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JĀBIR B. ḤAYYĀN'S ALCHEMY, IBN 'ARABĪ,  
AND THE READING OF THE BOOK OF NATURE

This article is designed to shed some modest light on this volume by providing data and reflections related to the history of science, religious esotericism, and mysticism. I examine the notion of transmutation in alchemy and mysticism. Transmutation plays an obvious role in the theory and work of alchemists, as it is the science that aims to precisely transform base metals into noble metals and, more generally, transform one substance into another. As we know, from its origins to the modern era, alchemy has long been considered a path to wisdom. Even if the language of alchemy remains mostly abstruse, we sense a deep connection between the alchemical enterprise and other paths of wisdom that are considered philosophy proper (*falsafa*) or mysticism. It is this link between alchemy and wisdom that I comment on here. In what way is the transmutation of metals linked to a philosophical or spiritual evolution in the mind of the alchemist? This question has been of interest to Muslim intellectuals for centuries. In al-Andalus, in particular, it was introduced in the famous *Rutbat al-ḥakīm* of Maslama b. Qāsim al-Qurṭubī<sup>1</sup>.

1. Maslama al-Qurṭubī writes, for example: «They are two conclusions. The Ancients called one of them *kīmiyā'* and they called the other one *sīmiyā'*. These are the two sciences of the ancients from which one can profit. Whoever has not achieved them is no sage until he masters them, and he who masters [only] one of them is [only] half a sage. Both share [the quality of] being subtle. For *kīmiyā'* is the knowledge of earthly spirits and the advantageous extraction of their subtleties. The other is called *sīmiyā'*, and is the *tarjīh* (literally, «the fact of giving the preponderance to something»), the [art of] talismans and of syllogisms, and this is the science of the superior spirits and of how to call down their powers advantageously», cited and trans. by G. de Callataÿ and S. Moureau, «Again on Maslama Ibn Qāsim al-Qurṭubī, the Ikhwān al-Ṣafā' and Ibn Khaldūn: New Evidence from Two Manuscripts of *Rutbat al-ḥakīm*», *al-Qanṭara* 37 (2016), 342. See also P. Carusi, «Appendice – Le traité alchimique

Maslama cites the most important ancient pseudepigraphic writings in Arabic, including the works of great names such as Khālīd b. Yazīd and Jābir b. Ḥayyān<sup>2</sup>. This chapter is based on the study of two great bodies of work, two great written corpora, that of Jābir b. Ḥayyān and the mystic Ibn ‘Arabī. Indeed, their ambition and their impact in specific intellectual circles were such that they can be considered representative of two ways of approaching the question of alchemical transmutation. One might even say that these two authors represent two paradigms of the idea of the transmutation of elements in medieval Islam. These two paradigms were present from the second/eighth century.

### *Jābir b. Ḥayyān*

Let us begin with Jābir’s conception of transmutation. The difficulty of treating Jābir’s corpus as a whole is well recognized. Indeed, we know from the work of Paul Kraus, in particular, that all the treatises attributed to Jābir b. Ḥayyān were the work of a school that probably produced these texts over a period of almost two centuries. This raises the question of whether it is legitimate to speak of Jābir’s doctrine as a unified and homogeneous theory. The unity of thought among the various treatises can be questioned with each quotation. However, reading the whole corpus, it appears that we can conclude, following Kraus, that there is at least a homogeneous “Jābirian tradition”. More precisely, with regard to material transformations, the purpose of these works is quite unified and coherent.

*Rutbat al-ḥakīm* – Quelques notes sur son introduction», *Oriente Moderno* 80–83 (2000), 491–502, although it is partly outdated by subsequent research. In addition, the *Epistles of the Ikhwān al-Ṣafā’* also proposes a mineralogy and a conception of alchemy and metallic transmutations, see Y. Marquet, *L’alchimie des philosophes et la philosophie des alchimistes*, Paris 1988, 15–47.

2. Concerning the *Rutbat al-ḥakīm* and its links with the *Ghāyat al-ḥakīm* and the *Epistles of the Ikhwān al-Ṣafā’*, see G. de Callatay, «Magia en al-Andalus: *Rasā’il Ijwān al-Ṣafā’*, *Rutbat al-Ḥakīm* y *Gāyat al-Ḥakīm* (Picatrix)», in *al-Qanṭara* 34.2 (2013), 297–343; and G. de Callatay and S. Moureau, «Towards the Critical Edition of the *Rutbat al-ḥakīm*: A Few Preliminary Observations», in *Arabica* 62 (2015): 385–94. Maslama al-Qurṭubī’s conception of alchemy as the pinnacle of wisdom and that of Jābir, however, do not seem to coincide completely; hence the purpose of this chapter. After the publication of the critical edition of the *Rutbat al-Ḥakīm* by G. de Callatay and S. Moureau a full study ought to be undertaken.

The problem of Jābir and Jābir's alchemical teachings have been discussed in detail by great historians of science: Paul Kraus, of course, and others before<sup>3</sup> and after him<sup>4</sup>. Without dwelling on well-known doctrines, it is important to recall a few basic points. The doctrine of transmutation of Jābir's corpus is based on the following.

(1) The idea that the four elements are reducible to the four elemental qualities<sup>5</sup>. Jābir's corpus repeatedly describes how it is possible to extract heat and dryness from fire, moisture and heat from air, etc. using various procedures<sup>6</sup>. There is an essential choice that breaks the classical system of the four elements. The hidden structure of matter is modified; and, consequently, the relations between bodies and spirits is also found in more mobile, fluid relationships.

(2) Jābir's corpus explains how the four elemental qualities are blended with the universal soul and fixed in prime matter, the passive substance. In several texts, Jābir mentions the cosmological basis of his system: the universal soul penetrates the prime matter, mixes with it according to its desire and choice, and then mixes with the

3. E. J. Holmyard, «Jābir ibn Haiyān», in *Proceedings of the Royal Society of Medicine* 16 (1923), 46-57; E. J. Holmyard, «An Essay on Jābir ibn Ḥaiyyān», in *Studien zur Geschichte der Chemie* (Berlin 1927), 28-37. Several articles of J. Ruska deal with the question, see «Die bisherige Versuche, das Dschābir-Problem zu lösen», in *Dritter Jahresbericht des Forschungsinstitut für Geschichte der Naturwissenschaften in Berlin* (Berlin 1930), 7-22.

4. M. Plessner, «Ġābir ibn Ḥayyān und die Zeit der Entstehung der Ġābir-Schriften», in *Zeitschrift der deutschen morgenlandischen Gesellschaft* 115 (1965): 23-35. F. Sezgin has produced the most comprehensive attempt to counter the ideas of P. Kraus on the dating of Jābir's corpus, F. Sezgin, *Geschichte des Arabischen Schrifttums* (Leiden 1971), 4:132-269. See also H. Corbin, *Alchimie comme art hiératique* (Paris 1986), 147-219; Marquet, *La philosophie des alchimistes et l'alchimie des philosophes - Jābir ibn Ḥayyān et les «Frères de la Pureté»*; P. Lory, *Alchimie et mystique en terre d'Islam* (Paris 1989), 47-165; S. Nomanul Haq, *Names, Natures, and Things: The Alchemist Jābir ibn Ḥayyān and His Kitāb al-Aḥjār (Book of Stones)* (Dordrecht 1994).

5. Jābir Ḥayyān, *K. al-sab'īn*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 474-76, 481-84; P. Kraus, *Jābir ibn Ḥayyān - Contribution à l'histoire des idées scientifiques dans l'Islam - Jābir et la science grecque* (Cairo 1942; repr. Paris 1986), 6-18, 148-61.

6. Jābir Ḥayyān, *K. al-sab'īn*, 472-74. Cold resembles pieces of salt; moisture resembles a sticky substance; heat resembles a transparent, red, and shiny body; and dryness resembles a powdery, siccative solid.

elemental qualities<sup>7</sup>. The universal soul and the prime matter (*hayūlā*), mixed together, form an inseparable whole. The soul becomes a material substance by mixing with the *hayūlā*<sup>8</sup>. Substance is sometimes identified with the soul (*naḥs*) and sometimes distinguished from it<sup>9</sup>. This point is not always clear. Thus, it is written in the *Kitāb al-sabʿīn*:

The foundation of all things are the four elemental qualities, to which must be added a fifth, which is the simple substance called “prime matter”; it is the dust that fills the voids, it is the dust that can be seen when the sun shines on it. It is also called “soul”, know this. It is in that substance that figures and forms are assembled, everything is merged in it. It is the foundation of everything that is composed, and it exists in everything that is composed. It is the foundation of everything, it will exist permanently until the end of the time allotted to it”.

*Wa-aṣl al-ashyāʾ arbaʿu ṭabāʿiʿ, wa-la-hā aṣlun khāmis wa-huwa al-jawhar al-basīṭ al-musammā hayūlā; wa-huwa al-habāʾ al-mamlūʾ bi-hi al-khalal, wa-huwa bayyin idhā ṭalaʿat ʿalay-hi al-shams. Wa-qīla anna-hu al-naḥs, fa-iʿlam-hu. Wa-ilay-hi tajtamiʿ al-ashkāl wa-l-ṣuwar, wa-kullun munḥallun ilay-hi; wa-huwa aṣl li-kulli murakkab, wa-l-murakkab aṣlun la-hu. Wa-huwa aṣl al-kull, wa-huwa bāqin ilā l-waqt al-maʿlūm*<sup>10</sup>.

7. Jābir b. Ḥayyān, *K. al-taṣrīf*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 405f.; Kraus, *Jābir ibn Ḥayyān*, 137-47, 159-61. And Jābir b. Ḥayyān, *K. al-sabʿīn*, 460, 463, where it is specified that man can imitate this work of nature.

8. Kraus, *Jābir ibn Ḥayyān*, 155-56, 145; Jābir b. Ḥayyān, *K. al-taṣrīf*, 173; and Jābir b. Ḥayyān, *K. al-baḥṭh*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 501-27; Jābir b. Ḥayyān, *K. al-mizān al-ṣaghīr*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 431f.; and Kraus, *Jābir ibn Ḥayyān*, 180-84.

9. Jābir b. Ḥayyān, *K. maydān al-ʿaql*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 208, 211, 212; where the «choice» of the soul is discussed. This raises questions about the use of the term «substance», see Kraus, *Jābir ibn Ḥayyān*, 170-71; Lory, *Alchimie et mystique*, 40.

10. Jābir b. Ḥayyān, *K. al-sabʿīn*, 482, trans. P. Lory. See also in Jābir b. Ḥayyān, *K. al-mawāzīn al-ṣaghīr*, in *La chimie au Moyen Âge*, ed. M. Berthelot and O. Houdas (Paris 1893), 3:428-29, another passage on this substance is the body of the sphere «... wa-min-hu kullu shayʾ wa-ilay-hi yaʿūdu kullu shayʾ kamā khalaqa-hu al-Bārī taʿālā...». This is followed by the enumeration of Aristotle's categories. Then: «... fa-yanbaghī an taʿlam anna dhālika huwa naḥs jirm al-falak al-munīr al-aʿṣam... wa-huwa al-jisma alladhī fī sāʾir al-mawjūdāt al-thalātha allatī hiya al-ḥayawān wa-l-nabāt wa-l-ḥajar». This is followed by a passage where he specifies that this *jawhar* is not sensitive, that God directs it as He wants, but that He can show its effects to His prophets, saints, and to whomever He wants.

This idea of mixing the soul with matter, common to many religious and philosophical systems, is central here. This is the first link between alchemy and mysticism. It concerns the fate of human beings before and after their physical deaths. The specifically human soul – *nafs nāṭiqā*, [or] *'aql* – is involved in this mixture<sup>11</sup>. The theme of liberation, of releasing the essences of this “mixture” and liberating this human soul appears here. This is an important point in Jābir's doctrine: it explains the role of his doctrine of the reincarnation of souls and his soteriology. Similarly, his political eschatology, his conception of the coming of the Maḥdī, is closely linked to this idea of the progressive purification of human souls, or at least of the souls of the elect.

Here I provide some observations.

(1) If we follow the exposition of Jābir's thought, the four elemental qualities never cease to increase or decrease in intensity, thus producing infinite permutations. All existence below is in the process of transmutation, everything is being transmuted at every moment, in the three realms and also within the human being. In the material operations described in the alchemical laboratory processes, these transmutations can be perceived in two ways, according to two aspects: one is “horizontal”, from one material to another; for example, the transformation of lead into silver or vice versa, as observed by the external, visible qualities of matter. The other is “vertical”: it is the intensification or weakening of the energy in the substance, as well as the distribution of these energies of the soul according to the qualities of each, though it is not necessarily visible to the naked eye in the material operation<sup>12</sup>. The two aspects of transmutation always occur together; for example, in the work of obtaining purified gold. In Jābirian texts, the alchemist can either describe the apparent transformation of materials as he observes it in his laboratory, or he can evoke the evolution of the intensity of

On the handling of the concepts of *jawhar* and *hayūlā* in Jābir with regard to the Hellenic tradition, see Haq, *Names, Natures and Things*, 49–57.

11. Note the diversity of expressions concerning this «mixture», e.g., in Kraus, *Jābir ibn Ḥayyān*, 167.

12. Jābir b. Ḥayyān, *K. maydān al-'aql*, 211f.; Kraus *Jābir ibn Ḥayyān*, 159. Note the question of the free choice of the soul in this text, in Kraus, *Jābir ibn Ḥayyān*, 160.

the “spirit” at work in the same operation. This second reading is obviously speculative, hence the ongoing ambiguity of alchemical language. The two transmutations, horizontal and vertical, interact. What is more, Jābir uses philosophical vocabulary as a toolbox, his approach is different from that of the philosophers. He is primarily concerned with describing processes.

In an earlier study of *Kitāb al-sabʿīn*<sup>13</sup>, I made a systematic index of the main terms used to describe the great work – the main alchemical operation to obtain a transmutation from a metal into gold: body, soul, spirit, fire, water... I soon reached a dead end. Certain developments based on the Aristotelian concept of the four elemental qualities manifested in the four elements, which the alchemist seeks to understand and master experimentally, certainly posed no problem for analysis. Elsewhere, however, many terms were found to have completely different meanings depending on the context. For example, the term *ḥayawān*, animal (as a noun and adjective), emphatically refers to mineral matter, without anything to suggest a metaphorical use<sup>14</sup>. Even more strikingly, *rūḥ* (“vital spirit”) refers not only to known mineral substances (sulphur, arsenic, mercury, ammoniac salt, camphor)<sup>15</sup> in their gaseous state, but it can also designate liquids or even solids<sup>16</sup>. An analogous ambiguity is found in the term *nafs* (“living soul”), which is clearly distinguished from “spirit” in crucial passages. Similarly, *nār* (“fire”) refers not only to ordinary combustion and especially to the eminently volatile hot/dry element present in primordial matter, but also to solid or liquid substances. Parallel remarks can be made about the terms *māʾ* (“water”), *arḍ* (“earth”), and *hawāʾ* (“air”)<sup>17</sup>. It is important to realize that the alchemical terms Jābir used are not of an ordinary descriptive nature. They aim to go beyond the changes in consistency and color of the primordial matter, to express a different way of perceiving and expressing the flow of phenomena. In short, they aim to describe the processes and dynamics of the alchemical work, not

13. Thesis presented at the University of Paris III – Sorbonne Nouvelle, 1983; Lory, *Alchimie et mystique*, 38, 41–42.

14. See Jābir ibn Hayyān, *Dix traités d'alchimie par Jābir ibn Hayyān*, trans. P. Lory (Paris 1996), 247, 259–61, 281.

15. Kraus, *Jābir ibn Hayyān*, 18–9, 24–27.

16. Jābir ibn Hayyān, *Dix traités d'alchimie*, 247, 256–58, 279f.

17. Jābir ibn Hayyān, *Dix traités d'alchimie*, 262–67 and 281f.

permanent or repetitive states. The terms we use in everyday language mostly clarify substances and their degree of permanence, or static states. A description of a simple pharmacological operation, for example, identifies each substance at the beginning and follows its evolution through the various changes of state it may undergo<sup>18</sup>. Contrary to essentialist philosophies, Jābir proposes a way of thinking that perceives in each being, in each matter, a simple “moment,” a particular circumstance situated in a flux of evolution of the soul of the world imprinted in the primordial matter. Jābir's text seeks to give an account of the ongoing process of transformation. Consequently, it does not refer to a substance in terms of what it was at the beginning, but in terms of what it is expected to become. This transformation takes place according to the amount of energy that comes from the soul that animates it, and the consistency and the external aspect that it assumes in such a precise operation<sup>19</sup>. Such a solid substance is called “spirit” because it is destined to evaporate. Another substance, solid or gaseous, is called “water” because it is intended to be liquified. A material that has nothing mineral about it, but corresponds to the densest, most solid stage of its evolution, is called “stone”. Jābir seeks to comprehend the spirit, the universal and inconceivable agent of all events that occur on earth, to estimate its power, to understand its tropism, and finally to master it.

Let us now return to the question of alchemical transmutation.

(2) The possibilities of transmutation are infinite<sup>20</sup>. Whoever follows the instructions of Jābir knows that the secret of creation,

18. A lexicological classification would follow other criteria. It would consist of bringing together the similar and differentiating the dissimilar in what is constant according to the usual criteria of the time: color, consistency, taste, sound, etc. The whole taxonomy is based on an approach of inclusion and exclusion. If A is different from B and C identical to B, A can never be identical to C. And it is precisely this rule of the excluded third that does not always work in the alchemical discourse and that sometimes makes it confusing, even impenetrable.

19. See Lory, *Alchimie et mystique*, 38-45; and Jābir ibn Ḥayyān, *Dix traités d'alchimie* par Jābir ibn Ḥayyān, 278ff.

20. Jābir b. Ḥayyān, *K. al-sab'īn*, 463f., 470; Jābir b. Ḥayyān, *K. al-mīzān al-ṣaḡhīr*, 449: «There are two creations (*khalqānī*), the second resembling the first because it is *ṣan'a*». Kraus, *Jābir ibn Ḥayyān*, 2, 57-58, 99 n.5 citing *K. al-baḥṭh*, where Jābir states that man can reproduce God's actions, but to the extent of his human capacity: «[...] *wa-hādḥā huwa ghāyat (al-ṣan'a) fī l-ḥikma al-mutaqabbil bi-hā l-insān af'al Allāh ta'ālā wa-l-mutashabbih bi-hā bi-qadri ṭāqati-hi*», 188; Lory, *Alchimie et mystique*, 149.

“attains all science and grasps the science of the creation and production of nature” (*fa-qad waṣala ilā kulli ‘ilmin wa-adraka ‘ilm al-khalīqa wa-ṣan‘at al-ṭabī‘a*)<sup>21</sup>. Any substance can be transformed into any other, provided the work is done with enough patience. Needless to say, this assertion is consistent with the claim that transmutation imitates the creative action of God Himself.

The philosophical problem of the transmutation of material substances arose in medieval thought. Are essences mutable, as current alchemy assumes, or immutable? In a specific treatise, al-Kindī (d. 260/873) refuted the alchemists’ claim, which he saw as nothing more than deceptive procedures. In a passage of his *Shifā’*, Ibn Sīnā (d. 428/1037) also rejects the idea that the inner substance of metals can be changed. Without ruling out the possibility of transmutation, Ibn Khaldūn considered it almost impossible. Al-Fārābī (d. 339/950), on the other hand, believed that metals are only distinguished from each other by accidental properties and that man is capable of acting upon them. Fakhr al-Dīn al-Rāzī, on the other hand, openly supported the possibility of transmuting metals by imitating the laws of nature<sup>22</sup>.

In fact, Jābir himself is not very precise in his definitions<sup>23</sup>. As we have seen above in relation to his language, Jābir adopted a vision of the world based not on the transformation of substances, but rather on an uninterrupted flow of changing polarities<sup>24</sup>. He does not even draw a clear line between the three kingdoms: he says minerals, plants, and animals are produced by an effect, be it strong or weak, of the rotation of the celestial sphere, which determines the mixture of soul and matter. It simply happens that the soul gives them different forms. Jābir’s corpus mentions the use of minerals, but also vegetable and animal matter to obtain the philosopher’s stone<sup>25</sup>. It

21. Jābir b. Ḥayyān, *K. al-sab‘īn*, 481.

22. Manfred Ullmann, *Die Natur-und Geheimwissenschaften im Islam* (Leiden 1972), 249–55.

23. Kraus, *Jābir ibn Ḥayyān*, 258, where he explicitly refers to Aristotle: the ‘ayn, or *dhāt*, or *ḥaqīqa* of things is independent of their existence with respect to us. But is it a purely logical difference, or one that exists in itself? Haq, *Names, Natures, and Things*, 49f.

24. «*Fa-i‘lam yā akhī anna al-maḥsūsāt hiya allatī lā wujūda la-hā, wa-la-hā kaww, wa-li-dhālīka tarā-hā bi-ṣūrat al-thābit, wa-hiya sā‘ila*», Jābir b. Ḥayyān, *K. al-ma‘rifā*, in *Majallat ta’rīkh al-‘ulūm al-‘arabiyya wa-l-islāmiyya* 1 (1984), 84.

25. Scattered quotations from *K. al-sab‘īn* quoted in Kraus, *Jābir ibn Ḥayyān*, 3, 4, 41.



also mentions the production of living beings<sup>26</sup>, and goes so far as to affirm – at least by quoting the so-called *aṣḥāb al-ṭabā'i* (proponents of the four natures) – that it is possible to create a non-intelligent animal and even a human being endowed with reason and capable of religious belief. But we cannot rely on these passages to develop Jābir's theory of transmutation. Either we take them literally and find them too extreme, or we see a symbolic meaning in them, but any interpretation would be highly speculative.

(3) In any case, what draws the boundaries between one kingdom and another, between one substance and another, is the intensity of the soul of each of the four elemental qualities in it. The right proportions between these intensities are called “balances”<sup>27</sup>. Each substance depends on a different balance, which conditions it and makes it what it is<sup>28</sup>. The whole alchemy of Jābir consists of measuring the intensity of the soul and imitating the action of that same world soul in its laboratory work<sup>29</sup>. It should be noted that there is an immense effort to rationalize the laws of the universe, far removed from mystical speculation.

(4) Let us now come to the main question that concerns us: in what way can alchemical work according to Jābir stimulate, accompany, or even join, a philosophical and especially a spiritual, mystical vocation? What about the transformation of the human being? First, there is a philosophical question: what is a “human being”? How is he different from animals?

It is here that the concept of *'aql* appears. It is crucial for our purpose because it denotes both a cosmic entity – the universal intellect – and at the same time an individual faculty<sup>30</sup>. The human being is

26. Scattered quotes from *K. al-sab'īn*, *K. al-baḥṭh*. For the idea that what God creates at once, the alchemist does in several, less perfect ways, see Jābir b. Ḥayyān, *K. al-mīzān al-ṣaḡīr*, 439, 444–45, 449. In Jābir b. Ḥayyān, *K. maydān al-'aql*, 221, it is said that «you become the soul and the substance» in the operation, reproducing the genesis of earthly beings.

27. Kraus, *Jābir ibn Ḥayyān*, 30, for the quote, 188 n.3: there are balances for all things, intellect, soul, nature etc., but the most complete is the balance of letters.

28. Jābir b. Ḥayyān, *K. al-ahjār*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 129f.

29. Jābir b. Ḥayyān, *K. maydān al-'aql*, 221. Kraus, *Jābir ibn Ḥayyān*, 99–101.

30. See Kraus, *Jābir ibn Ḥayyān*, 97–103 and on the artificial generation of man, see 103–19, 147. See in particular Jābir b. Ḥayyān, *K. al-tajmī'*, in *Mukhtār*

composed of a vital soul and an intellect (*nafs nāṭiqā*). This pure, luminous intellect distinguishes humans from animals. In fact, this individual intellect emanates from the universal intellect. Jābir goes so far as to call it, the individual intellect, the “little brother” of the universal intellect: “Indeed, he is its little brother. By ‘little’ I simply mean that he comes after it and is supported by it through providence. He is the effect (*athar*) of the first intellect, and its orphan child, and the effect of the first cause through the Intellect”<sup>31</sup>. Here we find a framework of thought common to the philosophers (*falāsifa*) and the Ismāʿīlīs.

Here the key to human destiny lies in the theory of knowledge. Indeed, to learn the truth of things and the world is to make a decisive act, a profound commitment; for knowledge is nothing other than the coming into action of an element of the universal intellect in the individual intellect. It is knowledge that brings about the transformation, or liberation, of the human compound. Of course, this statement does not include all kinds of knowledge. There are two kinds of knowledge<sup>32</sup>. Jābir distinguishes the weak alchemists who rely solely on sense observation (*maʿrifa*) from those who have access to direct intellectual knowledge (*ʿilm*)<sup>33</sup>. The human being, as

*rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 342f. with a wealth of details; and Jābir b. Ḥayyān, *K. al-sabʿīn*, 461. Note the importance of the «mold», i.e. the form (vs. *jawhar*, or *dhāt*) of what is generated, which is then filled with sperm, flesh of the desired being, blood, and brain. The opinions are numerous and varied.

31. Cf. Jābir b. Ḥayyān, *K. al-qisma*, in *Majallat taʾrīkh al-ʿulūm al-ʿarabiyya wa-l-islāmiyya* 1 (1984), 64: «[...] *dhālika li-anna-hu akhū-hu al-aṣghar, wa-lastu urīdu bi-l-aṣghar illā kawna-hu baʿda-hu wa-maḥmūlan fī-hi bi-l-qisma; fa-huwa athar al-ʿaql al-awwal wa-waladu-hu al-yatīm, wa-athar al-ʿilla al-ūlā bi-tawassuṭ al-ʿaql*». On the parable of the two brothers, see *Mukhtār rasāʾil Jābir ibn Ḥayyān*, 333f. On the definition of *ʿaql*, see also Jābir b. Ḥayyān, *K. al-ḥudūd*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 101, 102, 105, 109 (the intellect grasps things as a mirror grasps colored forms), 110 (where *nafs nāṭiqā*, *ʿaql* and *ʿilla ūlā* are juxtaposed as a sequence).

32. The first one is inductive, based on sensitive things: it is the *istiqrāʾ*, the instrument of the earthly soul (*nafs*), which is weak and fallible, and leads to partial knowledge, the *maʿrifa*. The second one, universal and illuminative, is the one that interests Jābir. Through it, the human intellect reaches the universal intellect, from which it derives its knowledge, *ʿilm*.

33. This is the main theme of Jābir b. Ḥayyān, *K. al-maʿrifa*, 52–57; see also Jābir b. Ḥayyān, *K. al-bayān*, in *The Arabic Works of Jābir ibn Ḥayyān*, ed. E. J. Holmyard (Paris 1920), 5–12. See also Lory, *Alchimie et mystique*, 43, 158–60, and 231 n.60. In Jābir b. Ḥayyān, *K. al-raḥma* (The book of mercy/Le Livre de la

mentioned, is physically immersed in the mixture of intellect/soul/matter. In every human being, every act of thinking involves his soul, his intellect, and his substance itself. It defines his existence in the world, it determines the orientation of his life. To “understand,” according to ‘*ilm*, is to perform an act of purification, an act of liberation. Indeed, this is what qualifies true being (*wujūd*) – as opposed to apparent being at the level of mixture (*kawn*)<sup>34</sup>. Through this connection between the cosmic intellect and the human intellect, the wise man becomes what he knows. This is a long process, marked by many reincarnations<sup>35</sup>. Note that this process only affects certain souls, those of the “philosophers” (i.e., the alchemists), and not those of ordinary people<sup>36</sup>.

Alchemy, however, adds another term. In order to understand, according to ‘*ilm*, one needs an object of science, a support on which to rest the object of one’s own act of thinking. The thinking person cannot be both the subject and object of his own act of thinking, of his own constant evolution. He needs an object of knowledge that corresponds to the universal balances and leads to them. The role of the alchemical operation is an intermediate world, a “mesocosm”. Jābir’s texts emphasize this explicitly: just as the human being is a microcosm, a precise reflection of the whole cosmic structure, so the alchemical work is a mesocosm (*‘ālam awṣaf*):

There are two worlds, the great and the small. The great one is the superior heavenly body with the heavenly beings (*al-jawāhir al-rūḥāniyya*) above it.... It is said that the small world is man, who is called “small” in relation

Miséricorde), in *La chimie au Moyen Âge*, ed. M. Berthelot and O. Houdas (Paris 1893), 3: 134, the term ‘*aql* refers to the ability to think what is perceived by the senses, it concludes: «*Al-ḥawāss ālāt al-naḥs, wa-l-naḥs wa-l-ḥawāss ālāt al-‘aql*». It is clear from what follows that this ‘*aql* is not mere reasoning, but also an intuitive perception.

34. Jābir b. Ḥayyān, *K. al-ma‘rifa*, 54; Jābir b. Ḥayyān, *K. al-bayān*, 9–10. On the role of human language as an act of the soul, involving its substance, see Haq, *Name, Natures, and Things*, 83–84, 90, 226.

35. See especially Jābir b. Ḥayyān, *K. al-ishtimāl*, in *Mukhtār rasā’il Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 548f. on whether it is an alchemical parable; Jābir b. Ḥayyān, *K. al-khawāṣṣ*, in *Mukhtār rasā’il Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 378; Jābir b. Ḥayyān, *K. al-uṣṭuqus al-uss*, in *The Arabic Works of Jābir ibn Ḥayyān*, ed. E. J. Holmyard (Paris 1920), 100; Jābir b. Ḥayyān, *K. al-ma‘rifa*, 57; Jābir b. Ḥayyān, *K. al-khalīl*, in *Majallat ta’riḥ al-‘ulūm al-‘arabiyya wa-l-islāmiyya* (1985), 82–83; Lory, *Alchimie et mystique*, 67f.

36. Jābir b. Ḥayyān, *K. al-ma‘rifa*, 62.

to the great, to whom he is similar (*li-anna-hu mithla-hu sawā*). The wise Plato said: “The alchemical work (*al-ṣanʿa*) is a third world, because it is similar to each of the other two”<sup>37</sup>.

Here the parallel between the three worlds is in a rigorous order. It allows the alchemist to use the reference points of astrology as well as those of medicine to evoke, for example, the process of making gold. This contemplation of the alchemical work sets the human intellect (*ʿaql*) in motion; it is transformative, for the human intellect contemplates in the alchemical operations the same divine secrets that are hidden and buried within it. In this way, alchemical science is the path of wisdom par excellence, a redemptive path of transformation of the human compound. Henry Corbin wrote:

To measure the nature of a thing, whatever that thing may be, [involves] measuring the quantities that the soul has appropriated, and measuring the intensity of the desire of the soul that descends into matter. Conversely, it is the transmutation of the soul that conditions the transmutation of the bodies; it is in the soul that they are transmuted, the soul is the place of their transfiguration<sup>38</sup>.

The true alchemist therefore acquires a science of timeless principles, the science of balances. The science of balances is, in a way, above the universal intellect. First, the intellect itself contains the balances. Second, it is the universal intellect who transmits the numerical harmonies to the hypostases below him and to the sublunary world. Moreover, some passages seem to suggest that the balances are the essence of the first intellect, but these passages are not very clear<sup>39</sup>. In any case, Jābir stresses that the *ʿilm al-mawāzīn* is a divine science entrusted to the prophets and Imams – including

37. Cf. Jābir b. Ḥayyān, *K. al-raḥma*, 149–50; and Jābir b. Ḥayyān, *K. ikhrāj mā fī l-quwwa ilā l-ʿil*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 71: «(*al-Ṣanʿawiyyūn*) ... *yaʿtaqīdūn anna al-ʿālam insān kabīr wa-l-ṣanʿa insān aṣṣaṭ wa-l-insān insān ṣaghīr*». German trans. F. Rex, *Zur Theorie der Naturprozesse in der frühharabischen Wissenschaft* (Wiesbaden 1975), 116. Elsewhere in Jābir’s corpus, it is written: «In (the alchemical mesocosm), the forces of the macrocosm come together in the microcosm», Jābir b. Ḥayyān, *K. al-raḥma*, 149. This text develops the idea of the tried and tested, experimental character of the junction of these two worlds.

38. Corbin, *L’alchimie*, 179–80.

39. Jābir b. Ḥayyān, *K. al-khawāṣṣ al-kabīr*, in *Mukhtār rasāʾil Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 250, 252; Kraus, *Jābir ibn Ḥayyān*, 311–13.

Ja'far al-Ṣādiq (d. 148/765) in his time. This purpose of purification is cited as the real reason for the composition of Jābir's corpus. Ja'far al-Ṣādiq justifies writing his treatises on the basis of the instructions given to him; for Jābir adds that "this will undoubtedly purify me from the impurity of this world"<sup>40</sup>. This is a crucial point; we see how it differs from the vision of human transformation among Sufis such as Ibn 'Arabī.

To express this inner transformation, several of Jābir's treatises use a Shī'ī vocabulary. The disciple must join the Imām. The Imām is the philosopher's stone<sup>41</sup> that acts as an elixir that allows metals to be transmuted. The disciple who understands alchemy becomes the Imām, in the sense that he acquires the same level of knowledge as the Imām<sup>42</sup>. The disciple is then liberated from the cycle of reincarnation. Jābir calls the alchemist who has reached this level of knowledge an "orphan". The "orphan" (*al-yaṭīm*), is neither a prophet nor an Imām, but he rises to their level of knowledge because he draws from the source of all light<sup>43</sup>. The parallel between the Imām and the

40. «... *fa-asā-hu an yukhalliṣa-nī min wasakh hādihā l-'ālam*», Jābir b. Ḥayyān, *K. al-raḥma*, 95.

41. Jābir b. Ḥayyān, trans. M. Berthelot and O. Houdas, *Le Livre de la Miséricorde*/(*Kitāb al-raḥma*), in *La chimie au Moyen Âge*, vol. 3 (Paris 1893), 132-60 (Ar.) and 163-90 (Fr. trans.)] (where the imām = the Stone), 94 («... *fa-asā an ya'rifa al-tadbīr bi-hādhi-hi al-lafza man shāhada-hu wa-waṣala ilay-hi, wa-huwa qawli: illā an yus'idu-ka Allāh bi-ru'yat al-Imām*» (follows a mention of Ja'far al-Ṣādiq), 95; Lory, *Alchimie et mystique*, 64-66, and related notes, 211-12.

42. Recall here the role of the *ashkhāṣ rūḥāniyya*, explained in terms that are often rather confused by Jābir; notably in allusions to the triad intellect/soul/*ashkhāṣ*, Jābir b. Ḥayyān, *K. al-baḥth*, 506-8, 526-27, where these *ashkhāṣ* can be identified with the stars, but also with the prophets and saints; curiously, Jābir does not take sides. See Jābir b. Ḥayyān, *K. al-khamsīn*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus (Cairo 1935), 491, 497 on the role of the Imam as the first silent one, the origin of everything; Jābir b. Ḥayyān, *K. al-ishtimāl*, 551-52 on the unity in essence of the fifty-five *ashkhāṣ* – and their numerous differences in *maqāmāt*; P. Kraus, «Les dignitaires de la hiérarchie religieuse selon Gābir ibn Ḥayyān...» in *BIFAO* 41 (1942), 92; Lory, *Alchimie et mystique*, 71-81, 115. Finally, note that: «The angel is the goal toward which all the universe tends», according to Jābir in the *K. al-khamsīn*. On this subject, see Lory, *Alchimie et mystique*, 28f. and 64f.; and P. Lory, «Eschatologie alchimique chez Jābir ibn Ḥayyān», in *Revue des mondes musulmans et de la Méditerranée* 91-94 (2000), 75.

43. Thus in Jābir b. Ḥayyān, *K. al-khalīl*, 81: «... *anna al-yaṭīm tarbiyatu al-Imām, wa-nā'ibun 'an-hu wa-qā'im maqāmi-hi ba'da-hu idh kāna la-hu walad*». Lory, *Alchimie et mystique*, 55-56, 208, and the related notes.

universal intellect is explained in the *Kitāb al-bayān*: “It is this vocalized hamza who is the origin of all things, the composer of books. [...] He manifests that he is the first cause”<sup>44</sup>.

Man’s existence has no value and no interest except in relation to his future, his destiny as a “great man”<sup>45</sup>. The goal of all this is the attainment of human perfection. Hence the eschatological dimension of Jābir’s project<sup>46</sup>. At the end of a period of change in esoteric knowledge, an eschatological figure will come, the Bayān. He will restore science and destroy the ignorance that leads to degrading reincarnations. This perfect person will mark the end of earthly history. It should be noted that there are many points of comparison with other schools of thought – especially with the Ikhwān al-Ṣafā’. I draw a parallel with Ibn ‘Arabī, although he is later than the period considered here. In fact, he helps us clearly mark the boundary between material and mystical alchemy.

### *Transmutation and Enlightenment According to Ibn ‘Arabī*

Let us now turn to Ibn ‘Arabī’s ideas on transmutation. The comparison can be fruitful, despite the temporal difference that separates these two corpora. Indeed, these two major works present a complete cosmology articulated around a “lettrist” vision of language. According to this vision, letters play a role in structuring the levels of existence. The permutation of (cosmic) letters thus accompanies the evolution of beings created in the sublunary world. It is doubtful that these two systems have a common origin or that Ibn ‘Arabī drew on the writings of Jābir. In his essay on the science of letters

44. Jābir b. Ḥayyān, *K. al-bayān*, 9–10; note the use of the term *al-jawhar al-sharīf*. See also Jābir b. Ḥayyān, *K. al-khalīl*, 84.

45. Jābir b. Ḥayyān, *K. ikhrāj*, 71, where the accomplished alchemist becomes *insānan kabīran lā nihāyata la-hu*; what differentiates the alchemist from the philosopher is that he does not need anyone else, Jābir ibn Ḥayyān, *Kitāb al-ḥudūd*, 110; Lory, *Alchimie et mystique*, 45.

46. Jābir b. Ḥayyān, *K. al-ishtimāl*, 553, where the coming of the Qā’im is mentioned, when the deliverance of matter will appear; Jābir b. Ḥayyān, *K. al-khamsīn*, 490f., enumeration of the different «grades»; Jābir b. Ḥayyān, *K. ikhrāj*, 71–72; Lory, *Alchimie et mystique*, 117–19, 225 n. 225. The fifty-five hierarchs collectively assume the role of the Imam, perhaps absent since the death of Ja’far al-Ṣādiq.

in the works of Ibn 'Arabī, Denis Gril notes the striking similarities between the two systems of esoteric thought. He states:

The study of the relationship between these two works, separated by at least three centuries, remains to be done, not on the secondary level of a possible literary transmission, but in order to understand how *taṣawwuf* integrated elements of which only it [*taṣawwuf*] knew the true origin<sup>47</sup>.

This last assertion, which has yet to be tested and discussed, is one of the aims of this article: What is the deep connection between Jābir's alchemy and mystical vision in the world? How might the transformation of metals in an alchemical laboratory lead to, or at least signify, human transformation? In Jābir and in Ibn 'Arabī we find common discourses on the transmutation of materials and humanity. Ibn 'Arabī's vision, like that of Jābir, encompasses a complex and comprehensive cosmology. It describes the role of the elements, the three realms, etc. in the details of the constitution of the universe. The earthly world is the emanation of the universal intellect, from which emanates the universal soul and nature, united with universal matter. The universal or first intellect is also called the Muḥammadan reality. The earthly world is a world of change. It is in constant mutation, in constant "journey". It is the world of transience (*'ālam al-fanā*) and constant change, in contrast to the heavenly world. As he strikingly sums up in the *Kitāb al-iṣfār*:

Existence has movement as its origin. Therefore, there can be no motionlessness in it, for if it were motionless, it would return to its origin, which is nothingness. The journey never ceases in the lower and higher worlds... In reality, we never cease to be on a journey from the moment of our original constitution and the moment of the constitution of our physical principles until infinity. When a stage (*manzil*) appears to you, you say to yourself: here is the end... But as soon as you arrive, you do not hesitate to leave to take the road again<sup>48</sup>.

Of course, the "journey" described here by Ibn 'Arabī takes place in a metaphysical framework. It seems to refer to a purely spiritual

47. D. Gril, «La science des lettres», in Ibn 'Arabī, *Les Illuminations de La Mecque/The Meccan Illuminations* [English and French], ed. M. Chodkiewicz (Paris 1988), 415.

48. Ibn 'Arabī, *K. al-iṣfār 'an natā'ij al-aṣfār, Le dévoilement des effets du voyage*, ed. and trans. D. Gril (Paris 1994), 4-6.

evolution. But the adverb “purely” must be used with caution, for the material constitution also comes into play. For al-Shaykh al-akbar, too, the macrocosm corresponds to the microcosm<sup>49</sup>. Adam is the summation of the constitution of the material universe. He is endowed with a mind and a soul corresponding to the universal mind and soul. The dense Adamic body is composed mainly of earth and water. His spirit (*rūḥ*) is itself a subtle, imaginal body centered on the heart<sup>50</sup>. It is on earth as a replica of the universal intellect, the Muḥammadan reality. “The first thing that God created was the intellect, and it is from this intellect that these other intellects were manifested through the intermediary of natural souls (*al-nufūs al-ṭabī‘iyya*). This intellect is the first of the fathers; God called it ‘spirit’ (*rūḥ*) in His glorious book”<sup>51</sup>. The human form is created “of divine origin” (*‘alā l-ṣūra al-ilāhiyya*). This means that man was created to be a perfect being reflecting all the divine names. According to a *ḥadīth*, God created Adam in His own image, that is, in all His beautiful names. This point is essential. Man is a complete expression of the whole universe, of the three realms (summary, microcosm, and as an image of the world in miniature). He is a microcosm encompassing the whole macrocosm. In most cases, however, this form remains in a purely potential state. It is fully realized only in the saint, the *walī* of God. The goal of Sufism is to actualize these divine names, station by station. As for the one who does not correspond to this elevation, «he is not really a human being, but rather an animal whose external form resembles that of a human being”<sup>52</sup>.

49. On microcosmism in Ibn ‘Arabī, see, for example, Ibn ‘Arabī, *al-Futūḥāt al-Makkiyya* (Cairo 1911), 2:71, in answer to al-Tirmidhī’s question about the precedence of Adam over the angels; and Ibn ‘Arabī, *al-Futūḥāt*, 3:315, trans. W. Chittick, *The Sufi Path of Knowledge* (Albany 1989), 359. M. Takeshita, *Ibn ‘Arabī’s Theory of the Perfect Man and Its Place in the History of Islamic Thought* (Tokyo 1987). Now, Sophie Tyser, *Dans les horizons et en eux-mêmes, L’homme, le monde et la Révélation dans l’enseignement d’Ibn al-‘Arabī* (PhD diss., Paris Sciences et Lettres – École Pratique des Hautes Études, Paris 2022).

50. See, for example, Ibn ‘Arabī, *al-Futūḥāt*, 3:156. A certain vacillation in the vocabulary sometimes appears: the body and its faculties of growth, its humors, etc. is governed by the rational soul/spirit, for example, Ibn ‘Arabī, *K. al-isfār*, 17–19.

51. Ibn ‘Arabī, *al-Futūḥāt*, 2:66–67, in answer to al-Tirmidhī’s question about the relationship between the prime intellect and the particular intellects of men.

52. «... *fa-laysa bi-insān, wa-innamā huwa ḥayawān, yushbihu fī l-ṣūra zāhir al-insān*», Ibn ‘Arabī, *al-Futūḥāt*, 3:154; Chittick, *The Sufi Path*, 275–76.



Ibn 'Arabī quotes Jābir several times, but as far as I know only in the context of the science of letters. He notes that Jābir separates the hamza from the alif as if they were two separate letters<sup>53</sup>; he does not mention, and perhaps did not know, that this distinction is based on the order of Shī'ī metaphysics: it is the separation of the silent (*ṣāmit*) alif from the vocalized hamza, the speaking Imām.

Alchemy as such is of only passing interest to Ibn 'Arabī, the Shaykh Akbar. He alludes to it in chapter 167 of *al-Futūḥāt al-makkiyya*, entitled *Bāb fī ma'rifat kīmiyā' al-sa'āda* ("Chapter on the knowledge of the alchemy of happiness"). This chapter compares the scientific journey of the one who trusts in rational approaches (*naẓar*) with that of the follower of the prophetic tradition. It begins by noting that there is an analogous relationship between the universal soul and nature, the particular human spirit (*rūḥ*, *nafs*) and the human body, the partial souls and the mineral bodies they animate. This point is subtle because these three relationships are not identical but parallel, and their evolution allows us to clarify them in relation to each other. In fact, the souls of the minerals, like the souls of human beings, are of different degrees; and each soul of each compound seeks its own completeness, which differs from that of the others by its nature and by its accidents. Ibn 'Arabī comments on the two different ways of understanding these processes in terms of the journey of two pilgrims traveling from one celestial sphere to another. The spheres influence the natural bodies, according to the teachings of traditional astrology<sup>54</sup>. He explains that there are innumerable causes influencing the sublunary world that affect natural souls without the earthly observer (*ṣāhib al-naẓar*) having access to them. The "rational" inquirer cannot understand the true metaphysical causes that come from the divine order. Ibn 'Arabī himself states that he has received this hidden science, which is "the science of the elixir through natural alchemy" (*'ilm al-iksīr fī l-kīmyā' al-ṭabī'iyya, fa-hādhā huwa iksīr al-'arīfīn*); and that he is only revealing its mean-

53. *Kitāb al-mīm wa-l-wāw wa-l-nūn*, 85. In Jābir's speculations on letters, the hamza and alif are not dissociated.

54. In premodern times, it was widely believed that the stars gravitating on the celestial spheres exerted a constant and determinative influence on the various realms of terrestrial life; they were regarded as intermediaries of the divine will. As a result, the extremely rigorous calculations of medieval astronomers concurred with the speculations of the highly influential astrologers of the time.

ing here by divine order to warn the Muslim community and the human community.

Ibn ‘Arabī shows a real knowledge of alchemical theory, and especially of its very close connection with astrology. Moreover, he believes that for him, alchemy (*kīmiyā*) is a true form of wisdom, celestial and angelic, a mirror of the numerical harmonies of the universe. However, the rest of the text shows that it serves to support his central point, namely that followers of the prophetic life are transformed; they are not deficient like those who follow reason alone. The parallelism between alchemy and mysticism continues throughout the text. Ibn ‘Arabī explains the two ways alchemy transforms metals into gold; this is its *aṣl* and purpose<sup>55</sup>. The first is the science of letters, letters that carry the divine creative breath, and modify the metaphysical structure, the root of what exists in the divine order. This first process enabled Jesus to give life to a clay bird and to raise the dead<sup>56</sup>. The second process corrects the inadequacies of what exists at the natural level.

Man is also called to transform himself<sup>57</sup> so that he can attain a dimension of saintliness (*walāya*). Transformation consists in conforming to the higher worlds, and in freeing oneself from the usual attachments to this world and the body. Each degree of knowledge is a transformation and continues until one transcends the sensible world and enters the intelligible world<sup>58</sup>. Note that all these transformations take place according to the norms of traditional Sufism. Through the account of the journey of the two seekers, the “rational” and the worshiper, Ibn ‘Arabī offers a cosmological picture of the spiritual evolution taught in classical Sufism. The integral human

55. One takes place by rebalancing the properties of the elementary qualities. The concept of «balances» is mentioned, but not the work of Jābir. The other way is through the production of an elixir that transforms them.

56. Ibn ‘Arabī, *al-Futūḥāt*, 2:274–75.

57. Man is transformed by his gestation, birth, growth, adulthood, death, and even beyond his physical death, see Ibn ‘Arabī, *K. al-isfār*, 6. This transformation takes place in and through his body, for a man cannot understand himself without his body: «*Dhālīka anna al-rūḥ lā ya‘qil nafsa-hu illā ma‘a hādha l-jism, maḥall al-kam wa-l-kathra, wa-lam yashhad nafsa-hu qaṭṭ waḥda-hu ma‘a kawmi-hi fī nafsi-hi ghayr munqasim*», Ibn ‘Arabī, *al-Futūḥāt*, 2:618; trans. Chittick *The Sufi Path*, 235.

58. Ibn ‘Arabī, *al-Futūḥāt*, 2:279–83. In the ascensional journey, the Muḥammadan traveler goes beyond the material spheres.

transformation leads to total submission (*'ubūdiyya*) and annihilation (*fanā'*) in God<sup>59</sup>. The pilgrim who follows the Prophet

knows from this presence the science of the elixirs that transform the mineral bodies through the spirit that it [the science] contains. He contemplates Michael and Abraham and the science of the provisions (*arzāq*) which they possess to nourish forms and spirits, and which will maintain them in existence. He knows which elixir is food for which particular metal, which he can turn into gold or silver after it has been iron or copper: this is the good health of that metal and the removal of the disease that has entered its mine and turned it into iron<sup>60</sup>.

From there a new ascent can begin, that of the knowledge of the material degrees of substances<sup>61</sup>. The end of the chapter indicates that resurrection is the completion of the human transformations.

In short, Ibn 'Arabī alludes to the evolution of metals. He speaks of the balances of the spiritual bodies<sup>62</sup> and of the degrees of soul present in the mineral bodies, but in fact the alchemical references serve him more as a reservoir of images and parallels to trace spiritual growth. As S. Tyser writes,

In this passage where Ibn al-'Arabī alludes to the parallelism between the growth of minerals and that of human beings, as well as to the evils that can tarnish the original purity of minerals and that of humans, he refers to the path of equilibrium, the path that leads human beings in the direction of the "excellent, golden and perfect city"<sup>63</sup>.

He who achieves this, Ibn 'Arabī points out, is no longer subject to transmutation to that which is inferior to this perfect form of gold, gold corresponding to the degree of perfection<sup>64</sup>.

59. See, for example, Chittick *The Sufi Path*, 309.

60. Ibn 'Arabī, *al-Futūḥāt*, 2:282.

61. Ibn 'Arabī, *al-Futūḥāt*, 2:282.

62. Ibn 'Arabī, *al-Futūḥāt*, 2:275, about Joseph's ability to interpret sensitive apparitions, dreams.

63. Tyser, *Dans les horizons et en eux-mêmes*, 261.

64. Tyser, *Dans les horizons et en eux-mêmes*, «Dans ce passage où Ibn al-'Arabī fait allusion au parallélisme entre la croissance des minéraux et celle des êtres humains, ainsi qu'aux maux qui peuvent ternir la pureté originale des minéraux comme celle des hommes, il fait référence au chemin de l'équilibre (*ṭarīq al-i'tidāl*), voie (*maḥaḡḡa*) qui mène l'être humain en direction de la 'cité excellente, dorée et parfaite' (*al-madīna al-fāḍila al-ḍahabiyya al-kāmila*). Celui qui y parvient, précise le maître andalou, cesse d'être sujet à la transmutation

Alchemy is not, as in Jābir, the engine of a transformation of the human compound. If we look at the reasons for these differences, we can make some observations. Despite certain similarities, there are profound differences between the two systems.

(1) According to Ibn ‘Arabī, the mystic does not expand his consciousness by working in an object outside himself, like a laboratory. The assistance of alchemical operations is not invoked as useful for the advancement of spiritual knowledge. If Jesus is a master of transformation, it is because the secrets of language were revealed to him, not because he worked in a material way. This progression takes place through the application of religious law, and/or Sufi exercises; but these are not an absolute requirement. The seeker of truth approaches the divine presence and understands it, not by himself, but only through a divine impulse. Not only is this a matter of divine mercy, but above all, the whole mystical experience is a progressive awareness of the divine omnipresence: it is God who contemplates Himself through the human form. For Ibn ‘Arabī, transmutation can be summarized as “the self-disclosure of God”, to use Chittick’s title.

We find nothing similar in Jābir’s corpus, which describes procedures and teachings designed to guide the reader on a path of understanding and personal action. Of course, Ibn ‘Arabī also describes the path that leads the Sufi to the path of saintliness (*walāya*). But he seeks to awaken a knowledge that germinates within the human individual, who is a mirror of divine attributes. We are far from the orphan of Jābir, who speaks of a gradual rise to the level of the Imām through tireless personal research into the alchemical mesocosm. Material alchemy has a truly redemptive role. It is about the liberation of souls immersed in matter and ignorance. This progressive liberation takes place through work on the alchemical mesocosm and the material elaboration of the philosopher’s stone. It is enlightening, but not mystical in the Sufi sense. It even has an eschatological dimension, that of the liberation of the whole human race, as explained in the *Kitāb al-bayān*. Ultimately, it will make the return of the awaited Imam possible. According to Ibn ‘Arabī, transmuta-

vers ce qui est inférieur à cette forme d’or parfaite (*al-istiḥāla ilā l-anqāṣ ‘an-hā*), l’or correspondant au degré de la perfection (*darajat al-kamāl*)», Tyser, *Dans les horizons et en eux-mêmes*, 251–52.

tion is a way to reach the divine eternal present. Jābir works for the future of humanity, for the coming of a perfect man. Can we compare this allusion to the coming of the “great man” (*al-insān al-kabīr*) of Jābir with Ibn 'Arabī's idea of the perfect man (*al-insān al-kāmil*)? Given the highly allusive nature of Jābir's writings and their specifically Shī'ī expressions, it seems risky to attempt such a comparison.

(2) For Ibn 'Arabī, alchemy is purely “vertical” and spiritual: it is the alchemy of happiness, the only one that matters. As James Morris writes:

[...] the process of “dissolution” or “disassembly” into its constituent elements (organic, mental, psychic and spiritual) of the original “composition” (*tarkib*) constituting the psychosocial “self” (*dhat*) in the broadest sense – as opposed to the *sirr*, the “innermost reality” or “secret” that is the true essence of each individual. The terms “dissolving” (*tahlil*) and “reintegration” (*tarkib*) are drawn from a larger body of alchemical vocabulary which Ibn 'Arabī uses in this spiritual sense throughout the *Futuḥat*, most notably in chapter 167...<sup>65</sup>

The *kīmiyā' al-ṭabī'a* is only a discrete mirror of it, and for good reason: essences do not change in any way. As Ibn 'Arabī writes: *a'yān al-ṣuwar lā tanqalib* or *al-istiḥālāt muḥāl* is the sensitive perception that varies, as the example of Moses' staff shows<sup>66</sup>. In other words, “transmutation” can only take place in order to realize the substance that constitutes it from all eternity: lead and silver are destined to become gold because gold is their essence. But, a prophet or a true 'arīf can manifest an object or a being in the form (*ṣūra*) of another being. Moses' staff suddenly took the form of a snake, but it did not become a snake in its essence. God took away some of its attributes and created others in it. The knower ('arīf) knows how to discern the 'ayn, the *jawhar* (essence) of things beyond the sensible form. Like Joseph, he knows the balances of imaginal appearances. He is not deceived by earthly forms. He understands that everything is only theophany (*tajalliyāt ilāhiyya*)<sup>67</sup>.

65. J. W. Morris, «The Spiritual Ascension: Ibn 'Arabī and the Mi'rāj», in *JAOS* 107, no. 4 (1987): 629–52 [pt 1]; and 108, no. 1 (1988): 63–77 [pt. 2], see 639 n.53.

66. Ibn 'Arabī, *al-Futūḥāt*, 2:277–78.

67. Ibn 'Arabī, *al-Futūḥāt*, 2:282, 275. Subtle bodies cannot become dense; but they can appear in the world of nature; see Chittick, *The Sufi Path*, 141.

Jābir's perspective is profoundly different. First, as we have seen, he asserts that transformations have no real limits, that any substance can be transformed into any other through variations in the elemental qualities. In fact, he does not speculate about the eternity of substances. He is not a metaphysician; he uses Neoplatonism as a tool to explain his vision of transformations.

(3) Moreover, Ibn 'Arabī's system of correspondence gives a central role to the Qur'ān. The correspondences are largely textual; for example, the letters of the alphabet, and the divine names are the basic structures of the whole universe:

The manifestation of the letters in the path of the breath and in words is similar to the manifestation of the cosmos from the Cloud, which is the Real's All-merciful Breath, within the ordained levels along the supposed extension – not within a body – which is the Void filled by the cosmos<sup>68</sup>.

The mixture of soul and matter in the sublunary world is a linguistic, syntactic combination. More specifically, it is the text of the Qur'ān that plays the role of the "mesocosm" here.

In Jābir, too, language, the balance of letters, occupies a central place. But it owes little to the Qur'ānic word. It is based on the common use of the common language, and indeed of any language, not just Arabic. There is scarcely a question here of the sacred dimension of the Arabic language. The perspective owes much to the philosophical traditions of late antiquity. References to the Qur'ān are numerous in Jābir's corpus, but one does not find anything resembling Ibn 'Arabī's exegetical approach of *i'tibār*<sup>69</sup>. More profoundly, the balances are not on the order of language but of number; they are mathematical matrices, not linguistic ones.

(4) Finally, I comment on their literary forms. As explained above, for Jābir, language is multidimensional and dynamic. Indeed, Jābir understands the world as a continuous and complex process, one that is physical, energetic (in relation to the universal soul), and spir-

68. Ibn 'Arabī, *al-Futūḥāt*, 2:395, quoted by Chittick, *The Sufi Path*, 129.

69. *I'tibār* involves commenting on the Qur'ān not only by means of reasoning, but also by allowing oneself to be guided by intuition, by the spiritual «taste» of the moment. In this way, one can go beyond the apparent meaning of the sacred text to reach its hidden meaning.

itual. He seeks to understand how these multiple dynamics are at work in an alchemical operation. Hence his discourse breaks the passage from one register to another. By contrast, for Ibn 'Arabī, language does not accompany transmutation. It is, of course, also a language of awakening. It obeys an associative, exegetical logic that moves back and forth between a text (e.g., the Qur'ān) and a spiritual state of knowledge that has nothing to do with the reality of the external, sensible world. It is a fragmented, impressionistic language describing successive *maqāmāt* (stations), numerous "stills". Hence its great prolixity. This is, of course, only a linguistic observation. The two authors are not concerned with the same thing: Jābir is concerned with concrete alchemical processes, and Ibn 'Arabī with the evolution of souls toward saintliness. But it seems to me that there is much more to this way of seeing the world, even a way of living in this world. At the beginning of this chapter, we suggested that these two positions would express paradigms present in the culture of Islam from its first centuries. Alchemy presents itself as a way of universal wisdom, hence its proximity to Sufism. As Regula Forster points out:

But alchemy was also a natural philosophy that sought to explain the world. It was believed that whoever was able to produce the *prima materia*, the base material that contained no accidental qualities, and transform it into gold by means of the elixir, had understood the principles of the world and, consequently, had gained a deep insight into the nature of God himself. Arabic-Islamic alchemy therefore developed a strong affinity with Sufism: some Sufis used alchemical terms to describe their experiences, and alchemical treatises were attributed to Sufi authorities such as al-Ḥasan al-Baṣrī (d. 110/728), Dhū l-Nūn al-Miṣrī (d. 246/861), al-Junayd (d. 298/910), or even Abū Ḥāmid al-Ghazzālī (d. 505/1111)<sup>70</sup>.

Indeed, one could outline obvious convergences. But this vision is not identical to the Sufi approach. We must be very careful in making comparisons between these two forms of wisdom. While it is possible that some Sufis practiced alchemy, or that some alchemists had mystical tendencies, it is likely that the two esoteric disciplines never merged into a single line of thought. It is interesting to note

70. R. Forster, «Arabic Alchemy: Texts and Contexts», in *al-Qanṭara* 37 (2016), 270-71. Needless to say, these attributions are apocryphal, as suggested by the titles of some works attributed to them.

Ibn al-Qifṭī's comment on Jābir: "In addition [to his alchemical works], Jābir mastered many philosophical sciences, and he followed the path of the 'inner science', i.e., the school of Muslim Sufis like al-Ḥārith b. Asad al-Muḥāsibī, Sahl b. 'Abdallāh al-Tustarī, and their like"<sup>71</sup>.

At the time of Ibn al-Qifṭī, in the seventh/thirteenth century, a kind of proximity between alchemy and mysticism was suggested. The two are not confused, but brought closer together, as if they belonged to the same horizon. The fundamental differences between Jābir's alchemy and Sufism proper, noted above, are not mentioned at all. They are two different visions of man and his destiny; different visions that are not opposed or antagonistic, like two companions traveling in the same direction in different vehicles.

### Bibliography

- Carusi, P., «Appendice – Le traité alchimique *Rutbat al-ḥakīm* – Quelques notes sur son introduction», in *Oriente Moderno* 80-83 (2000): 491-502.
- Chittick, W., *The Sufi Path of Knowledge*, Albany, NY 1989.
- Corbin, H., *L'alchimie comme art hiératique*, Paris 1986.
- de Callatay, G., «Magia en al-Andalus: *Rasā'il Ijwān al-Ṣafā'*, *Rutbat al-Ḥakīm* y *Gāyat al-Ḥakīm* (Picatrix)», in *al-Qanṭara* 34.2 (2013): 297-343.
- de Callatay, G. and S. Moureau, «Again on Maslama Ibn Qāsim al-Qurṭubī, the Ikhwān al-Ṣafā' and Ibn Khaldūn: New Evidence from Two Manuscripts of *Rutbat al-ḥakīm*», in *al-Qanṭara* 37 (2016): 329-72.
- de Callatay, G. and S. Moureau, «Towards the Critical Edition of the *Rutbat al-ḥakīm*: A Few Preliminary Observations», in *Arabica* 62 (2015): 385-94.
- Forster, R., «Arabic Alchemy: Texts and Contexts», in *al-Qanṭara* 37 (2016): 269-78.
- Gril, D., «La science des lettres», in Ibn 'Arabī, *Les Illuminations de La Mecque/The Meccan Illuminations* [English and French], ed. M. Chodkiewicz, Paris 1988.
- Haq, S. Nomanul, *Names, Natures, and Things: The Alchemist Jābir ibn Ḥayyān and His Kitāb al-Aḥjār (Book of Stones)*, Dordrecht 1994.
- Holmyard, E. J., «An Essay on Jābir ibn Ḥayyān», in *Studien zur Geschichte der Chemie*, Berlin 1927, 28-37.
- Holmyard, E. J., «Jābir ibn Ḥayyān», in *Proceedings of the Royal Society of Medicine* 16 (1923): 46-57.

71. Ibn al-Qifṭī, *Tārīkh al-ḥukamā'*, ed. J. Lippert (Leipzig and Cairo 1903), 160: «[...] wa-kāna ma'a hādhā mushrifan 'alā kathīr min 'ulūm al-falsafa wa-mutaqallidan li-l-'ilm al-ma'rūf bi-'ilm al-bāṭin, wa-huwa madhhab al-mutaṣawwifin min ahl al-Islām ka-l-Ḥārith b. Asad al-Muḥāsibī, wa-Sahl b. 'Abd Allāh al-Tustarī wa-naẓā'iri-him».



- Ibn 'Arabī, *al-Futūḥāt al-Makkiyya*, 4 vols., Cairo 1911.
- Ibn 'Arabī, K. *al-isfār 'an natā'ij al-asfār*, *Le dévoilement des effets du voyage*, ed. and trans. D. Gril, Paris 1994.
- Ibn 'Arabī, *Kitāb al-mīm wa-l-wāw wa-l-nūn*, in *Rasā'il Ibn 'Arabī*, Beirut 2001, 83-91.
- Ibn al-Qifṭī, *Tārīkh al-ḥukamā'*, ed. J. Lippert, Leipzig and Cairo 1903.
- Jābir ibn Ḥayyān, *Dix traités d'alchimie par Jābir ibn Ḥayyān*, trans. P. Lory, Paris 1996.
- Jābir b. Ḥayyān, K. *al-aḥjār*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 126-95.
- , K. *al-baḥṭh*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 501-27.
- , K. *al-bayān*, in *The Arabic Works of Jābir ibn Ḥayyān*, ed. E. J. Holmyard, Paris 1920, 5-12.
- , K. *al-ḥudūd*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 97-114.
- , K. *ikhrāj mā fī l-quwwa ilā l-fī'l*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 1-95; German trans. F. Rex, *Zur Theorie der Naturprozesse in der früh-arabischen Wissenschaft*, Wiesbaden 1975.
- , K. *al-ishtimāl*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 548-55.
- , K. *al-khalīl*, in *Majallat ta'rīkh al-'ulūm al-'arabiyya wa-l-islāmiyya* (1985): 81-84.
- , K. *al-khamsīn*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 489-500.
- , K. *al-khawāṣṣ*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 303-32.
- , K. *al-khawāṣṣ al-kabīr*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 224-391.
- , K. *al-ma'rifa*, in *Majallat ta'rīkh al-'ulūm al-'arabiyya wa-l-islāmiyya* 1 (1984): 52-57.
- , K. *al-mawāzīn al-ṣaghīr*, in *La chimie au Moyen Âge*, ed. M. Berthelot and O. Houdas, vol. 3, Paris 1893, 105-31. (Ar.); 139-62 (Fr.).
- , K. *maydān al-'aql*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 206-23.
- , K. *al-mīzān al-ṣaghīr*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 425-59.
- , K. *al-mulk*, in *The Arabic Works of Jābir ibn Ḥayyān*, ed. E. J. Holmyard, Paris 1920, 161-72.
- , K. *al-qisma*, in *Majallat ta'rīkh al-'ulūm al-'arabiyya wa-l-islāmiyya* 1 (1984): 63-67.
- , K. *al-raḥma* (The book of mercy/Le Livre de la Miséricorde), in *La chimie au Moyen Âge* vol. 3, ed. M. Berthelot and O. Houdas, Paris 1893, 132-60 (Ar.); 163-90 (Fr.).
- , K. *al-sab'īn*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 460-88.
- , K. *al-tajmī'*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 341-91.
- , K. *al-taṣrīf*, in *Mukhtār rasā'il Jābir ibn Ḥayyān*, ed. P. Kraus, Cairo 1935, 392-424.

- , *K. al-uṣṭuqus al-uss*, in *The Arabic Works of Jābir ibn Ḥayyān*, ed. E. J. Holmyard, Paris 1920, 61–112.
- Kraus, P., «Les dignitaires de la hiérarchie religieuse selon Ġābir ibn Ḥayyān...» in *BIFAO* 41 (1942): 83–97.
- Kraus, P., *Jābir ibn Ḥayyān – Contribution à l'histoire des idées scientifiques dans l'Islam – Jābir et la science grecque*, Mémoire présenté à l'Institut d'Égypte, vol. 44, Cairo 1942; repr. Paris 1986.
- Lory, P., *Alchimie et mystique en terre d'Islam*, Paris 1989.
- Lory, P., «Eschatologie alchimique chez Jābir ibn Ḥayyān», in *Revue des mondes musulmans et de la Méditerranée* 91–94 (2000): 73–91.
- Marquet, Y., *L'alchimie des philosophes et la philosophie des alchimistes*, Paris 1988.
- Morris, J. W., «The Spiritual Ascension: Ibn 'Arabī and the Mi'rāj», in *JAOS* 107.4 (1987): 629–52 [pt 1]; and 108.1 (1988): 63–77 [pt. 2].
- Plessner, M., «Ġābir ibn Ḥayyān und die Zeit der Entstehung der Ġābir-Schriften», in *Zeitschrift der deutschen morgenländischen Gesellschaft* 115 (1965): 23–35.
- Ruska, J., «Die bisherige Versuche, das Dschābir-Problem zu lösen», in *Dritter Jahresbericht des Forschungsinstitut für Geschichte der Naturwissenschaften in Berlin* (1930): 7–22.
- Sezgin, F., *Geschichte des Arabischen Schrifttums* vol. 4, Leiden 1971, 132–269.
- Takeshita, M., *Ibn 'Arabī's Theory of the Perfect Man and Its Place in the History of Islamic Thought*, Tokyo 1987.
- Tyser, Sophie, *Dans les horizons et en eux-mêmes, L'homme, le monde et la Révélation dans l'enseignement d'Ibn al-'Arabī*, PhD diss., Paris Sciences et Lettres – École Pratique des Hautes Études, Paris 2022.
- Ullmann, M., *Die Natur-und Geheimwissenschaften im Islam*, Leiden 1972.

ABSTRACT

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

The debate over the possibility of the transmutation of matter involves profoundly divergent visions of the world, of man, and of God. The comparison attempted here between the conceptions of Jābir b. Ḥayyān and Ibn 'Arabī illustrates quite distinct ideas. According to Jābir, no being on earth has a fixed essence: all creation is subject to transmutation. A man's effort to acquire the science of these transmutations is itself transformative, elevating souls mired in ignorance. This is why, for Jābir, alchemy is the philosophy par excellence; this is why he believed it would pave the way for a new humanity, at the coming of the Mahdī. According to Ibn 'Arabī, the expansion of consciousness does take place; it is described in terms of the Sufi spiritual path, but it is the effect of divine grace with the saint (*walī*). Material alchemy is known and recognized, but its role remains discrete, because for him the essences of things are immutable in God. The renewal of humanity is also conceived by Ibn 'Arabī, but it is the work of God's self-realization.

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