

*Michela Pereira*

MOTHER OF ALL CREATURES  
ALCHEMICAL VIEWS ON MATTER IN THE  
LATIN MIDDLE AGES

*A new source on first matter?*

The alchemical texts of Arab-Islamic origin, which reached the Latin West in the 12<sup>th</sup> century, had a strong impact on learned scholars, who translated and read works where they found notice of practices – mainly metallurgical and dyeing practices – that they could partially recognize, but whose connection with natural philosophy they could only guess. Moreover, in the alchemical texts referring to Hermetic philosophy, transmutations were presented as directed to a higher goal than those which mere craftsmanship can obtain: an enticing secret with lofty religious connotations, a «novelty» which fascinated and eluded understanding<sup>1</sup>. The Hermetic-alchemical secret concerned the knowledge of matter, or rather was based upon the idea of matter as the unique root (*radix*, i.e. principle) of the elements; these, on turn, are the principles of all bodies. Such a notion of matter emerges, albeit confusedly, from the first text translated into Latin, the *Testamentum Morieni*:

Scias quod radix eius sit una, et res una atque una substancia [...] de una radice fit que postea in multas res expanditur et iterum ad unam revertuntur [...] Dixit Hermes: sicut omnia ex uno procedunt, sic et hoc opus maius de una re fit et de una substancia, et sicut homo habet

1. A survey of this theme in my «Projecting perfection. Remarks on the origin of the “alchemy of the elixir”», *Micrologus. Nature, Sciences and Medieval Societies*, 24 (2016), 73-93.

in suo corpore .iiii. elementa, sic deus creavit ea et sicca et disiuncta et coniuncta et collata atque expansa, quia unum corpus ea coniungit<sup>2</sup>.

The notion of *radix una* of the elements could in fact contribute to the search for the unitary substrate of natural bodies that, in the words of Hermann of Carinthia, was the «materiale corporee forme receptaculum [...] in multiplici diversitate»<sup>3</sup>. Since the alchemical opus begins by dissolving mixed natural bodies in their seemingly ultimate components, one could think that they resolve bodies into their material substrate, thus reaching the maximum proximity to the original process, from which all natural bodies emerge: «de incorporea natura corpoream creamus substantiam [...] non translationis forme, ut diximus, sed transmutationis materie»<sup>4</sup>. Both the Platonic notion of matter and the Aristotelian as well were present to the mind of the philosophers of the late 12<sup>th</sup> century who, like the above quoted Hermann, strove to outline a rational understanding of nature. The *radix una* of the alchemists, however, neither exactly coincides with Plato's idea of matter («omnium quae gignuntur receptaculum [...] quasi quaedam nutricula [...] omni quippe forma carens», which Chalcidius explains as «materiam principalem et corporis primam subiectionem»<sup>5</sup> [316]); nor with the Aristotelian «aliquid quod subiicitur», without form and hence devoid of actual existence<sup>6</sup>. Therefore alchemy seemed to disclose a new possibility for thinking matter as the unique principle of all bodies and of their transformations, according to the new kind of experience (or *experimentum*) introduced by the alchemical texts.

Around the end of the 12<sup>th</sup> and the beginning of the 13<sup>th</sup> centuries, there were some attempts to include alchemy in the *divisio*

2. *A Testament of Alchemy*, ed. L. Stavenhagen, Hanover (New Hampshire) 1974, 12, 14 (with English translation, 13, 15).

3. Hermann of Carinthia, *De Essentiis*, ed. and transl. Ch. Burnett, Leiden, Köln 1982, 100 (English translation, 101).

4. *Ibid.*, 102 (103).

5. Chalcidius' translation and commentary on Plato's *Timaeus* are quoted from: Calcidio, *Commentario al Timeo di Platone*, ed. C. Moreschini (with parallel Latin text from the critical edition by Waszink), Milano 2003, 94 (T Wz 46), 100 (T Wz 49), 620 (Comm. par. 316).

6. *Phys.* I.7 (187 a), *translatio vetus (Aristoteles Latinus VII 1/2, Brill 1990)*.

*disciplinarum*, either as a part of natural science, or as especially subordinated to astronomy<sup>7</sup>. Yet, it was not until the following century that the full range of the theoretical implication of the transmutation practices began to be explored within the Aristotelian framework of scholastic natural philosophy. This was first attempted in the *Quaestiones* on meteorology by Nicolaus Peripateticus<sup>8</sup>, who wrote at the court of Frederic II of Sicily, in the same environment where Michael Scot was a witness to the diffusion of practical alchemy in the Mediterranean regions<sup>9</sup>. After that, alchemy became the object of some attention even within universities. The interest of the Scholastic thinkers was primarily directed towards a critical evaluation of the basis and of the methodology of alchemy, as well as towards a clear approach to the theory/practice relationship within alchemy and to its relationship to natural philosophy and/or the special disciplines subalternated to it<sup>10</sup>.

One of the earliest scholastic discussions on alchemy can be found in the *Liber secretorum alchimie*, written by *Magister* Constantine of Pisa. He speaks of himself as a physician (or a student of medicine), who wrote little after the middle of the 13<sup>th</sup> century<sup>11</sup>. According to Barbara Obrist, who critically edited and studied the *Liber secretorum alchimie*, this composite text «illustrates the fact that in mediaeval universities the teaching of medicine was closely associated with that of Aristotle's natural philos-

7. C. Crisciani, M. Pereira, *L'arte del sole e della luna. Alchimia e filosofia nel Medioevo*, Spoleto 1996, 31-34.

8. Nicolaus Peripateticus, *Quaestiones*, ed. S. Wielgus, *Mediaevalia Philosophica Polonorum*, 17 (1974), 17-155. Cf. R. Halleux, «L'alchimia», in *Federico II e le scienze*, a cura di A. Paravicini Bagliani, P. Toubert, Palermo 1994, 152-61. According to Chiara Crisciani, «[la forma] questionativa costituisce lo stile proprio per un approccio meno diretto e più meditato filosoficamente nei confronti della validità dell'alchimia nel suo complesso: rispetto al dialogo, si presenta come un discorso di principio destinato a chiunque sia dotato di ragione» (C. Crisciani, «La *Quaestio de alchimia* fra Duecento e Trecento», *Medioevo. Rivista di storia della filosofia medievale*, 2 (1976), 119-68: 128-29).

9. A. Vinciguerra, «The *Ars alchemiae*, the First Latin Text on Practical Alchemy», *Ambix*, 56 (2009), 57-67.

10. Crisciani, «La *Quaestio*», 129.

11. The datation 1257 is given, as a hypothesis, by B. Obrist, «The Document», in Costantine of Pisa, *Liber secretorum alchimie*, B. Obrist ed., Leiden 1990, 3-19: 6.

ophy»<sup>12</sup>. Moreover, from her introduction we learn that «the aim of the *Liber secretorum alchimie* is to introduce alchemy into the sphere of Aristotle's natural science, and thereby conferring on it both scientific status and social dignity»<sup>13</sup>. This «scientific legitimization» of the transmutation art seems to have been conceived of while Constantine was attending lectures on Aristotle's *Meteorologica*; therefore his approach to alchemy belongs to the same intellectual climate as that of Vincent of Beauvais in his *Speculum naturale*, and of Albert the Great's *de mineralibus* and commentary on *Meteorologica*. Yet Constantine's text has not a status comparable to those written by Vincent and Albert; rather, it is a kind of report of «classroom discussions on Aristotle's *Meteorologica*»<sup>14</sup>. Not surprisingly, this text did not obtain a wide diffusion, indeed, its impact on later development of alchemy was almost null.

Anyway, the *Liber secretorum alchimiae* is interesting for our discussion, since part of Constantine's «scientific legitimization» of alchemy consists in a comparison between mercury, which is the very beginning of the transmutation process («inpossibile habere introitum alchimie nisi mediante mercurii congelatione») <sup>15</sup>, and the prime matter of creation:

Omnis consistit fortitudo et operatio in mercurio, quia est mater et materia omnium metallorum, tanquam yles primitiua causa [...] in qua congelatione efficitur causa materialis, ut in prima yles que fuit omnium creaturarum mater, a summo opifice condita [...] <sup>16</sup>.

12. *Ibid.*, 3.

13. *Ibid.*, 5.

14. Obrist, «The Place of the *Liber secretorum alchimie* in the Context of Mediaeval Learning», in Constantine of Pisa, *Liber*, 22-49.

15. Constantine of Pisa, *Liber*, 75.

16. Costantine of Pisa, *Liber*, 84, 79. Cf. 85: «Et numquam potest fieri aliqua transformatio in alchimia nisi mediante mercurio, quia ipse est omnium materia, ut uidebitur in suis operibus [et in] subsequentibus». Cf. B. Obrist, «Cosmology and Alchemy in an Illustrated 13th Century Alchemical Tract: Constantine of Pisa, "The Book of the Secrets of Alchemy"», *Micrologus. Nature, Sciences and Medieval Societies*, 1 (1993), 115-60. For a survey of mediaeval alchemical cosmologies see M. Pereira, «Cosmologie alchemiche», in *Cosmogonie e cosmologie nel Medioevo*, edd. C. Martello, M. C. Militello, A. Vella, Louvain-la-Neuve 2008, 363-410.

We must stress that *mercurius* is not identified with created matter, but is just associated to this by analogy: *tanquam yles*. To metals, mercury is the one general principle, as *yles* is to *omnes creaturas*. Moreover, a clear phrase in the prologue confirms that mercury is considered in the light of Aristotle's classification of bodies, and that alchemy is kept within the limits of a technique:

De omiomeris uero corporibus, ut hic loquendi est intentio, in quibus consistit tota ars alchimica, maxime in mercurio, quia ipse est materia omnium metallorum, a quo habent fieri omnia metalla, et naturaliter, sicut et artificialiter<sup>17</sup>.

And yet that same prologue, structured like a classical *accessus*, connects the discourse about *corpora omiomera*, «que sunt unius generis et diuisa ab omnibus corporibus aliis»<sup>18</sup>, with an extended discussion about the origin of *all* bodies, by abruptly introducing a theological / metaphysical point of view. After quoting the most famous aphorism from the *Liber XXIV philosophorum*, «Monas genuit monadem et in suum reflexit ardorem», attributing it to Aristotle, Constantine engages in a discourse concerning the reason of creation. He alternates a Platonic philosophical language to that of the Genesis, thus outlining a cosmology based on the four elements (*tetrasoma*) and the fifth essence, all this sounding as an echo of the statement of Morienus about the first root and the four elements. This discourse ends as abruptly as it had begun, going back to the homeomeric bodies<sup>19</sup>. In spite of the impression of confusion and of overlapping (metals and «all beings»), probably due to the notebook character of the *Liber de secretis alchimie*, the position of Constantine of Pisa is generally coherent with the first attempt made, about ten years before, by Albert the Great – an incomparably superior mind than Constantine – to understand alchemy within a concordist philosophical framework.

The position developed by Albert the Great about alchemy was a coherent attempt to insert this new «art and science», to

17. Costantine of Pisa, *Liber*, 70. The passage goes on with a clear statement about the relationship between nature and art.

18. Costantine of Pisa, *Liber*, 68.

19. Cf. above, note 17.

which he approached with deep interest, within natural philosophy, at least so far as alchemy could be considered a *science*. Alchemy was explicitly mentioned by him for the first time in his commentary on *Sentences* (1246 ca.); however, already earlier, in *de quattuor coaequaevis*, he had engaged in elaborating a new theory of matter, along a line which might support the same comparison with cosmological issues as the one by Constantine<sup>20</sup>. Starting from a theory of creation, Albert proceeded to discuss about *natura creata*, whose foundation was considered prime matter<sup>21</sup>. Then he compared Augustine's doctrine on matter (*Conf.* XII, 8.8: «fecisti mundum de materia informi, quam fecisti de nulla re pene nullam rem») with Aristotle's metaphysical notion of it. And, eventually, he elaborated his philosophical approach on the basis of the notion of *forma substantialis*<sup>22</sup>, thus keeping himself within the limits of a discussion about matter as the substrate of corporeal alterations<sup>23</sup>.

The notion of *forma substantialis* was Albert's main tool for building the new theory of matter he needed, and he still used it in his later commentary on *Meteors* and *de mineralibus*. In these works, indeed, he linked information got from alchemical literature and from mineralogical practices, in order to complement Aristotle's treatment about the origin of metals, nay of unani-

20. U. R. Jeck, «*Materia, forma substantialis, transmutatio*. Frühe Bemerkungen Alberts der Großen zur Naturphilosophie und Alchemie», *Documenti e studi sulla tradizione filosofica medievale*, 5 (1994), 205-40. On Albert and alchemy see also P. Kibre, «Albertus Magnus and alchemy», in *Albertus Magnus and the Sciences*, ed. J. Weisheipl, Toronto 1980, 187-202; R. Halleux, «Albert le Grand et l'alchimie», *Revue des sciences philosophiques et théologiques*, 66 (1982), 57-80.

21. The issue is developed in Albert, *Summa de creaturis de quattuor coaequevis*, where the second question of the first book is his first exposition of a global theory of matter. See A. Rodolfi, *Il concetto di materia nell'opera di Alberto Magno*, Firenze 2004.

22. Jeck, «*Materia*», 212. According to Jeck *formae substantiales* are «dynamischen Strukturen, die eine dem Stoff inhärente Form mit gestalter Aktivität vereinigen» (215).

23. The status of matter as substrate and its ambiguous relationship to the category of substance is the focus of prolonged discussion within Aristotelian studies. Cf. Th. Irwin, G. Reale, R. Davies, *I principi primi di Aristotele*, Milano 1996, § 47 112-14. See also C. Esposito, P. Porro, «Introduzione» in *Quaestio. Annuario di storia della metafisica*, 7 (2007), 7.

mated bodies in general, and he criticized alchemists for not attempting to understand matter as a metaphysical concept<sup>24</sup>. The intermediate stage of his reflection was developed in the commentary to the *Sentences*, which, according to Udo Jeck, exemplifies the «enormen Einfluss der aristotelischen Naturphilosophie auf die Frühphase der lateinischen Alchemie»<sup>25</sup>. The key notion examined is that of transmutation, only one of whose four modes, however, is related to alchemy (the other three being the elementary *mixtum* in the preparation of medicines, the decomposition of corpses, and «natural» transmutation, i.e. spontaneous generation). Therefore, the discourse on alchemical matter was kept within the scope of a special science, meteorology, with its development into mineralogy. Focusing on the role of *formae substantiales* (and that of heavenly influence) in transmutation, Albert *de facto* excludes that the alchemical *prima radix* may be linked to the notion of *prima materia* in creation.

#### *Alchemical matter as a philosophical problem*

The question about the possibility of identifying the murky substance, obtained by dissolving metallic bodies (or other)<sup>26</sup> in the very first phase of the transmutation process, with *materia prima*, as this was understood in the Aristotelian natural philosophy, was inspired among alchemists by discussions on the *de conglutinatione et conglutinatione lapidum*. This was a text written by Avicenna, and translated into Latin by Alfred of Sareshel, who appended it to his commentary on *Metheors*, where he observed that Aristotle's fourth book on meteorology was not meteorological but rather an introduction (and nothing more than an introduction) to mineralogy<sup>27</sup>. Avicenna's text, considered as a whole,

24. Jeck, «*Materia*», 234.

25. *Ibid.*, 222; at note 47, *ibid.*, Constantine of Pisa is quoted (*Liber secretorum alchimiae*, 73).

26. On alchemical practice not starting from the dissolution of metals, see M. Pereira, «Teorie dell'elixir nell'alchimia latina medievale», *Micrologus. Nature, Sciences and Medieval Societies*, 3 (1995), 103-48.

27. Alfredo di Sareshel, *The Commentary on the Metheora of Aristotle*, ed. J. K. Otte III.17, Leiden 1988, 52: «Quartus iste *Meteororum* a premissis tribus

promotes research on the transformations of matter at a further level than that of Aristotle in his *de generatione et corruptione*. Indeed, Avicenna's argument focuses, not on the generation of elements and their mutual interactions, but on the generation of mixed bodies, thus throwing some light on the theoretical background of actual alchemical practices<sup>28</sup>.

Avicenna himself was also the author of the *Liber ad Hasen regem*, where a careful research about the production of the elixir is described. This is a quite different text from the pseudo-Avicennan *de anima in arte alchemiae*: it is a mere laboratory protocol, where the then current practices of Arab-Islamic alchemy are examined, and its authenticity seems out of doubt<sup>29</sup>. Notwithstanding this – or, possibly, just as a result of his *bona fide*

in modo tractandi et materia diversus reperitur. In prioribus enim de impressionibus que accidunt in sublumi sufficienter tractavit. In hoc vero de virtutibus tam activis quam passivis et compositione naturalium corporum agit. Unde et a philosophis introductorius in librum *De mineralibus* potius quam meteoricus indicatur».

28. See also Albert the Great's distinction between *de gen. et corr.*, that he describes as treating «de generatione universali substantiae et substantiae simplicis quae est elementum», and *Meteor. IV*, whose subject, the generation of *mixtum*, albeit more general than that of individual bodies, «est tamen contracta respectu generationis absolute universalis» (*De Mineralibus*, ed. Jammy vol. II, 147b-48a).

29. The debate about the *Risālat al-iksir* has been recently summarized by Sébastien Moureau in his introductory «Étude» in S. Moureau, *Le De anima alchimique du pseudo-Avicenne*, Firenze 2016, 19-23. Although he cautiously concludes that «le débat reste donc ouvert» (23), all the alleged arguments from several different scholars (Ateş, Stapleton, Anawati, Ullmann, Terzioğlu) converge on the authenticity of the *Risālat* as well as on its character of laboratory protocol. Instead, in the *Kitāb al-ma'ādin wa-al-āthār al-'uluwiyya* (*De mineralibus/De congelatione et conglutinatione lapidum*, translated into Latin by Alfred of Sareshel and especially known by Latin authors because of its final discussion on the reality of transmutation, *Sciant artifices*), a philosophically oriented discussion is developed. Moreover, the Latin translation, with the added sentence on *materia prima*, adopted an even more philosophical approach to this basic issue (cf. here immediately below and notes 30-34). Moureau, following William Newman (cf. below, note 49) stresses the apparent traces of «atomism» in the *Risālat*, and seems neither to perceive the shift between experimental description and philosophical discussion on matter (see «Étude», 17-18), nor to know my previous discussion on this topic in «*Prima materia. Echi aristotelici e avicenniani nel Testamento pseudolulliano*», in *Aristoteles Chemicus. Il IV libro dei meteorologica nella tradizione antica e medievale*, a cura di C. Viano, Sankt Augustin 2002, 145-64.



research —, Avicenna explicitly denied the possibility of transmutation in the *de congelatione*.

Avicenna's explicit criticism of alchemy is expressed in the final pages of *de congelatione*, which circulated widely and are mainly known from the incipit of the Latin translation by Alfred of Sareshel, *Sciant artifices*<sup>30</sup>.

Quare sciant artifices alkimie species metallorum mutare non posse, sed similia facere possunt et tingere rubeum citrino, ut videatur aurum, aut tingere albo donec sit multum simile argento aut eri, aut plumbi immundicias abstergere possunt; verum tamen semper erit plumbum, quamquam videatur argentum; obtinebunt tamen in eo aliene qualitates. Ceterum, quod differentia specifica aliquo tollatur ingenio non credo possibile, quia in talibus non est quod complexio convertatur, quia ista sensibilia non sunt de quibus mutantur species, sed sunt accidentia et proprietates. Differentie metallorum enim non sunt cognite, et cum differentia non sit cognita, quomodo poterit sciri utrum tollatur necne, vel quomodo tolli possit? Sed expoliatio intus accidentium ut saporis, coloris, ponderis vel saltem diminutio non impossibilis, quia tunc hec ratio non stat. Ceterum contra hoc proportio terrarum substantiarum compositis non erit in omnibus eadem. Hec compositio in aliam mutari non poterit compositionem, nisi forte in primam reducatur materiam, et sic in aliud quam prius erat permutare. Hoc autem per solam liquefactionem non fit, sed acciduntur ei ex hoc res quedam extranee etc. Finis<sup>31</sup>.

Avicenna's philosophical analysis of the carefully observed transformations in the various stages of the transmutation process seemingly had driven him to refute the capability of alchemists to transmute the *species* of bodies; keeping himself on a logical level, he argued that the *species* (i.e. the core definitions which identify any material body) cannot be radically altered by physi-

30. Cf. F. H. Fobes, «Medieval Versions of Aristotle's Meteorology», *Classical Philology* 10 (1915), 297-314, and *Aristoteles Latinus I Pars posterior*, Cambridge 1955 - G. Lacombe), 57, 96-97 (from ms. Digby 153, f. 28). Cf. Alberto Magno, *De Mineralibus*, III.1. 9 (ed. Jammy, vol. II, 251b). Bacon refutes the attribution of *De congelatione* to Aristotle in several passages of his works: e. g. in *Opera hactenus inedita* vol. II, 6-7. Cf. Pereira, «*Prima materia*», 150-52.

31. Avicennae *De congelatione et conglutinatione lapidum* being sections of the Kitab al-Sifa', ed. and tr. E. J. Holmyard, D. C. Mandeville, Paris 1927; cf. Moureau, «*Étude*», 14-17.

cal treatments like those caused in metals or in mineral substances by means of fire: solution, sublimation, distillation etc.<sup>32</sup>. Therefore, what alchemists obtain is only an external alteration, which gives to base metals the look of gold or silver, without really transmuting them.

The Latin translation of the *Sciant artifices*, however, added a sentence, which is not found in the Arabic text and produces a shift from logical towards a physical consideration, nay a metaphysical one. «Hec compositio in aliam mutari non poterit compositionem, nisi forte in primam reducantur materiam, et sic in aliud quam prius erat permutare»<sup>33</sup>. Does this sentence really imply identification of the material mass produced in the first stage of the *opus* (also called *tetrasoma*, or *nigredo*) with *materia prima* devoid of form (according to Aristotle's metaphysical definition)? If one interprets Avicenna's *de congelatione* according to the *minima* theory, as Sébastien Moureau does, the identification of the alchemical stuff with *materia prima* goes beyond the scope of Avicenna's doctrine, yet we cannot deny that this step was really done by some Latin alchemists. The *de congelatione* was rapidly diffused as a supplement to Aristotle's fourth book on *Meteors*, under whose authority the criticism of Avicenna about the reality of transmutation reached both scholars and alchemists. Albert the Great quoted it for the first time in his commentary to the *Sentences*, as well as in his later alchemy-related writings. It is also quoted in encyclopedias like the *De floribus (finibus) rerum naturalium* by Arnoldus Saxo, and the *Speculum Naturale* and *Speculum*

32. The logical character of Avicenna's debate on the transmutation of *species* had been stressed by W. R. Newman, «Technology and Alchemical Debate in the Late Middle Ages», *Isis*, 80 (1989), 425-37: yet the *Sciant artifices* concerns also the physical level, and in its three ending paragraphs we can appreciate a *crecendo* in the argument, of which the affirmations about *differentia specifica* are an intermediate step. About the *De congelatione* see G. Freudenthal, «(Al-)chemical foundations for cosmological ideas: Ibn Sina on the geology of an eternal World», in *Physics, Cosmology and Astronomy, 1300-1700: Tension and Accomodation*, ed. S. Unguro, Dordrecht-Boston-London 1991, 47-73; A. Hasnawi, «Avicenne et le livre IV des *Météorologiques* d'Aristote», in *Aristoteles Chemicus*, 133-43. Cf. also R. Halleux, «The Reception of Arabic Alchemy in the West», in *Encyclopedia of the History of Arabic Science*, III, 886-900: 895-86.

33. Avicennae *De congelatione*, 55 (italics mine).

*Doctrinale* by Vincent of Beauvais. The attempt made by Arnoldus is especially interesting since he, or maybe an alchemical source he used, attributed to Hermes the added statement about *reductio ad materiam primam*<sup>34</sup>.

Either that alchemists simply believed that the dark stuff resulting from *liquefactio* was evident proof that prime matter can actually be retrieved, or that they found arguments in the Hermetic philosophy to defend this thesis, the question had been posed. Therefore it is not surprising to discover that Roger Bacon tried to answer it in his *Communia Naturalium*. This work can be considered a kind of «intellectual laboratory», where Bacon built his own intellectual tools «in a close dialogue and often in opposition to the more classical and philosophical *autoritates* and to the *magistri* of his time»<sup>35</sup>. At the very beginning of the text, where the philosopher is exposing his working plan in order «to explore the possibility of formulating specific and detailed natural doctrines, following a systematic order that does not undermine the Aristotelian one, but reshapes it according to new needs», we read the following passage:

Et taceant stulti qui abutuntur autoritate illa in fine prime translacionis Meteororum, quam contra veritatem allegant, dicentes scriptum esse «Sciant artifices Alkimie species rerum transmutari non posse», ac si

34. Arnoldus Saxo, *Liber de floribus (finibus) rerum naturalium – V: De virtutibus lapidum*, ed. Stange, *Die Enzyklopädie des Arnoldus Saxo*, Erfurt 1907, p. 45: «In libro meteorum Aristotelis: Sciant artifices alchimyie species non permutari non posse, sed similia illi facere possunt, ut tingere rubeum citrino, ut videatur quirinum, et album tingere colore, quo volunt, donec sit multum simile auro aut eri. In eodem Aristoteles: Ceterimque differentia specifica aliquo tollatur ingenio, non credo possibile. Sed expoliatio accidentium non est impossibilis, vel saltim dimitionis. In eodem Hermes: Hec igitur in illam permutari non poterunt, nisi forte in primam reducantur naturam, et sic in aliud, quam prius erat, permutatur, sed per solam liquefactionem non fit, sed accidunt ei ex hoc res quedam extrane (*sic*)». Cf. Vincent of Beauvais, *Speculum Doctrinale*, Douai 1624, XI.128 (col. 1068), quoting an unnamed *Alchymista*: «et ex pluribus rebus fiat una, quasi res iterum nata. Et hoc est fortasse quod dicitur in fine *Meteo*. “Nisi forte in primam reducatur naturam”». A few pages below the same quotation ends «in primam [...] materiam» (XI.131, col. 1070).

35. C. Crisciani, M. Pereira, «Introduction to the Philosopher’s Laboratory», in *Roger Bacon’s Communia Naturalium. A 13<sup>th</sup> Century Philosopher’s Workshop*, eds. P. Bernardini, A. Rodolfi, Firenze 2014, 5.

esset verbum Aristotelis, cum nichil eius sit a principio illius capituli «Terra pura lapis non fit» et cetera, set additum ab Alveredo. Quod si esset male allegant, cum sequatur «nisi fiat resolutio ad materiam primam quam ignorant», de qua tamen Aristoteles in nono Metaphisice dicit quod non fit ex mortuo vivum, nisi fiat resolutio ad materiam primam. Hec enim sciencia [i.e. alchemy] traditur apud Aristotelem non in libris vulgatis, quia nichil habemus in communibus libris naturalibus de speciebus rerum inanimatarum, set in aliis libris suis specialibus qui de rebus inanimatis intitulantur et in libro Secretorum et alibi in particulari docet de practica Alkimie, cuius sententiam exponit Avicenna in nono volumine de illa sciencia, quod in decem libris continetur<sup>36</sup>.

Two elements are especially noteworthy in this quotation: first, the precise refutation of the Aristotelian authorship of this passage; and, second, the critical remark about its true meaning, «quod si esset [i.e., even if the author might be proved to be Aristotle himself] male allegant». Those who declare the impossibility of transmutation, says Bacon, make a mistake, since they do not take into consideration the sentence about *resolutio ad materiam primam*. This sentence, which might even be interpreted as an argument *per absurdum* – since prime matter is beyond experience – is indeed taken by Bacon as a *condition of possibility* to produce true transmutation, like the following lines of the quotation, which explicitly refer to alchemy, confirm<sup>37</sup>. A third

36. *Communia Naturalium* 1, OHI II, 6–7. While the *liber Secretorum* is easily identified as the ps. Aristotelian *Secretum secretorum*, the *de rebus inanimatis* does not match any item in the repertory *Pseudo-Aristoteles Latinus* (Ch. Schmitt, D. Knox, *Pseudo-Aristoteles Latinus. A Guide to Latin Works Falsely Attributed to Aristotle Before 1500*, London 1985). The reference to Avicenna is to *de anima in arte alchemiae*, cf. above, note 29. The reference «in nono *Metaphisicae*» is actually to the eight book (see below, note 38).

37. A twisted interpretation like this can be found in the *Secretum secretorum cum glossis et notulis Rogeri Baconis*, OHI V, 157: Aristotle's comment on Alexander's purpose to kill the inhabitants of Persia, since they are difficult to rule, is as follows: «si non potes illius terre mutare aërem et aquam, insuper et dispositionem civitatum, imple tuum propositum». According to Steven Williams, «in a significant misunderstanding of the text, Bacon takes Aristotle to mean that it is possible to change the bad qualities of the land and the air of a region into good ones so that bad mores will be similarly changed to the good» (S. Williams, «Roger Bacon and the *Secret of secrets*», in *Roger Bacon and the Sciences. Commemorative Essays*, ed. J. Hackett, Leiden 1997, 388). For Bacon, this is one of the «great secrets» preserved in the pseudo-Aristotelian book.

remark might be added: the statement that Aristotle had written about alchemy in secret books. But we cannot approach this topic at present.

The new element introduced by Bacon is the quotation from *Metaph.* VIII; yet, this only affirms: «Et quecumque sic transmutantur in invicem, *ad materiam* oportet redire», where *matter* is much more likely to mean «the elements», rather than the *first matter*<sup>38</sup>. Therefore Bacon was either actually distorting the meaning of *Metaph.* 1045a, or he meant, with *materia prima*, the elements themselves. The same quotation, equally distorted, occurs again in his *de erroribus medicorum*: «si per eandem (i.e. per alkimiam? Some lines before he was recalling *vias alkimie*) reducerentur res multe ad materiam primam, de qua Aristoteles loquitur in 8<sup>o</sup> *Metaphisice* et in fine *Metheororum* scribitur, possent rectificari corpora humana pluquam credibile est»<sup>39</sup>. Here we can more easily surmise that Bacon was identifying the first matter with the four elements, as another quotation from his commentary on the ps.aristotelian *de plantis* clearly proves, by doubling the meaning of the lemma «first matter»<sup>40</sup>:

38. This is the opinion of Alexander of Aphrodisia on *Metaph.* 1045 a 4 (CAG 1891, 560, 16). The case evoked is that of spontaneous generation, cf. *supra*, 6. The text referred to is *Aristoteles Latinus*, XXV 2 – *Metaphysica*, «Translatio Anonymi sive “media”», ed. G. Vuillemin-Diem, Leiden 1976, VIII 4–5, 163–5: «Sed de materiali substantia oportet non oblivisci quia et si ex eodem omnia primo aut eisdem ut primis et eadem materia ut principium factis, est tamen aliqua propria cuiuslibet [...] Habet autem dubitationem quomodo ad contraria materia cuiuslibet habet. Ut si corpus potestate sanum, contrarium vero infirmitas sanitatis, tunc ambo potestate? Et aqua potestate vinum et acetum? Et huius quidem secundum habitum et secundum speciem materia, illius vero secundum privationem et corruptionem preter naturam? Dubitatio quedam est, quare vinum nec materia aceti nec potestate acetum (fit quidem ex eo acetum) et vivens potestate mortuus. Aut non, sed secundum accidens corruptiones, animalis vero materia ea secundum corruptionem mortui potentia et materia, et aqua acetum; fit enim ex hiis ut ex die nox. Et quecumque sic transmutantur in invicem, ad materiam oportet redire, ut si ex mortuo animal, in materiam primam, deinde sic animal; et acetum in aquam, deinde sic vinum». Cf. «Recensio et translatio Guilielmi» (vol. XXV 3.2, ed. G. Vuillemin-Diem, Leiden 1995), 174–75.

39. *De erroribus medicorum* OHI IX, 165.

40. *Quaestiones super de plantis*, OHI XI, 251–52: «... dicendum, ut dictum est, quod duplex est materia prima; aut prima que est remota, et ad istam non fit resolutio; aut ad primam que est proxima. Cum primus sit

Duplex est materia prima; aut prima que est remota, et ad istam non fit resolutio; aut ad primam que est proxima. Cum primus sit dupliciter, aut primum ante quod nichil, aut primum idem quod proximum, hic fit resolutio ad materiam primam, id est, proximam que est communis in illa transmutatione.

The first matter *que est proxima* is *materia naturalis*, i.e. the third level in the descending scale from first matter properly said (*materia universalis*), that is the materia of creation, which cannot be reached back by human artifice. As I have tried to demonstrate in a study on Bacon's natural matter, this third level coincides with the four sublunar elements<sup>41</sup>; this conclusion is confirmed by the text of *Secretum secretorum* and by Bacon's own glosses on it<sup>42</sup>. For Bacon, indeed, the «first» matter of alchemy can neither be defined mere potentiality, nor passive substrate of changes. Rather, it is the homogeneous, yet dynamic, state of basic corporeal matter, the dark and amorphous mixture, whose existence is confirmed by *experimentum*, because it is obtained by dissolving corporeal substances, at the very first stage of the transmutation process. Its bare existence renders it necessary to enlarge Aristotle's ideas on matter, confirming Bacon's idea that «parum de hiis que ad materiam pertinent certificat naturalis philosophia Aristotelis»<sup>43</sup>.

dupliciter, aut primum ante quod nichil, aut primum idem quod proximum, hic fit resolutio ad materiam primam, id est, proximam que est communis in illa transmutatione. Vel dicendum quod natura potest transmutare species, non tamen ars, et hoc tangit Aristoteles in quarto *Metheor.*, “Sciunt artifices alkimie etc.”, quia dixit “artifices”, id est, per artem non potest transmutari res secundum species, et non negat quod non possit per naturam».

41. M. Pereira, «Remarks on *materia naturalis*», in *Roger's Bacon Communia Naturalium*, 103-38, 116 (figure).

42. OHI V, 115.

43. *Communia Naturalium*, I, cit., 5. In I.1.4 (14-16) Bacon distinguishes three different physical conceptions of matter: «[1] quod vero suscipit accionem agentis in se, dicitur materia [...] Sic autem sumitur materia vulgariter. [2] Aliter vero sumitur materia pro eo quod cum forma constituit compositum [...] [3] Tercio modo dicitur materia esse illud quod est in potencia ad aliud, sicut ad suum complementum [...] et sic materia sumitur in usu maxime naturalium, et ab eis vocatur subiectum in generatione et corrupcione». Even further definitions can be found: «Si vero aliis modis dicatur materia, patebit inferius set precipue in *Metaphisica*»: cf. the *six* definitions of matter in I.2.4 (60-61). Moreover, there is a remarkable discus-

*Res una*

Of the two main scholastic philosophers who contributed to the theoretical development of alchemical notions, Albert the Great and Roger Bacon, Albert was the more influent on early developments among alchemists. His ideas on transmutation come to the surface in many alchemical texts written in the last decades of the 13<sup>th</sup> and at the beginning of the 14<sup>th</sup> century, first of all – no need to say – in those attributed to him, like the *Libellus alchimiae*<sup>44</sup>. A special case is that of the *Summa perfectionis magisterii* attributed to Jabir (the «Latin Geber»)<sup>45</sup>. This was a mainly technical text, which gave a peculiar turn to the interpretation of alchemy according to Aristotle and Albert the Great, and a relevant contribution to the development of a new theory of matter. This has been described as a properly corpuscular interpretation of *omeomera*, «thoroughly corpuscular [...] though little related to the atomistic conceptions of antiquity»<sup>46</sup>, «a corpuscular theory according to which the principles of metals, mercury and sulfur, begin their subterranean existence as volatile fumes»<sup>47</sup>. Its key-

sion about the uniqueness and *communitas* of matter, conceived of as neither mere potentiality nor *una numero*, but rather as «una materia communissima ad omnes materias substanciarum compositarum» (54). Cf. A. Rodolfi, «*Dicitur materia propriissime et strictissime*. Roger Bacon and the Ontological Status of Matter», in *Roger Bacon's Communia Naturalium*, 83–102.

44. Printed in the Jammy edition, it is also briefly considered by Jeck in his article cited above, note 20, and especially by Halleux, «Albert le Grand».

45. In his critical edition, *The Summa perfectionis of pseudo-Geber* (Brill, Leiden 1991), William R. Newman attributed this text to an otherwise unknown Franciscan friar, Paolo of Taranto. This attribution should probably be reconsidered (as I have shown in «Paolo di Taranto al crocevia dell'alchimia medievale», in *I francescani e le scienze*, Atti del XXXIX Convegno della Società Internazionale di Studi Francescani, Spoleto 2012, 141–85), yet the primary role of the *Summa perfectionis* in the later development of medieval alchemy remains undisputed.

46. Newman, *The Summa Perfectionis*, 143.

47. Newman, *The Summa perfectionis*, 154. Also Avicenna's *De congelatione et conglutinatione lapidum* had been an attempt to describe the process hinted to in *Meteor.* III.vii (378 a 15–b 6). A detailed alchemical interpretation of the origin and formation of metals, especially based on Avicenna, was later given in the pseudo-Lullian *Testamentum*; cf. Pereira, «*Prima materia*», 154–63.

words are strictly related to the doctrine on *omeomera* developed in *Meteorologica: pars, minimum, subtilis e subtilitas, grossus, mixtio, inspissatio e spissitudo*<sup>48</sup>. The author shows little or no interest for the problem of *materia una*, that he considers to be sufficiently known («Est igitur per se huius medicine materia cuiuscunque generis una, et est quod iam sufficienter notum est»)<sup>49</sup>, and his efforts are directed to classify metals and mineral substances employed in transmutation, to define their physical structure, and to describe their formation in mines by identifying the two exhalations of *Meteor. IV* with the alchemical mercury and sulphur. This doctrine explains transmutation satisfactorily, therefore it was adopted by the followers of the Latin Geber till the later metallurgical, mineralogical and «chymical» developments in the Renaissance. But it was not enough for those alchemists who, declaring themselves «children of Hermes», brought forth the lofty view of alchemy they could read in a relevant part of the Islamic tradition, and proposed the grand goal of a global renovation of the material world<sup>50</sup>.

The cognitive counterpart to this purpose is clearly expressed in the alchemical *Testamentum* attributed to Ramon Llull – written before 1332 by a still unknown physician, or student of medicine, who dedicated it to the king of England Edward III:

48. Newman, «Introduction», in *The Summa perfectionis*, 143–92, stresses the importance of the «corpuscularism» developed by pseudo-Geber, and tends to identify *all* alchemical theories of matter with corpuscularism. Cf. his closing remark: «Whenever concrete, specific description of matter were required, the late medieval writers tended to invoke this corpuscularism [...] it was alchemy above all to which the medieval “science of matter” most properly pertained. The attempt to put this science of matter into corpuscular terms may well have reached its medieval climax in the *Summa perfectionis*».

49. *The Summa Perfectionis*, 571. Cf. 275: «materiam generationis et corruptionis ad esse et non esse specierum»; and 288: «Similiter et metalla non mutamus, sed natura cui secundum artificium materiam preparamus, quoniam ipsa per se agit, non vero administratores sumus illius». Wherever else the term «matter» is found in the *Summa perfectionis magisterii*, it is employed according to the generic meaning that Roger Bacon had defined as follows: «Quod vero suscipit accionem agentis in se, dicitur materia; et ideo idem potest esse materia et efficiens, respectu diversorum, ut ignis agit in lignum et efficit calidum, et aqua extinguit ignem. Sic autem sumitur materia vulgariter» (*Communium Naturalium*, 14).

50. Cf. Pereira, «Projecting perfection», note 1.



Clarificare donum nobis datum pro processo necessario [...], sine quo plena noticia rei, que est una compositiva de illis entibus, que sunt materia nature, que per dissolutiones inventas in viis ordinariis videre non patitur<sup>51</sup>.

This definition is not a masterpiece of clarity, but the basic idea can easily be grasped: on the one side, *materia nature*, i.e. the elementary *mixtum* that is the basic component of all natural bodies, is not the ultimate foundation of the natural world, and, on the other, the *res una* – which is precisely the searched foundation – cannot be *seen* according to ordinary alchemical processes («dissolutiones inventas in viis ordinariis»). In a single sentence the author, *Magister Testamenti*<sup>52</sup>, echoes both Avicenna's warning as to the limited result of the alchemical operations, and Roger Bacon's distinction between prime matter and *materia naturalis*. Yet his intention is not to stress limits and distinctions, quite the opposite, he is persuaded that the *processum necessarium* revealed to him as a gift can give *plena noticia* (full knowledge) of the *res una*. Such knowledge has not been obtained through ordinary transmission, but is the fruit of revelation by nature herself (as described in the prologue): an intuition that can be compared to prophetic inspiration<sup>53</sup>.

This knowledge concerns the *res una* that gives origin to the four elements which, according to the Baconian hylomorphic structure, are the «natural matter»; it also recalls similar cosmo-

51. M. Pereira, B. Spaggiari, *Il Testamentum alchemico attribuito a Raimondo Lullo*, Firenze 1999, 4.

52. In my first study on the *Testamentum* (M. Pereira, *L'oro dei filosofi. Saggio sulle idee di un alchimista del Trecento*, Spoleto 1992) I proposed to give this nickname to the unknown author, whose Catalan origin and medical studies seem out of doubt. Cf. also my «Introduzione storica», in *Il Testamentum alchemico*, XVIII–XXI. From the late 14<sup>th</sup> century this work was attributed to Ramon Llull and this traditional authorship, albeit undoubtedly fake, has been accepted by the whole later alchemical tradition.

53. Alchemy had been compared to prophecy already by Constantine of Pisa, because of its difficulty and obscurity, while *Magister Testamenti* is rather stressing the direct link of the alchemist to the *magisterium naturae*, bypassing the rules of sensible and abstract knowledge. Cf. C. Crisciani, «*Opus and sermo. The Relationship between Alchemy and Prophecy (XIIth–XIVth centuries)*», *Early Science and Medicine*, 13 (2008), 4–24.

logical ideas developed in the *Liber chaos* by Ramon Llull<sup>54</sup>. This is to stress that Magister Testamenti, who was of Mallorquine origin and used Lullian philosophical ideas and combinatory devices in his text, was prepared to accept Bacon's suggestions on a merely philosophical level, as well as he developed Bacon's ideas on the relationship between alchemy and medicine<sup>55</sup>. The confluence of these sources with the Hermetic utterances of the *Tabula smaragdina* set the background to the attempt made by Magister Testamenti in his «alchemical philosophy» to legitimate his view of matter as quintessence.

Therefore, as Bacon «does not refrain from integrating the tasks of the naturalist and the metaphysician when it comes to structuring the basis of his natural research»<sup>56</sup>, in a similar way the Magister Testamenti outlines a hylomorphic continuity between the physical level to which practical alchemy belongs, that of matter composed of the four elements, and the metaphysical foundation of that same matter, i.e. of the whole corporeal world. The transition between metaphysics and physics is established in the third chapter of the first part, *Theorica Testamenti*. Almost the whole of the *Theorica* (chapters 4 to 97) are dedicated to explain a complex doctrine of transmutation, where Aristotelian, Avicennan and Albertine conceptual tools are extensively used, and the doctrine of the formation of metals and minerals is developed in terms similar to those of the Latin Geber<sup>57</sup>. Yet, before beginning his wide exposition of his «alchemical philosophy» (by the way, with a quotation from *Meteor. IV* through the Albertine commentary)<sup>58</sup>, the author explains the metaphysical and cosmological roots of the *res una*

54. J. M. Ruiz Simon, «De la naturalesa com a mescla a l'art de mesclar (sobre la fonamentació cosmològica de les arts lullianes)», *Randa*, 19 (1979), 69-99. Llull's *Liber chaos* is a part of *Lectura super figuras Artis demonstrativae* (1285 ca), yet it has been also transmitted as an independent work.

55. M. Pereira, «Un tesoro inestimabile. Elixir e *prolongatio vitae* nel Trecento», *Micrologus. Nature, Sciences and Medieval Societies*, 1 (1993), 161-87, repr. in C. Crisciani, M. Pereira, *L'alchimia nel Medioevo*, Firenze 2016, 79-124.

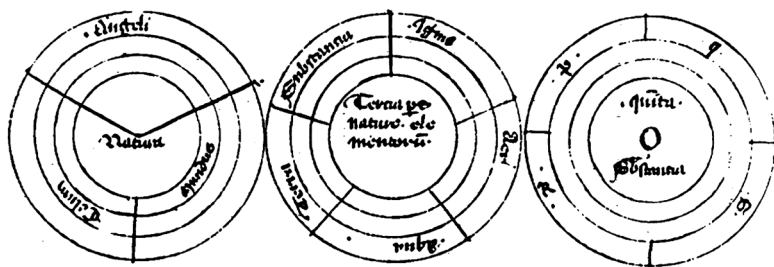
56. Crisciani, Pereira, «Introduction» in *Roger Bacon's Communia Naturalium*, 23.

57. Pereira, «*Prima materia*», 160-63.

58. Pereira, «*Prima materia*», 154, 163-64.

mentioned in the prologue, speaking «about the principles of universal nature, and how they are drawn from the confused mass; about the four elements; and about the three primordial principles of all things»<sup>59</sup>.

The *res una*, directly created by God through his supernatural power, is also named *natura* and *quinta essentia*, and is said to have been created *de nichilo*:



Supra potentiam nature est summus Deus celestis [...] Illam naturam Deus creavit de nichilo in unam puram substantiam, quam vocamus quintam essentiam, in qua tota natura comprehenditur.

It belongs to the same primary level of creation to which also angels, heavens and the terrestrial globe belong:

De istius substantie, divide in tres partes secundum essenciam, parte puriori creavit Deus angelos; de minus pura creavit celum et planetas et omnes stellas; de tercia parte, que erat minus pura, creavit Deus istum mundum<sup>60</sup>.

This division of created matter was represented in a triple circular figure in manuscript of the *Testamentum*, copied for Nicolaus Cusanus (Praha, Universitní Knihovna, Lobk. 249, 1428ca), here reproduced (first figure from the left).

59. *Il Testamentum alchemico*, 12, «De principiis nature universalis et quomodo sunt extracta a massa confusa; et de 4 elementis; et de tribus primordialibus omnium rerum principiis pro maiori forma mundi reducendo ad magisterium, quod est forma minor, tanquam minor mundus».

60. *Ibidem*.

The third part of created matter, the less pure<sup>61</sup>, was then divided into five parts of different purity (central figure), one of which is the fifth substance, which shares the same condition of the heavenly substance; whilst the other four, in diminishing degrees of purity, are the four elements (fire, air, water, earth):

Summus Creator divisit istam partem in 5 partes et ex una parte magis pura creavit Deus quintam substanciam elementorum, que participat cum re celestiali [...] Et istam divisit in quattuor partes<sup>62</sup>.

Therefore, the four elements are nothing else than *quinta essentia* at a lesser degree of purity, and the elements we see and touch are «elementata ex vero quinto elemento», which, in its purity, is embedded in their *centrum* («in centro terre est terra virgo et verum elementum, quod ignis comburere non potest in die pavenda, et sic de aliis elementis», figure on the right side)<sup>63</sup>. Later in the same chapter, we read that matter can also be envisaged as the third of the primordial principles, defined through terms which go back to the 12th century tradition of commentaries on *Timeus*<sup>64</sup>, although in the *Testamentum* they rather sketch an emanatistic process: 1. *artificiale*, i.e. *Deus omnium conditor*, 2. *exemplar*, the second principle that «moveretur ab illo, qui est sapiencia»; and 3. *materia*, the primordial element «quod nos vocamus “yle”»<sup>65</sup>. Immediately after, the author affirms that the alchemical quest starts from the mixed bodies («debes investigare in specie composita»), i.e. operates with material elements, and that there is no need to pursue the quest until reaching the essence of matter-quintessence. And yet this, or better the part of it which constitutes the material world (now defined *quinta sub-*

61. The scale of purity (subtlety) of matter is as follows: the *quinta essentia*=created matter has three degrees: the most subtle (angels), intermediate (heavens and heavenly bodies), less pure (sublunary world). This, on its turn, in its utmost subtlety is the *quinta substancia*, from which the four elements (fire, air, water earth) descend according to a diminishing grade of purity (cf. below, note 63).

62. *Il Testamentum alchemico*, 12-14.

63. *Il Testamentum alchemico*, p. 12. Cf. Pereira, *Cosmologie alchemiche*, 400-7.

64. On this issue see I. Caiazzo, «La materia nei commenti al *Timeo* del secolo XII», *Quaestio. Annuario di storia della metafisica* 7 (2007), 245-64.

65. *Il Testamentum alchemico*, 16.

*stancia*), is the necessary substrate, without which the alchemical *opus* can neither be realized nor brought to its end («absque illa non poteris facere aut finire») <sup>66</sup>.

The ambitious attempt of Magister Testamenti to establish transmutation on a «quintessential» world-view based on the homogeneity of created matter had no followers, excepted John of Rupescissa, with his *de consideratione quintae essentiae*, whose theoretical support is a radically simplified doctrine of the *res una*. In the later 14th century, alchemists eventually conflated the idea of natural matter with that of the dark fluid mass obtained during the first stage of the *opus* and identified with mercury as principle of metals and minerals. Thus doors were open to the loss of theoretical consistency of the alchemical doctrine(s) about matter, and to the counterpart of such loss – the uncontrolled metaphorical flourishing of the «names of matter» <sup>67</sup>.

*Una materia* (according to the widely adopted motto: *una materia, unum vas, unus lapis*) becomes the synthetic statement, found in innumerable texts, that the alchemical *opus* can begin from any kind of stuff – not only metals and minerals, but also several different organic substances. A related statement, and commonly repeated, is that «*materia lapidis est res vilis pretii ubicumque*

66. On matter as substrate see L. Brisson, «La théorie de la matière dans le *Timée* de Platon et sa critique par Aristote dans la *Physique*», in *L'alchimie et ses racines philosophiques. La tradition grecque et la tradition arabe*, ed. C. Viano, Paris 2005, 15–35; J. B. Gourinat, *La théorie stoïcienne de la matière: entre le matérialisme et une relecture «corporaliste» du Timée*, ivi, 37–62. On matter in medieval neoplatonism, M. Benedetto, «La dimensione fondante della realtà: la materia in Ibn Gabirol e Shem Tov ben Yosef ibn Falaquera», *Quaestio. Annuario di storia della metafisica*, 7 (2007), 229–44 (the *Fons vitae* by Ibn Gabirol was the background to the theory of matter developed in the *Testamentum*, as well as in Lull's *Liber chaos*, and in Roger Bacon's doctrine of *materia naturalis*: see, respectively, Ruiz Simon, «De la naturaleza com a mescla» and Pereira, «Remarks on *materia naturalis*»).

67. Cf. J. M. Mandosio, «Basilisk, lettuce, and the stone which is not a stone: On the relationship between living things and inert substances in medieval alchemy», in D. Jacquart, N. Weill-Parot, *Substantes minérales et corps animés / Mineral Substances and Animated Bodies (1100–1500)*, D. Jacquart, N. Weill-Parot eds., Montreuil 2012, 111–43. After discussing a late witness to the alchemical conception of Quintessence, Mandosio writes that «this topic of the multiplicity of names was a strong issue for medieval readers and writers of medieval texts, and a central one for the understanding of the true meaning of those texts».

reperta», a conventional formula which echoes the *Testamentum Morieni*, according to whom *materia lapidis* is not a stone and it can be obtained from anything, even from the human body<sup>68</sup>. That's why this substance, albeit unique, could be named with many names, and the multiplicity of processes through which transmutation was attempted could be considered as one single *opus* realized *multifarie multisque modis*. Such was the process through which the alchemical *materia una*, deprived of any philosophical meaning, became the first of countless metaphorical names, which were adopted, drawing inspiration from the allegorical language of several texts of Arabo-Islamic origin, to express an idea impossible to think according to Scholastic philosophy: that humans, reaching back to the primordial matter, can artificially change the natural bodies towards perfection, and develop the unlimited potentialities of the material world far beyond the *opus naturae*.

#### ABSTRACT

Michela Pereira, *Mother of All Creatures: Alchemical Views on Matter in the Latin Middle Ages*

Some characters of the alchemical *opus* as described in the earliest alchemists' texts translated into Latin seemed to offer a new approach to the understanding of first matter, a major philosophical issue in both the Platonic and the Aristotelic traditions. Witnesses of the interest aroused in scholastic environments are the discussion about Avicenna's text known to Latins as *Sciant artifices*, as well as the traces of alchemical doctrines in philosophers like Albert the Great and Roger Bacon. At the end of the 13th century, the attempt made by pseudo-Geber to explain transmutation by means of the concept of minimum hinted to a possible corpuscular doctrine of matter. Yet the later alchemical tradition was mainly imbued with the conception of first matter as a physi-

68. *A Testament of Alchemy*, 24: «Et scito quod numquam ponas in animo tuo quod lapides in hoc opere intrabunt ... Si invenitur hoc in sterquilino quod petis, id accipe. Si vero non inveneris, tolle manum tuam a marsupio tuo, quia omnis res que magno precio emitur in huius operis artificio mendax reperitur»; 26: «Hec enim res ex te extrahitur et tu illius minera existis et apud te illam inveniunt et vere ex te excipiunt, et post eius probationem augebitur eius amor in te».

cal substrate of the four elements (fifth essence). This idea, grounded on a hylomorphic cosmological background that had been also accepted by Roger Bacon, was developed in the pseudo-Lullian Testamentum. In later alchemy it was condensed in the widely diffused formula of *materia una* and of its countless names, which was extremely simplified and deprived of a properly theoretical content.

Michela Pereira  
SISMEL (Firenze)  
mpereira@tiscali.it