae*,” *Speculum*, 13/1 (1938): 80–85, on 83–4. See also Herbert D. Austin, “Arterphius-Orpheus,” *Speculum* 12/2 (1937): 251–4, from which the controversy originated. Giorgio Levi Della Vida demonstrated that Arterphius’s *Clavis* entered the Latinate tradition as a translation from the Arabic and discovered two manuscript witnesses of the Arabic version of the *Clavis*, the *Miftah al-hikma*. This discovery led an overall reassessment of both the sources and the content of the *Clavis*, both forthcoming in Paola Carusi’s critical edition of the original Arabic text. See Paola Carusi, “Animalis herbalis naturalis. Considerazioni parallele sul *De anima in arte alchemiae* attribuito ad Avicenna e sul *Miftah al-hikma*,” *Micrologus* 3 (1995): 45–74; and Paola Carusi, “Il trattato di filosofia alchemica *Miftah al-hikma* ed i suoi testimoni presso la Biblioteca Apostolica,” *Miscellanea bibliothecae apostolicae vaticanae* 9 (2002): 35–84.

Segovia.<sup>8</sup> Chester's translation opened a period of great interest in alchemy within the framework of the twelfth-century translation movement from Arabic into Latin. This interest came to a climax with Gundissalinus's inclusion of alchemy among the sciences subordinated to natural philosophy and Michael Scot's works on alchemy at the beginning of the thirteenth century. Given that Grosseteste wrote his *De artibus liberalibus* at the beginning of the thirteenth century, it can be supposed that the *Clavis* had been translated into Latin in the Iberian Peninsula as part of the impressive translating effort that characterised that area of Europe in the preceding century.

The Latin text of the *Clavis sapientiae* would then circulate throughout Europe for centuries. The *Clavis* is mentioned in both Jean-Jacques Manget's *Bibliotheca chemica curiosa* (hereafter BCC) and Lazarus Zetzner's *Theatrum chemicum* (hereafter TC). Between the two, however, there exists a major complication. While BCC presents one version of the *Clavis sapientiae* ascribed to Artephius, TC has two versions: one ascribed to *Artefius*, the other to *Alphonsus Rex*.<sup>9</sup> I have termed these two versions of the *Clavis* "A-version" (Artephius's) and "AR-version" (Alphonsus Rex's), respectively. Their incipits are:

- (a) "Artefii incipit liber qui *Clavis maioris sapientiae* dicitur."<sup>10</sup> ("A-version").
- (b) "Sapientissimi arabum philosophi, Alphonsi, regis Castellae, etc., liber philosophiae occultioris, praecipue metallorum profundissimus, cui titulum fecit *Clavis sapientiae*."<sup>11</sup> ("AR-version").

The incipits refer to two different authors, "Artefius" and "Alphonus Rex." They also have two slightly different titles, "Clavis maioris sapientiae" and "Clavis sapientiae." Most important, they present different textual versions of the *Clavis*.<sup>12</sup>

As for the title, the mere addition of "maioris" could be the outcome of an incidental interpolation of the adjective "greater" to "key of wisdom" during the centuries-long process of manuscript copying, or it could be the result of a distinction between the two versions of the *Clavis* introduced by a learned copyist at some stage of textual transmission. At present, the available data are insufficient to assess either possibility reliably.

Much more challenging is the duality of the authorship ascribed to the two versions of the *Clavis sapientiae*. Both the incipit and the preface of the AR-version

<sup>8</sup> See Robert Halleaux, "The Reception of Arabic Alchemy in the West," in *Encyclopedia of the History of Arabic Sciences*, ed. Roshdi Rashed, vol. 3 (London: Routledge, 1996), 886–902. See also Michela Pereira, "Cosmologie alchemiche," in *Cosmogonie e cosmologie nel medioevo: Atti del convegno della Società Italiana per lo Studio del Pensiero Medievale (S.I.S.P.M.), Catania, 22–24 settembre 2006*, ed. Concetto Martello, Chiara Militello, and Andrea Vella (Turnhout: Brepols, 2008), 363–410.

<sup>9</sup> See Jean-Jacques Manget, *Bibliotheca chemica curiosa*, vol. 2 (Geneva, 1702), 503–9; Lazarus Zetzner, *Theatrum chemicum*, vol. 4, Strasbourg, 1613, 198–209 (A-version), and vol. 5, Strasbourg, 1622, 856–79 (AR-version).

<sup>10</sup> Zetzner, *Theatrum chemicum*, vol. 4, 198.

<sup>11</sup> Zetzner, *Theatrum chemicum*, vol. 5, 856.

<sup>12</sup> The discrepancy between "Clavis maioris sapientiae" and "Clavis sapientiae" is not unique to Zetzner: though it only contains one edition of the *Clavis*, Manget's BCC refers to it as "Clavis maioris sapientiae." In both cases, the text of the *Clavis maioris* is the A-version.

claim that the *Clavis* is the result of a translation sponsored by “King Alfonso” whom the preface identifies as Alphonso X, *El sabio*, king of Castile (r. 1252–1284).<sup>13</sup> However, were Alphonso X the sponsor of the translation, the *Clavis* would have entered the Latinate tradition much later in the thirteenth century, and on that basis Dorothea Waley Singer has suggested that the preface should be considered spurious.<sup>14</sup> Moreover, the name “Alphonsus” is likely the result of a corruption of the name “Artephius.” Accordingly, the spurious preface of the *Alphonus Rex* version was most probably added to the text at a later stage following a corruption of Artephius’s name.

Although the differences in title and author between the A-version and the AR-version are very important, the two versions are mainly distinguished by a series of alterations within the main text itself. As yet, I have not been able to find a manuscript witness of the A-version. However, the AR-version is present in medieval manuscripts from the fourteenth and the fifteenth centuries. Noticeably, the manuscript tradition witnesses at least one case in which the text of the AR-version is ascribed to Artephius without any mention of Alphonsus either in the title or the prologue. A comparison between two manuscript witnesses makes this point clearly:

Ms. Cambridge, Trinity College O.2.18, fols. 129-135v, dated from the fourteenth century: AR-version + prologue on *Alphonus Rex*. Title: “Liber qui clavis sapientie Alfonsi nuncupatur de arte alkimica.”

Ms. London, British Library, B.M. add. 10764, fols. 117-126v, dated from the fifteenth century: AR-version without any mention of *Alphonus Rex* in the prologue. Title: “Incipit liber qui vocatus est clavis sapientie. Et credo quod fuerit opus Alfidii ut reperit in testus Alkmie.”

Both manuscripts present the text of the AR-version. The Cambridge witness has both incipit and prologue referring to *Alphonsus*, while the London manuscript presents the same text without either referring to *Alphonsus* or the prologue. On the contrary, the copyist adds that s/he believes the author was “Alfidius” (another corruption of “Artephius”).

That some of the manuscripts contain the text of the AR-version without either the incipit or the preface ascribing it to Alphonsus means that the relation between ascribed authorship and the textual version is not univocal and that the possible corruption of “Artephius” into “Alphonsus” supposedly occurred at a later stage of textual transmission than its division into A- and AR-versions. As a

<sup>13</sup> See Artephius, *Clavis sapientiae* (AR-version), 856: “Quia super honoratissimus et fortissimus rex quintus Alfonsus Dei gratia, rex Castellae et Legionis, filius domini Servandi regis et dominae Beatricis reginae, nomen suum volunt perpetuae commendare memoria: Hinc est quod diu scientias, antecessorum suorum, temporibus omnino contemptas, ad successorum suorum memoria revocare student. Inter alia vero quam plurima, librum etiam istum, qui Clavis Sapientiae nuncupatur, de lingua arabica per quendam suum scutiferum in linguam propriam Castellinam videlicet transferri curavit.”

<sup>14</sup> See Dorothea Waley Singer, *Catalogue of Latin and Vernacular Alchemical Manuscripts in Great Britain and Ireland*, vol. 2 (Brussels: Union académique internationale, 1930), 129. On Grosseteste’s use of Artephius, see Gasper et al., “The Use of the Stars: Alchemy, Plants, and Medicine.”

consequence, a simple reference to “Artephius” and “Alphonsus Rex” in the title is not sufficient to establish whether the preserved text is the AR- or the A-version.

The two versions display substantial differences at both syntactic and semantic levels. In addition, the transcription of a manuscript witness of the original Arabic version of the *Clavis* by Levi Della Vida shows that the AR-version is much closer to the original text.<sup>15</sup> In what follows, I present a textual and doctrinal comparison of the two Latin versions, focusing on the first chapter of the *Clavis*, which is dedicated to a cosmological description of the universe.

## Cosmological accounts in the AR-version

Rooted firmly within the Hermetic tradition, the *Clavis* explores relevant medical, alchemical, and philosophical points in a very peculiar way. After a dense prologue, the text is structured into three chapters, the first of which has the form of a dialogue between Artephius and Bellonus/Balinas – that is, (pseudo-)Apollonius of Tyana. The dialogical structure of the first chapter is then abandoned in the two final chapters of the *Clavis sapientiae*, which are dedicated to the generation of minerals, plants, and animals.

The work opens with a short introduction giving an account of the *Tabula smaragdina* and the generation of numbers. The dialogue between Artephius and Apollonius begins thereafter, and consists in part of an interrogation of Artephius by Apollonius concerning the grounding principles of the universe. The starting point of this interrogation is the four-fold division of nature, which is also the thematic thread of the entire chapter. The author recalls that

He [Apollonius] said: how many contraries is everything divided into? I said: Into four. He said: What are these four? I answered: the simple; the simple proceeding from the simple; the composite from the simple; the composite proceeding from the composite.<sup>16</sup>

To be “simple” (*simplex*) are the active and passive principles, that is to say, heat and cold. They are the basic principles of existence and they cause a second level of physical reality, the simple proceeding from the simple (*simplex de simplicibus*). These simple yet composite “natures” are the four primordial qualities: hot, moist, cold, and dry. Moist and dry natures are indeed caused by the encounter of heat and cold principles. The emergence of the four primordial natures corresponds to the causation of the universe itself, which is described by the *Clavis sapientiae* through an intricate cosmological account. Artephius starts his account by claiming that

In the beginning, the creator of everything said without uttering a word: “Let there be such a creature.” Thereafter, a creature was created, of which you cannot say that it was big nor small, thin nor thick, moving nor resting. Neither could it be said that it

<sup>15</sup> See Levi Della Vida, “Something More about Artephius and His *Clavis Sapientiae*,” on 83–4.

<sup>16</sup> Artephius, *Clavis sapientiae* (AR-version), 858: “Et dixit: In quot contraria dividuntur omnia? Et dixi: In quatuor”. Et ille: Quae sunt illa quatuor? Simplex, et simplex de simplicibus, et compositum de simplicibus, et compositum de composito.”

was qualified by any qualification or that was similar to anything else. Indeed, in that thing everything existed originally and, in order to bring them to act, [the creator] created a second creature, that he decided was to be called light. But this light, like a sphere, contained within its concavity the first creature. Though, having such a nature – that is, the nature of the creature – the creature had [the nature] of heat and movement (*caloris et motus*) and, accordingly, the first [creature] had [the nature] of cold and rest (*frigiditatis et status*). Because these were close to each other, the heat struck the cold, which compressed and condensed itself. And as the nature of the heat and anything thin is to penetrate, the heat penetrated till the centre of the cold. And because the end of anything corresponds to its contrary, therefore both [contrary] movement and rest are opposed to movement.<sup>17</sup>

God created from nothing a first creature without name or qualification yet provided with the nature of cold and rest. This creature contained within itself what was meant to be the universe. In order to realise the possibility of this world to come, God created a second creature, which is light, whose proper nature is heat and movement. The physical interactions between cold/heat and rest/movement originated a series of reactions within the sphere made of light and the opposition among movement, contrary movement, and rest – a noticeably Aristotelian point.<sup>18</sup>

The heat forced the cold to congeal itself and penetrated its very centre. This movement toward the core of the sphere produced another movement that was opposite to it. Gradually, heat and cold were mingled together. The sphere was warmed and chilled by the physical interactions between heat and cold. A first outcome of this process was the moist sphere, which originated in the middle of the cosmic globe and was called “the Sphere of Equality” and “the Sphere of the Soul” (*sphaera animae*). Below and above this balanced region, two additional spheres came into being. The one below, posited between the cold and the moist spheres, was colder than moist and has been called “the Sphere of the Spirit” (*sphaera spiritus*). The other sphere, between the moist and the hot spheres, was hotter than moist and has been called “the Sphere of the Sense” (*sphaera sensu*). Finally, a fourth and highest sphere was the hottest and driest. According to this physical process, the universe is structured into four spheres that move with circular motion since the beginning of the universe and that are qualified by different ratios of heat and cold.

Artephius’s account of the origin of the four spheres answers Apollonius’s question on the “simple proceeding from what is simple.” They are the four basic

<sup>17</sup> Artephius, *Clavis sapientiae* (AR-version), 858–9:

Creator omnium in principio absque sermonis prolatione dixit: “Sit creatura talis”. Postea creata est creatura, quae nec magna nec parva, nec subtilis nec grossa, nec movens nec quiescens dici potuit, nec alia quacunquē determinatione determinari, nec rei cuiuslibet assimilari, in qua quidem principaliter omnia extiterunt quae ut ad actum reducerentur, creavit creaturam secundam, quam lucem appellare decrevit. Haec autem lux sphaera quadam creaturam primam intra sui concavitatem continebat. Huius vero naturae, id est, creaturae natura, aut (sic!) creatura erat caloris et motus, unde patet prima esse frigiditatis et status. Et quia ut illae erant ad invicem approximatae, percussit calor frigiditatem, et constrinxit se frigiditas condensando seipsam. Et quia de natura caloris et cuiuslibet subtilis est penetrare, penetravit calor usque ad centrum frigiditatis. Et quia cuiuslibet rei finis est eius contrarium, motui autem opponitur tam motus quam quies.

<sup>18</sup> Aristotle defines opposite movement and rest as contrary to the moment in *Physics* V, 5.

qualities – the original simple principles of heat and cold, plus dryness and moistness, which are produced by heat and cold. The cosmological description then moves to the next level of natural structure: the “composite proceeding from what is simple” (*compositum de simplicibus*). This third degree of Artephius’s examination corresponds to the four elements: fire, air, water, and earth. Their natural emergence is caused by the gradual coalescing of the four simple qualities. The mingling of heat and dryness originated elemental fire which, in turn, having been mingled with the moist nature established elemental air. Similarly, from the coalescing of air with moist and cold natures emerged elemental water. And finally, the mingling of water with cold and dry natures produced elemental earth. As a consequence of this genetic process, each element has two simple qualities.

The fourth and final level of the *Clavis*’s cosmological description corresponds to the origin of corporeal existence: the “composite proceeding from what is composite” (*compositum de composito*). Artephius lists eight bodies in a gradual progression towards the most composite and ontologically complex. These peculiar bodies originate by their intermingling, complete or partial, with the elements, as follows:

Compositing elements	Composite outcome
fire + water	body of the corporeal soul
water + [body of the] corporeal soul	body of the corporeal spirit
earth + body of the corporeal spirit	body of the corporeal body
water + thinnest part of the corporeal body	body of the spiritual body
air + thinnest part of the spiritual body	animal body
fire + thinnest part of the animal body	body of the corporeal soul
water + body of the corporeal soul	equal body
earth + equal body	Sun

Mention of the origin of the Sun marks the transition of Artephius’s account to the first discussion of the origin of metals.<sup>19</sup> His point of departure is the acknowledgment that all metals would be naturally gold if there were no celestial bodies influencing their natural development:

If there were no different actions and influences from the celestial bodies on those below, all metals would be gold. They all derive from the same thing, and their souls and spirits derive from one thing and they only differ [among each other] on account of their concentration (*magis et minus*) and because of the diversity of greater and lesser concoction (*secundum diversitatem concoctionis maioris vel minoris*). Their diversity indeed derives from the diversity of the influences of the celestial bodies on these below. As also their number follows the number of the seven planets, so too [their] natures, colours, odours, tastes, and other incidental qualities do. Lead, indeed, is on account of Saturn, its nature as its nature. While tin is on account of Jupiter, its nature as its

<sup>19</sup> A second discussion is expounded in chapter 2 of the *Clavis sapientiae*.

[nature]. Iron is on account of Mars, its nature as its nature. While gold is on account of the Sun, its nature as its [nature]. In turn, copper on account of Venus, its nature as its [nature]. Mercury is on account of Mercury, its nature as its [nature].<sup>20</sup>

This alchemical digression into the genesis of metals is very important.<sup>21</sup> Artepheus claims that every metal would be gold if the celestial bodies did not have an influence on the sublunary world. They do so, and this is a first variable within the process of the generation of metals. A second variable is stated immediately afterwards. Artepheus refers to a difference “on account of the more and the less” (*magis et minus*). What this proportion is about is made clear a few lines below, when Artepheus presents his version of Jabir al-Hayyan’s theory of balance.<sup>22</sup> In every substance, each of the four basic qualities has a degree (from 1 to 4) whose value corresponds to the different kinds of interactions that quality has with the other qualities at an elemental and corporeal level. The variable *magis et minus* attested in the text seems to be connected to the value in degree of these qualities within the metallic compound, as the differences in this proportion have a direct effect on the kind of metal that is generated.

Finally, a third variable is ascribed to concoction. In this case, the “greater or lesser concoction” can be considered as referring either to the length or to the temperature of the process, as the *Clavis* does not specify in which way this variable affects the compound. In summation, Artepheus’s theory of the natural generation of metals is grounded on three variables substantively determining the kind of compound of each metal:

variable (x)	celestial influence from the planets
variable (y)	value of the degree of each basic quality
variable (z)	degree/length of the concoction

Once these metals have been (naturally) generated, they tend to transmute one another, in a way that is similar to the four elements that continuously change

<sup>20</sup> Artepheus, *Clavis sapientiae* (AR-version), 861–2:

Et nisi etiam essent diversae actiones et influentiae corporum supercoelestium in illa inferiora, omnia corpora mineralia essent aurum. Omnia sunt ex eodem, et animae et spiritus eorum sunt ex una re, nec differunt nisi secundum magis et minus, et secundum diversitatem concotionis maioris vel minoris. Diversitas igitur eorum est ex diversitate influentiarum corporum coelestium in ista inferiora. Sic etiam numerus eorum est secundum numerum septem planetarum, et naturae, et colores, et odores, et sapores, et caetera accidentia. Plumbum enim est de parte Saturni sua natura, ut sua natura; stannum vero de parte Iovis sua natura, ut sua. Ferrum de parte Martis sua natura, ut sua natura. Aurum vero de parte Solis sua natura, ut sua. Cuprum vero de parte Veneris sua natura, ut sua. Argentum vivum de parte Mercurii sua natura, ut sua.

On the series of associations between planets and metals, see V. Karpenko, “Systems of Metals in Alchemy,” *Ambix* 50/2 (2003): 208–30.

<sup>21</sup> I had the occasion to present a first examination of this passage in relation to the use Grosseteste made of it in a collective chapter on Grosseteste’s *De artibus liberalibus*. See Gasper et al., “The Use of the Stars: Alchemy, Plants, and Medicine.”

<sup>22</sup> On Jabir’s thought, see Syed N. Haq, *Names, Natures and Things. The Alchemist Jabir ibn Hayyan and his Kitab al-Abjar (Book of Stones)* (Dordrecht: Springer, 1994); and Paul Kraus, *Jabir ibn Hayyan: contributions à l’histoire des idées scientifiques dans l’Islam*, vol. 1, *Memoires de l’Institut d’Égypte*, 45 (1943).

into the others. They are indeed made of elements, and every elemental compound shares similar characteristics to the elements of which it is mainly made. Accordingly, a compound has always all the four elemental natures (hot, cold, moist, and dry) in different proportions and degrees (namely, from 1 to 4).

Every corporeal being, therefore, shares the same physical composition of four elements and four natures. What appear to us as different kinds of bodies differ only on account of the ratio of their composition which, according to Artephius, is moderated by the binary pair of thin (*subtile*) and thick (*spissum*). As a consequence, the realms of nature compenetrates each other,

and we have to know that the body of the metals is the thin part of earthy earth. And the body of the plants is the thin part of the body of the metals and the animal body is the thin part of the body of the plants themselves. Indeed, in this way the bodies of the metals were generated from the elements, and the plants were generated from the metals, and the animals from the plants – because each of them is resolved in that of which it is composite. Therefore, when the animals are corrupted or resolved, plants are generated from them through resolution. In the same way, metals [are generated] from the plants, while it is necessary that the metals are resolved into the elements, and the elements into the [four] natures.<sup>23</sup>

There are no gaps in nature because everything is bound together by a principle of hypostatical compenetration, by which at every middle level of natural existence, the lowest degree of a natural layer  $x$  (= the thickness of  $x$ ) coincides ontologically with the highest degree of the natural realm  $y$  (= the thinness of  $y$ ), which is placed hypostatically below it and physically within it.

This dynamic is applied to the claim that (a) the body is thick, (b) the thin part of the body is the spirit, and (c) the thin part of the spirit is the soul.<sup>24</sup> As the principle of hypostatical compenetration is valid for nature as such, Artephius claims that

It is then clear that the spirit is the thin part of the body itself, while the soul is the thin part of the spirit itself. As we have said above, all these entities are reciprocally generated through the way of composition or resolution (*per viam compositionis sive resolutionis*). And they are reciprocally altered, as we have said above about the elements themselves. Though, this entire process happens only through the entrance of one nature upon the other.<sup>25</sup>

<sup>23</sup> Artephius, *Clavis sapientiae* (AR-version), 862:

Et debemus scire, quod corpus minerale est subtile terrae terreum. Et plantae est subtile minerae, et corpus animale subtile ipsius plantae. Ex elementis enim sic generantur corpora mineralia, ex mineralibus generantur plantae, et ex plantis animalia. Et quia unumquodque resolvitur in ea, ex qua componitur. Ideo animalia quando corrumpuntur aut resolvuntur, generantur ex eis plantae via resolutionis. Eodem modo ex plantis minerae, minerae autem in elementa, elementa in naturas resolvi necesse est.

<sup>24</sup> Artephius, *Clavis sapientiae* (AR-version), 862: “Spissum est corpus, subtile autem spiritus, et subtile spiritus est anima.”

<sup>25</sup> Artephius, *Clavis sapientiae* (AR-version), 863:

Manifestum est igitur, quoniam spiritus est subtile ipsius corporis, anima vero ipsius spiritus est subtile. Omnia autem ista ad invicem, ut praediximus, per viam compositionis sive resolutionis generantur, et ab invicem alterantur, sicut etiam de ipsis elementis praediximus. Hoc autem totum non fit, nisi per ingressum unius naturae super aliam.

In a sort of emendation of the Neoplatonic refrain that “everything is in everything,” Arterphius claim that “everything is indeed everything” although in different degrees of thinness and thickness, as established by the principle of hypostatical compenetration.

The final part of the first chapter of the AR-version of Arterphius’s *Clavis sapientiae* is focused on what can be called an analysis of “gradual transmutations.” Arterphius distinguishes among four degrees in which the four natures can be found in the universe. These degrees are also the patterns of a manipulating procedure that can be realised artificially, marking the passage from a cosmological description to a much more operative dimension, which will be met eventually at chapters two and three of the *Clavis*.<sup>26</sup>

The *Clavis* reports cases of manipulation of a substance through the alteration of the degrees of its qualities. For instance, the section is opened by the example of how something which is cold at the first degree and dry at the fourth degree can be transformed into something which is cold at the first degree and moist at the fourth degree. This case entails the passage from two opposites (dry and moist) while one quality is conserved. The *Clavis sapientiae* meticulously describes the gradual passage from the fourth degree of dryness to the third, then the second, etc., and then how it turns to the first, second, up to the fourth degree of moistness.<sup>27</sup> More cases are examined by the AR-version of the *Clavis*, in a long, intricate, and complex analysis of gradual transmutations. However, I shall limit this contribution to the examination of the cosmological account of the *Clavis* in both the AR- and A-versions.

## Textual alterations in the A-version

At first sight, the A-version of the *Clavis sapientiae* displays a very close textual proximity with the AR-version in both articulation and syntax. An in-depth analysis, however, reveals something different. At a terminological level, the A-version presents many variants in names, cases, and objects that are consistent with mechanical alterations derived from the manuscript transmission of the text. Many of these variants are evidently due to this copying-and-mistaking process. For instance, variants like *excutitur/exotitur* and *Bellonius/Bolemius* are all alterations of a common

<sup>26</sup> Chapters two and three of the *Clavis* expound intriguing doctrines like the mercury-sulphur theory, the production of the *ovum*, the causation of animals and humans, and a treatment of demoniac illnesses. However, I focus here only on the first chapter of the *Clavis sapientiae* and, specifically, on the cosmological account given by Arterphius.

<sup>27</sup> See Arterphius, *Clavis sapientiae* (AR-version), 863:

Verbi gratia, cum enim viderimus aliquid esse frigidum et sicum in quarto gradu et intendimus ipsum mutare de quarto gradu frigiditatis et humiditatis, ad gradum tertium eiusdem, deinde ad secundum, deinde ad tertium postremo quinto ad aequalem inter praedicta, deinde ad gradum primum. Variamenti versus humiditatem, deinde ad secundum, deinde ad tertium, deinde ad gradum quartum frigiditatis et humiditatis. Quod si iterum mutare voluerimus ad quartum gradum caliditatis et humiditatis, mutabimus ipsum in primis ad gradum tertium frigiditatis, deinde ad secundum, deinde ad primum, deinde vero ad gradum aequalitatis in frigiditate et humiditate, et deinde ad gradum primum variamenti ex parte caliris, deinde ad tertium deinde ad quartum, donec fiat calidum et humidum in 4 gradu.

Latin term that do not impact the semantic level. Other variants appear to have the same origin, but they do impact on the meaning of the treatise. Changes like *specialis intellectus/spiritualis intellectus* or *ad gaudium/ad gradum* have a direct effect in the sense expressed by the text. In both cases, though, the textual changes appear to be utterly incidental.

Aside from these mechanical alterations, the text also displays some meaningful non-incidental changes. I shall present three central cases, starting with the cosmological account of the creation of the universe. In this regard, the A-version of the *Clavis* presents a substantively different dynamic:

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*Alphonsus Rex Version*

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Et dixi: Creator omnium in principio absque sermonis prolatione dixit: "Sit creatura talis". Postea creata est creatura, quae nec magna nec parva, nec subtilis nec grossa, nec movens nec quiescens dici potuit, nec alia quacunquē determinatione determinari, nec rei cuiilibet assimilari, in qua quidem principaliter omnia existerunt, quae ut ad actum reducerentur, creavit creaturam secundam, quam lucem appellare decrevit.<sup>28</sup>

And he said: "In the beginning, the creator of everything said without uttering a word: 'Let there be that creature.' Thereafter, a creature was created, of which you cannot say that it was big nor small, thin nor thick, moving nor resting. Neither could it be said that it was qualified by any qualification or that it was similar to anything else. Indeed, in that thing everything existed originally and, in order to bring them to act, [the creator] created a second creature, that he decided was to be called light."

*Artephius Version*

Et dixi: Creator omnium in principio absque sermonis prolatione dixit "Sit creatura talis". Postea creata est **a Deo natura, sive materia prima de qua Aristoteles in primo Physicorum, et Plato in Timaeo consimiliter scripserunt, quod est primum passivum, sive receptivum**, quae non magna nec parva, nec subtilis nec grossa, nec movens nec quiescens ens potuit, nec alia debet nominatione determinari, nec rei cuiilibet adsimilari, in qua quidem omnia principaliter exstiterunt, **scilicet licet in potentia, quae est esse medium inter esse actu et perficere et nullo modo esse**. Et ut ad actum reduceretur, creavit creaturam secundam **scilicet causam agentem similem < scilicet > orbi caelesti** quam lucem appellare decrevit.<sup>29</sup>

And he said: "In the beginning, the creator of everything said without uttering a word: 'Let there be that creature.' Thereafter, **by God a nature** is created, **that is, the prime matter about which Aristotle in the first book of the *Physics* and Plato in the *Timaeus* similarly wrote that is the first passive, that is, receptive being**. It could not have been big or small, thin or thick, a moving or a resting being. Neither must it be qualified by any other denomination or considered as similar to anything else. Indeed, in that thing everything existed originally, **that is, as in potency, which is the middle entity between being in act and completed, and not-being in any way**. And in order to bring them to act, [the creator] created a second creature, **that is, an agent cause which is similar to the celestial globe**, and that he decided was to be called light."

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A comparison of the two passages reveals that the A-version has three main additions to the text, which substantively alter the meaning of the entire account in a noticeably philosophical way. The additions claim that:

- (a) "by God a nature is created, or better (*sive*), the prime matter about which Aristotle in the first book of the *Physics* and Plato in the *Timaeus* similarly wrote that is the first passive, that is, receptive being."
- (b) "in that thing everything existed originally, that is (*scilicet*), as in potency, which is the middle entity between being in act and completed, and not-being in any way."
- (c) "a second creature, that is (*scilicet*), an agent cause which is similar to the celestial globe."

<sup>28</sup> See Artephius, *Clavis sapientiae* (AR-version), 858–9.

<sup>29</sup> See Artephius, *Clavis sapientiae* (A-version), 199.

These insertions are introduced as explicative remarks through the Latin conjunctions “sive” and “scilicet,” which suggests that they may originally have been some marginal glosses to the text.

Insertion (a) explicitly connects the first creature with prime matter. In the AR-version, the first creature is the principle of cold/rest, whose interaction with the heat/movement expressed by light originated the universe. In turn, the association of this first creature with prime matter appears to be aimed at shifting the cosmological account toward a much more philosophical interpretation of the creation. This connection was surely made possible by the redundancy of the text in depicting the first creature as completely unqualified, potential, unknowable, and substrate of what would become the universe. All these traits are characteristic of the philosophical account of prime matter, whose peculiar ontological status gave origin to intricate controversies in the Middle Ages. It is fascinating to see how the A-version makes explicit reference to Aristotle’s *Physics*, book 1 – in which matter is presented as principle of change – and Plato’s *Timaeus*. In *Physics* 1, Aristotle introduces prime matter as the substrate of form and privation. He also mentions that prime matter can be known only through analogy.

However, at *Physics* 1, 9 Aristotle also refutes Plato’s doctrine of the *chora* as expounded in *Timaeus*.<sup>30</sup> Following the mention of Aristotle’s name in the textual insertion, the reference to Plato is therefore intriguing. Evidently, the author did not perceive any tension between Aristotle’s *Physics* 1, 9 and *Timaeus*. The reason could be that s/he was relying on Calcidius’s translation and commentary of this Platonic work. Calcidius, indeed, not only associated Plato’s *chora* and Aristotle’s *hyle*, but also presented a profoundly altered quotation from *Physics* 1, 9 in which Aristotle’s criticism against Plato is reverted.<sup>31</sup> This influential doctrinal point was very common in the twelfth century, especially in consideration of the naturalistic developments of the Chartrean masters and the pupils that were educated there, like Hermann of Carinthia and possibly Gundissalinus.<sup>32</sup>

An influence of Plato’s *Timaeus* (via Calcidius) on the *Clavis* can be appreciated also in insertion (b). This insertion clarifies that the soon-to-be universe was pre-contained in potency within the substrate, which has been identified with Aristotle’s and Plato’s “prime matter.” This original substrate is said to be “in potency, which is the middle entity between being in act and completed, and not-being in any way.” This reference to the description of potency/matter as a middle status between act and non-being is as important as problematic. Its origins can be traced back to two crucially different sources. The reference came from a development of the famous

<sup>30</sup> For an overall discussion of Aristotle’s *Physics* I, 9, see James G. Lennox, “Physics I.9,” in *Aristotle’s Physics Book I: A Systematic Exploration*, ed. Diana Quarantotto (Cambridge: Cambridge University Press, 2018), 226–45.

<sup>31</sup> See Calcidius, *On Plato’s Timaeus*, ed. John Magee (Cambridge: Harvard University Press, 2016), chapter 286, 572–7. Calcidius discusses matter in detail in the last section of his commentary (chapter 268–355, on 544–689).

<sup>32</sup> See in particular Irene Caiazzo, “La materia nei commenti al *Timeo* del secolo XII,” *Quaestio* 7 (2007): 245–64; Hermann of Carinthia, *De essentiis*, ed. Charles Burnett (Leiden: Brill, 1982); and Nicola Polloni, “Thierry of Chartres and Gundissalinus on Spiritual Substance: The Problem of Hylomorphic Composition,” *Bulletin de philosophie médiévale* 57 (2015): 35–57.

passage from Plato's *Timaeus* in which matter is said to be "between no substance and some sort of substance," (*inter nullam et aliquam substantiam*) that is to say, between non-being and some sort of being.<sup>33</sup> Through Calcidius's commentary, this passage became a common ontological reference until the beginning of the thirteenth century, often applied to Aristotle's doctrine of act and potency.<sup>34</sup> However, the reference can also have been inspired by another famous passage, in this case from Averroes's *Long Commentary on Physics*, I, in which matter is said to be "a middle entity between being in act and not-being" (*medium inter esse in actu et non esse*).<sup>35</sup> Translated by Michael Scot, Averroes's commentary on Aristotle's *Physics* started to be used at the beginning of 1230s, the first Latin author to use this text probably being Robert Grosseteste.<sup>36</sup>

Both Plato's and Averroes's works can be considered as possible sources of the inserted text. On the one hand, the reference to Plato made by insertion (a) might suggest that the interpolator was indeed using Calcidius's commentary, therefore implicitly referring to the potential presence of the universe within matter, which corresponds to a chaotic status of the proto-elements. Accordingly, the interpolator would have interpreted the emergence of the four basic natures and the formation of the elements as the theoretical equivalent of Plato's theory of primordial chaos. On the other hand, however, insertion (b) is textually closer to Averroes's, with an explicit reference to the couple actuality/non-being. This would imply that the interpolator was interpreting Artepheus's doctrines in a much more Aristotelian fashion, substantively considering both the original substrate of the *Clavis* and Plato's *chora* as the prime matter of the Aristotelian tradition – potential, unextended, unknowable. Moreover, if Averroes were the source of insertion (b), it would be possible to posit a *terminus post quem* after which the text has been glossed: the early 1230s, when the Latin translation of Averroes's *Long Commentary on Physics* started to circulate in Europe.

Finally, the third insertion (c) relates the second creature (light) to the efficient cause. This association corresponds to a doctrinal clarification required by the position of the first creature as prime matter. Being completely potential, matter requires an efficient

<sup>33</sup> Plato, *Timaeus*, 51b, in Calcidius, *On Plato's Timaeus*, on 113. See also Calcidius's commentary on this passage at chapter 334, on 648–9.

<sup>34</sup> See Dominicus Gundissalinus, *De processione mundi*, ed. María Jesús Soto-Bruna and Concepción Alonso Del Real (Pamplona: EUNSA, 1999), 176–8: "Plato says, nonetheless, that first matter was between some substance and no substance and rightly, since, between complete being and complete non-being, it is possible for a substance to be in between. And for this reason, matter, which before being united with form was in potency only, is said to have been between no substance and some substance so that it may be understood to have been only the possibility of being." ("Plato tamen primam materiam dicit fuisse inter aliquam substantiam et nullam; et merito, quoniam inter omnino esse et omnino non esse substantiam medium esse possibile est. Et ideo materia, quae ante coniunctionem formae in sola erat potentia, inter nullam substantiam et aliquam fuisse dicitur, ut sola potestas essendi intelligatur fuisse.") English translation by John A. Laumakis, *The Procession of the World* (Milwaukee: Marquette University Press, 2002), 59.

<sup>35</sup> Averroes, *Commentum super libro physicorum*, in *Aristotelis opera cum Averrois Commentariis*, vol. 4 (Venice: Apud Junta 1562), 41E. This passage from Averroes's commentary on *Physics* became a very common reference to Aristotle, as has been recently pointed out by Antonio Petagine. See Antonio Petagine, *Il fondamento positivo del mondo. Indagini francescane sulla materia all'inizio del XIV secolo (1300–1330 ca.)* (Rome: Aracne, 2019), on 57–8.

<sup>36</sup> See Richard C. Dales, "Robert Grosseteste's Treatise *De finitate motus et temporis*," *Traditio* 19 (1963): 245–66. On Grosseteste's use of Averroes's *Long Commentary on Physics*, see Neil Lewis, "Robert Grosseteste's *Notes on the Physics*," in *Editing Robert Grosseteste*, ed. Joseph Goering and Evelyn Mackie (Toronto: PIMS, 2003), 103–34.

cause to actualise it. This cause is the second creature, light. It is patent that the interpolator identifies light with the first form joining prime matter and actualising it.<sup>37</sup> As for the final part of the third insertion, it is aimed to clarify an additional aspect of the *Clavis*'s exposition. Light was similar to the celestial globe, that is, the globe of the universe. This passage has to be read in relation to what the *Clavis* claims immediately afterward: that the light had the first creature in its concavity, *de facto* embracing it as if it were circumscribing the limits of the physical universe.

Further alterations can be found in the cosmological account. The A-version follows the main structure of AR-version quite reliably in relation to the next phase of cosmic causation. Nevertheless, incidental alterations abound.<sup>38</sup> Some of these alterations might not be incidental and surely have an impact on the line of reasoning of the A-version. For instance, the A-version loses an important aspect of the original account of the four spheres into which the universe is articulated: it does not refer to the "Sphere of the Sense" (*sphaera sensus*). Indeed, both references to this entity made by the AR-version are lost in the A-version:

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*Alphonsus Rex Version*

Postmodum vero naturam caloris et humiditatis, etiam **Sphaeram sensus** appellaverunt. Et supremo naturam caloris et siccitatis, quam **Sphaeram** nuncupaverunt.<sup>39</sup>

But after that, they have also called the nature of heat and moist the **Sphere of the Sense**. And they have called eventually the nature of heat and dry, which they have named the **Sphere**.

Postmodum vero sphaera aequalitatis, quae est Sphaera animae, cuius medietas est de natura caloris, et medietas altera **frigiditatis supra Sphaeram sensus, quae est caloris et humiditatis, cuius medietas est de natura caloris, et medietas altera de natura humiditatis.**<sup>41</sup>

But after that, the Sphere of the Equal, which is the Sphere of the Soul, of which a half is of the nature of heat and the other half of the nature of cold, is posited above the Sphere of the Sense, which is of [the nature of] heat and moist, of which a half is of the nature of heat and the other half of the nature of moist.

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*Artephius Version*

Post modum vero naturam caloris et humiditatis, quam **Sphaeram tertiam** apellaverunt. Et supremo natura caloris et siccitatis, quam **Sphaeram** apellaverunt **quartam**, et hic fixatur.<sup>40</sup>

But after that, they have called the nature of heat and moist, which is the **Third Sphere**. And eventually, the nature of heat and dry that they have called the **Fourth Sphere**, was also fixed there.

Postmodum vero sphaera aequalitatis quae est Sphaera animae cuius medietas est de natura caloris, et medietas altera **de natura humiditatis.**<sup>42</sup>

But after that, the Sphere of the Equal, which is the Sphere of the Soul of which a of which a half is of the nature of heat and the other half of the nature of moist.

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<sup>37</sup> This is a very important point, as Grosseteste would famously identify light with the form of corporeity, depicting a cosmology which is very close to Artephius's. In a forthcoming article, Cecilia Pantri and I will give a detailed account of the meaningful interest Robert Grosseteste bestowed on alchemy, addressing this and similar questions on the alchemical sources used by this fascinating thinker.

<sup>38</sup> It can be worth noting that the annotator or a copyist modified a previous reference to rest (*status*) into dryness (*siccitas*) as a correlative qualification of the cold. And they have also emended the syntax of the convoluted Latin text in that very same passage. See Artephius, *Clavis sapientiae* (A-version), 199–200: "Haec autem lux sphaeram quamdam creaturam primam intra sui concavitatem obtinebat. Huius vero naturae, et primae creaturae alia creatura erat caloris et motus, unde patet aliam primam esse frigiditatis ac siccitatis."

<sup>39</sup> See Artephius, *Clavis sapientiae* (AR-version), 859.

<sup>40</sup> See Artephius, *Clavis sapientiae* (A-version), 200.

<sup>41</sup> See Artephius, *Clavis sapientiae* (AR-version), 860.

<sup>42</sup> See Artephius, *Clavis sapientiae* (A-version), 201.

At first sight, the second disappearance of the “Sphere of the Sense” seems to be the outcome of a *saut du même au même* from “medietas altera frigiditatis” to “medietas altera de natura humiditatis.” The same cannot be said about the first passage, as its terminology is altered and the “Sphere of the Sense” becomes the “Third Sphere.” As a consequence, the general reference to the “Sphere” in the AR-version becomes a reference to the “Fourth Sphere” in the A-version. According to this set of correlated textual modifications, the first altered passage from the A-version cannot be considered an outcome of a mechanical loss. The A-version reinterprets the AR-version – and misinterprets it. In fact, as the “Sphere of the Sense” becomes the fourth sphere, the A-version needs to posit a fifth sphere corresponding to the sphere of heat and dry. As a consequence, the A-version counts five spheres while the AR-version has only four.

Other aspects of the text show relevant discrepancies between the two versions. Another case of mechanical loss of text is the origin of the missing identification between silver and the Moon in the AR-version.<sup>43</sup> It is the final part of the first chapter of the *Clavis sapientiae*, however, that suffers the most profound alteration. The long paragraphs of Artephius’s examination of the “gradual transformations” in the AR-version are reduced by 2/3 in the A-version (namely, 1296 vs. 418 words).<sup>44</sup> All references to the proto-formalisation of key examples provided by the AR-version and its recourse to explanatory figures to describe the complex alchemical procedures completely disappear. This profound alteration of the text does not seem to be the consequence of a clumsy or eager copyist. Neither can it be the result of a loss of folia in the manipulation of the manuscript, as the text is not missing, but has served different purposes.

## Conclusions

The textual and doctrinal analysis presented above has considered the two versions preserved by the BCC and TC collections. The textual examination clearly shows that the A-version is a modified or revised version of the AR-version. The alterations that originated in the A-version, however, could have happened at different stages of the manuscript tradition, especially if we consider the two versions as witnesses of two different families which originated early in the tradition. The second family of manuscripts cannot be identified by the reference to King Alphonso or by the Prologue, as the London manuscript shows that there are manuscripts witnessing the AR-version without ascribing the text to *Alphonsus Rex*.

There are at least two major sets of alterations that mark the A-version of the *Clavis sapientiae*:

- (i) The insertion of philosophical passages on prime matter and form;

<sup>43</sup> Indeed, this passage is present in the A-version. See Artephius, *Clavis sapientiae* (A-version), 202: “Aurum vero de parte Solis, sua natura ut sua natura. Argentum vivum de parte Mercurii, sua natura ut sua natura. **Argentum ex parte Lunae, sua natura ut sua natura.** Cuprum vero de parte Veneris, sua natura ut sua natura.”

<sup>44</sup> Compare Artephius, *Clavis sapientiae* (AR-version), 863–7 and Artephius, *Clavis sapientiae* (A-version), 203–4.

(ii) The global reformulation of the final part of chapter 1 dedicated to gradual transformations.

It is my opinion that (i), the three passages related to the ontology of prime matter, were originally glosses clarifying Artephius's account. Nevertheless, (ii), the profound alteration that other sections of that text have undergone and the reformulation of the final part of chapter 1, cannot be explained by simple interpolations or mechanical losses. In turn, it could be that the main text of the A-version was manipulated or aborted in translation from the Arabic, perhaps made by the translator himself and later glossed by a learned scholar interested in natural philosophy. A duality of translations was not uncommon in the Iberian Peninsula: many works translated from the Arabic are preserved in two different versions, as are important parts of Avicenna's works.<sup>45</sup> Accordingly, the glossator might have worked on a proto A-version already distinguished from the AR-family in virtue of the (ii) set of main textual alterations.

While questions on the origin of the main text of the A-version remain open, I shall focus my conclusive remarks on the philosophical glosses. They appear to be the result of a learned philosophical glossator who used the text within the Latinate framework. Indeed, the reference to Plato's *Timaeus* makes clear that the insertions were written by a Latinate glossator and were not present in the text translated from the Arabic. The three insertions are based on two central claims, of which the first is explicit and the second implied. Accordingly,

- (a) the first creature (the principle of cold) is prime matter;
- (b) the second creature (light) is the first form.

Light as first form is implied by redundancy concerning the actualisation of the potentiality of prime matter, expressed by the insertion (b) seen above. Prime matter is posited by the glossator through two explicit references, one to Aristotle, the other to Plato. These two philosophical authorities are accompanied by a reference to the middle-status of matter, whose source can either be Plato's *Timaeus* or Averroes's *Long Commentary on Physics*.

The insertion itself does not offer enough ground to ascertain the source that inspired it, as the doctrinal closeness to Plato's theories is contrasted to the textual closeness to Averroes's writing. In either case, the glosses should be dated from the first half of the thirteenth century, as it is clear in consideration of the explicit mention of Plato

<sup>45</sup> See Charles Burnett, "Scientific Translations from Arabic: The Question of Revision," in *Science Translated. Latin and Vernacular Translations of Scientific Treatises in Medieval Europe*, ed. Michèle Goyens, Pieter De Leemans, and An Smets (Leuven: Leuven University Press, 2008), 11–34. It is worth noting that cases of altered translations that cannot be classified as either genuine translations or original works are not uncommon in the Middle Ages, especially in the twelfth century. A most eminent case of this "creative approach" to translation and textual appropriation is Dominicus Gundissalinus. His Latin translation of al-Farabi's *De scientiis* was the object of a series of alterations, additions, and textual reshaping which is close to what is in place with the A-version of the *Clavis sapientiae*. I am not claiming that Gundissalinus was the translator of that version; only that the similarities with what happened to the A-version are significant. These similarities are an outcome of specific practices of Arabic-into-Latin translations in the twelfth century.

by insertion (a). There, Plato's name is used as the main *auctoritas* together with Aristotle's. References to Plato's theory of matter are characteristic features of the *Timaeus*-based Latinate speculation of the twelfth century and the beginning of the thirteenth century, often corresponding to first attempts to understand the novelty of Aristotle's thought by contrasting it to Plato's. Later on, some aspects of the Platonic doctrine would be kept by the tradition, in particular by the Franciscans. Yet references to the *Timaeus* as authoritative source concerning the theory of matter would be rather unusual, being ousted by Aristotle's and Averroes's theories.

A most meaningful example of this thirteenth-century attitude is provided by the first Latin *Quaestiones* on Aristotle's *Physics* written in Paris in the 1240s. The author of these questions is Roger Bacon. He dedicates a substantive part of his questions on the first book of the *Physics* to the manifold problems related to matter (its existence, scope, intelligibility). In those dense pages, Roger Bacon refers to Plato's *Timaeus* only twice and always to demonstrate that his assumptions were wrong or misinterpreted.<sup>46</sup> In turn, Grosseteste's *Notes of Physics* is one of the last works in natural philosophy to use Plato with an authoritative profile, through seven occurrences of his name throughout a relatively short text.<sup>47</sup>

Both cases are just examples of the progressive exhaustion of the influence the *Timaeus*'s doctrine of matter had on the Latinate tradition – an exhaustion which is even more profound as regards to the doctrine of primordial chaos. Plato did not disappear, but he ceased to be referred to as a main authoritative source in natural philosophy. Accordingly, the relevance bestowed upon Plato's *Timaeus* in the glosses to Artephius's *Clavis sapientiae* makes it plausible that they were added to the text in the first half of the thirteenth century. Placing them at a later date would be very difficult in light of their philosophical contents.

In this regard, it should be noted that the A-version of the *Clavis sapientiae* is not an isolated case in which philosophical glosses entered the transmitted text. As Jean-Marc Mandosio and Irene Caiazzo have pointed out, philosophical glosses probably authored by Roger Bacon became part of the transmitted text of the *Tabula smaragdina* – a text which plays a fundamental role in the *Clavis*.<sup>48</sup> Similar dynamics appear to be put in place in both texts, as a consequence of a need for philosophical clarifications.

At the same time, it should be recalled that Grosseteste used the *Clavis sapientiae* in his *De artibus liberalibus*, deriving from it some central points of his discussion of alchemy and astrology. Among these doctrines, Grosseteste gives an account of the associations between metals and planets, their composition out of mercury and

<sup>46</sup> See Roger Bacon, *Quaestiones supra libros octo Physicorum Aristotelis*, ed. Ferdinand M. Delorme and Robert Steele (Oxford: Clarendon Press, 1935), quaestio 57, on 44 and quaestio 75, on 59. It should be noted that quaestio 57 discusses the middle position of matter in a manner similar to the glosses on Artephius's text. However, the relevance bestowed upon Plato is rather minor, as was common at the time.

<sup>47</sup> See Robert Grosseteste, *Commentarius in VIII libros Physicorum Aristotelis*, ed. Richard C. Dales (Boulder: University of Colorado Press, 1963).

<sup>48</sup> See Irene Caiazzo "La *Tabula smaragdina* nel Medioevo Latino. II. Note sulla fortuna della *Tabula smaragdina* nel Medioevo Latino," in *Hermetism from Late Antiquity to Humanism*, ed. Paolo Lucentini, Ilaria Parri, and Vittoria Perrone Compagni (Turnhout: Brepols, 2004), 697–711.

sulphur, and, eminently, a development of the three variables on the generation of metals expounded by Artephius. Yet Grosseteste also connects these dynamics to his theory of matter, seemingly displaying a stricter consistency with the A-version of the *Clavis sapientiae*. This consistency, however, might very well be incidental, as it is impossible to ascertain at present whether Grosseteste used the AR- or A-version – or even if he glossed the former producing the latter.

From a far-reaching point of view, the case of Artephius's *Clavis sapientiae* tells us something very important about the overall attitude toward alchemy in the thirteenth century. Since the very beginning of the Latinate alchemical tradition, pre-modern philosophers looked into hermetic and alchemical texts in order to find specific developments and also practices related to their interests. Undoubtedly, philosophy has had a meaningful influence on those alchemical practices and theories. Nevertheless, the case of the short philosophical glosses on the *Clavis sapientiae* appears to substantiate, at least in part, a claim that also theories and practices from the alchemical tradition shaped some aspects of the philosophical reflection in the Middle Ages. And in that context, problems concerning ontology, intelligibility, and practices of matter undoubtedly played a meaningful role.

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