

## ALEXANDER OF APHRODISIAS IN THE KINDĪ- CIRCLE AND IN AL-KINDĪ'S COSMOLOGY\*

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“How do the heavenly bodies physically affect the sublunary world?”

On this topic, similar accounts can be found in four groups of texts: (1) a few fragmentary statements in Aristotle; (2) Greek works of the Aristotelian commentator Alexander of Aphrodisias (fl. ca. 200 A.D.); (3) Kindī-circle Arabic versions of the same writings; and (4) the cosmological works of al-Kindī.

Across the centuries of transmission and transformation of Aristotle's thought, we observe a gradual expansion from latent possibilities introduced by his own partial or allusive statements, to philosophical justifications of celestial influence in the Greek writings of Alexander, to more specific astrological models in the Kindī-circle's Arabic Alexander, which al-Kindī himself reworks with further astronomical and astrological details. In fact, this is a subject on which al-Kindī's cosmology relies explicitly on Alexander, or better, on the transformed Alexander.

But the relationship was circular. While the Kindī-circle's Alexander was closely followed by al-Kindī on certain points, al-Kindī exerted a reciprocal influence on the Arabic Alexander, who was largely a product of his own group of translators.

On this subject, as on so many others, Alexander did not give an account independent from Aristotle's doctrine. In order to appreciate the development of Aristotle's incidental and incom-

\* This article arises from research we did together at the Warburg Institute of the University of London during the spring of 1992. We discussed every point together; nevertheless, S. F. is more responsible for the section on Greek sources and on the transformed Kindī-circle Alexander, whereas H. W. is more so for the section on al-Kindī, and translations and quotations from Arabic are hers, including the Kindī-circle versions of *Quaestiones* 2.3 and 2.19 from MS Istanbul, Millet Library, Carullah 1279, 32 ff. which we give here as an Appendix (pp. 149-53). We have been generously helped by M. Aouad, Ch. Burnett, R.W. Sharples, N. Webb, and F.W. Zimmermann. To them and to the whole Warburg Institute and its director Nicholas Mann we are enormously grateful.

plete treatment of these matters, we may recall here the texts Alexander uses most:

*De generatione et corruptione* II.10, 336a15-337a33 most clearly states that, of the two basic movements of the heavens, the first, i.e. the regular movement of the sphere of the fixed stars, is in itself the cause of continual movement on earth, whereas the other, the motion on the ecliptic, because of its obliqueness is able to draw the cause of generation (i.e. the sun) closer and to take it further away, so that a balance and an alternation may be possible between generation and corruption. This second movement has been established by God for the sake of the preservation of the species of living things through the eternal cycle of generation and corruption. Significantly, the other planets are not mentioned by Aristotle.<sup>1</sup>

Incidental remarks on these same points of obliquity and double movement can be found also in *Phys.* II.2, 194b13 and *Met.* XII.5, 1071a15-16; further important cosmological details are given, although in a rather cryptical way, in *Met.* XII.6, 1072a10-18.

A different and very relevant point is stated in the first book of the *Meteorologica*. Here Aristotle says that the first principle of movement for the sublunary elements are the heavenly movements, since they govern the sublunary elements *by contact* (339a21-32)<sup>2</sup> and affect differently each one of them accord-

<sup>1</sup> There are two related and very helpful articles by John North on this subject: "Celestial Influence - The major premiss of astrology," in P. Zambelli (ed.), *Astrologi hallucinati* (Berlin and New York, 1986), pp. 45-100, reprinted in J.D. North, *Stars, Minds and Fate* (London, 1989), pp. 243-98; and "Medieval concepts of celestial influence: A survey," in Patrick Curry (ed.), *Astrology, Science and Society* (Woodbridge, Suffolk and Wolfeboro, 1987), pp. 5-17.

<sup>2</sup> The heating, explains Aristotle, is not due to a hot quality of the heavenly bodies, but to the movement and the contact together: "the circular motion (...) dissolves and inflames by its motion whatever part of the lower world is nearest to it, 340b10-14, on the same topic see al-Kindi, *On the Proximate Efficient Cause* [in *Rasâ'il al-Kindi al-falsafiyya*, ed. Abū Rida, 2 vols. (Cairo, 1950-3)], vol. I, p. 223, lines 16 ff.: "It was advanced in the physical discussions that movement produces heat in the elements and what is compounded from the elements, by accepted arguments. The elements therefore receive the influence either through movement or through contact (*bi-al-mumāssa*). That which is touching the last of (the elements) is neither hot nor cold nor moist nor dry; therefore they receive through contact with him only the influence of movement. That which is touching [the last of the elements] varies with the [heavenly] bodies, their movement and position, because some of them are greater and some smaller and some slower and some faster and some more distant and some closer and on account of all of the terminations of the [heavenly] bodies, in speed and slowness - when it is ascribed to the essence [of the heavenly bodies] -

ing to their proximity: they act first on the space which is directly in contact with them (*ton geitniōnta malista topon*, 338b21-2), where we find the dry and hot element called fire,<sup>3</sup> and then on the air which is below the fire, and so on. In that way, the heavenly power is the efficient cause of sublunary phenomena.

These statements are rather fragmentary; in no way do they amount to an integral theory of the dynamic interaction between the heavenly and the sublunary bodies.

In order to understand from an historical point of view the character of Alexander's elaboration of these few passages, one should keep in mind that one of the main concerns of our commentator was to address philosophically a number of questions current in his day about fate (in the two treatises *Peri heimarmenes pros tous autokratoras*, i. e. the so-called *De fato*, and in the shorter *Peri heimarmenes* = *Mantissa XXV*), providence (in his *Peri pronoiās* and in other shorter treatises, like *Quaestiones* 1.25 and 2.19), and the power exerted by the stars (*Quaestio* 2.3). His tendency is to complete and update Peripatetic philosophy, since Aristotle never used the words *heimarmene* and *pronoia* in the sense in which Alexander, who follows the usage of his contemporaries, does.

Alexander does his best to formulate a theory compatible with Aristotle's outlook, and then to show such a theory as implicit in Aristotle's texts.

Alexander's treatments of *pronoia* and fate show strong similarities. We may take the main lines of the *incipit* of the *Peri pronoiās* from the faithful and diligent Arabic version of Abū Bishr Mattā ibn Yūnus called *Fī al-īnāya* (*On Pronoia*), in which the *Peri pronoiās* is best preserved:<sup>4</sup>

and in height and lowness and distance and closeness. We find the things which effect heat in other things by movement do so more intensely whenever they are large, close, fast, and low. Therefore the cause of the genesis of heat in the elements is from the first element moving over them ... (etc.)."

<sup>3</sup> Aristotle calls this either fire or "a sort of fire" (*hoion pyr*, 340b 33) but says that the name of "fire" is not totally appropriate, for fire is strictly speaking "the ebullition of a dry exhalation" (341b21); see R.W. Sharples, "The school of Alexander?," in R. Sorabji (ed.), *Aristotle Transformed* (London, 1990), pp. 83-112, esp. pp. 98-9.

<sup>4</sup> Abū Bishr Mattā's translation is edited together with the Kindi-circle translation by H.-J. Ruland, *Die arabischen Fassungen von zwei Schriften des Alexander von Aphrodisias: Über die Vorsehung und Über das liberum arbitrium*, diss. (Saarbrücken, 1976). Like Ruland, we call Abū Bishr Mattā's translation D18 and

Of those who philosophised on the subject of *pronoia* and who have conveyed to others a certain knowledge about that, some of them claimed that (...) the term *pronoia* is empty, without meaning, because there is no thing that is originated whose origination arises from the view of God and his reflection (...) [whereas others] claimed that nothing which comes to be arises without *pronoia* and that everything is filled with God and he penetrates all the things which exist. (p. 1.5-11, p. 5.1-3 Ruland; cf. Grant frgm. 3, first part)

Later in this text, Alexander will say that the common opinion of men is sufficient to demonstrate that gods exist and that they are ensouled and rational (p. 51 Ruland), and will stress that the real problem is to know what is their *pronoia* and how extensive it is, according to Aristotle (p. 58 Ruland).

This can be compared with the way the treatise *Peri heimarmenes* = *Mantissa XXV* starts, which is also very similar to the beginning of the major treatise *Peri heimarmenes pros tous autokratoras* after the *exordium* and dedication (p. 165.14 ff. Bruns).<sup>5</sup>

Concerning fate it is worth considering what it is and in which of the things that are [it is located]. That fate is *something* is sufficiently established by the common conception of men (...). Anaxagoras is not deserving of credence

the Kindi-circle translation D15, following their numbering in Dietrich's list of preserved Arabic translations of Alexander's works in A. Dietrich, "Die arabische Version einer unbekanntenen Schrift des Alexander von Aphrodisias über die *Differentia specifica*," *Nachrichten von der Akademie der Wissenschaften in Göttingen*, phil.-hist. Kl. (1964): 85-148. Some Greek fragments of Alexander concerning providence are preserved apud Cyril of Alexandria and published by R.M. Grant, "Greek literature in the treatise 'De Trinitate' and Cyril 'Contra Julianum'," *Journal of Theological Studies*, 15 (1964): 265-79. Four of these correspond to passages of Abū Bishr Mattā's translation, and support its authenticity. Others may well have had a different source. I intend to write about this elsewhere [S. F.]. On the earlier version of Alexander's *Peri pronoias* made in the Kindi-circle, see below, pp. 129 ff.

<sup>5</sup> On the introduction of the latter, see the subtle analysis of J. Mansfeld, "Diaphonia in the argument of Alexander *De fato* Chs. 1-2," *Phronesis*, 33 (1988): 181-207, who also compares it with the *incipit* of *Peri pronoias*. See also *ibid.*, p. 181 n. 4 a discussion on the authenticity of *Mantissa XXV*. I do believe that this should be regarded as authentic, and none of the arguments advanced until now appears strong enough to prove the opposite; the quality and the style of writing and also the content of *Mantissa XXV* are such as one would expect from a genuine work of Alexander. I hope to write about this elsewhere [S. F.]. Anyway, since the section we quote from *Mantissa XXV* is very similar to a corresponding one in *De fato* (whose authenticity is not questionable), this problem does not touch directly on our point here.

when he testifies against the common belief; for he says that fate is not anything at all, but that this term is an empty one. But as to what it is and in what [it is located], the common conception of men is no longer sufficient to indicate this. For they cannot agree either with each other or with themselves about this. For they change their opinion concerning fate with the times and the circumstances. At one time they posit fate as something unalterable and inescapable and place all things that are and come to be under it; at another one can hear them often speaking of what is contrary to fate and of what is contrary to destiny. (179.25-180.3, trans. R.W. Sharples, *Alexander of Aphrodisias On Fate* (London, 1983), p. 106.)

Then, speaking about fate, Alexander applies it to the fortunes of individuals and says that its cause is also the cause of nature, and that this cause is the circular movement (*periphora*) of the heavenly bodies (169.23-5 Bruns). In the *Peri pronoias* he specifies that providence is general; it preserves species and is not concerned with individuals. But the efficient cause of both is the same: the heavenly bodies, their movements and their *dynameis* administer providence and fate (although Alexander never defines their relationship explicitly).

Another common feature of these treatises (the two on fate and the one on providence) is that they pay considerable attention to the opinion of other philosophers, in order to show the superiority of Alexander's own doctrine, whose intention is to reconcile Aristotelian orthodoxy and factual evidence. For every point of his own doctrine, however, Alexander gives a rational argument.

This is even more true of Alexander's other treatments of the subject of providence: for they, as the Greek title of the collection *Aporiai kai lyseis*<sup>6</sup> in which they are preserved suggests, are marked by a strong aporetic character. We call them *Quaestiones*. Among these we have several texts on *pronoia*.<sup>7</sup> One of them, *Quaestio* 1.25, is very relevant in itself,<sup>8</sup> but does not seem to have been translated in the Kindi-circle. And in fact we will find that its strong argument *against* the idea that

<sup>6</sup> "Problems and solutions," in four books, edited by I. Bruns in *Supplementum Aristotelicum* (Berlin, 1892), II. 2.

<sup>7</sup> The authenticity of some of them is questionable. *Quaestio* 2.21 is stylistically anomalous and contradicts in its content at least one passage of *Quaestio* 1.25, which is very likely to be authentic. I intend to write about this elsewhere [S. F.].

<sup>8</sup> It is the only one which uses as a source the passage of *Met.* XII.6, 1072a 10-18 mentioned above, for this latter is probably the source for *Quaestio* 1.25's obscure developments about the two movements of the planetary spheres.

what we call *pronoia* is a mere accident (argument which is: the movement of the *planomenoi asteroi* on the circle of the ecliptic is *for the sake of* the preservation of the cycle of generation and corruption in the sublunary world, p. 40.34-41.4 Bruns)<sup>9</sup> is totally ignored by the Kindī-circle adaptor of D15 (see below, pp. 132-3) and by al-Kindī himself.

Texts of Alexander that the Kindī-circle surely had are the *Peri pronoias*, *Quaestio* 2.3 and *Quaestio* 2.19. Their translation, or better, adaptation, must have been available to al-Kindī himself. Let us then concentrate our attention on these texts and their destiny. We may see first of all how these three texts – *Peri pronoias* and the two *Quaestiones* – are related to each other in the original Greek.

*Peri pronoias* makes a distinction between two ways in which providence exists: it resides in the heavens and it acts on the sublunary world by contact.<sup>10</sup> Thus there is divine power in every natural being, governing and ordering the being and bringing everything to its proper perfection.<sup>11</sup> Humans have a purer nature, and providence makes them rational.<sup>12</sup> The individual human has reason, and so provides for his own needs, while differences among individuals are accidents due to matter.

*Quaestio* 2.19<sup>13</sup> works with some of these concepts from a slightly different viewpoint. It asks whether the whole world has providence or not. Since by its own nature the cosmos is well ordered,<sup>14</sup> then the world should have no need of providence. From this negative hypothesis he reasons his way to a reconciliation with the common notion that providence exists;

<sup>9</sup> See on this R.W. Sharples, “Alexander of Aphrodisias on Divine Providence: Two problems,” *Classical Quarterly*, 32 (1982): 198-211.

<sup>10</sup> See Aristotle *Meteor.* I.3, 339a21-32 mentioned above, on causal relationship by contact.

<sup>11</sup> See also Ps. Arist. *De mundo* 397b20-3.

<sup>12</sup> This point connects *Peri pronoias* with *Quaestio* 2.3, see below, p. 125.

<sup>13</sup> The title of *Quaestio* 2.19 in the Greek manuscripts is: “That, <if> the universe is eternal and the essence of the universe is its ordering, this too should be in its proper being” (trans. Sharples). But there is good reason to assume that Alexander himself did not give the titles to the individual *Quaestiones*, see I. Bruns’ preface to *Supplementum Aristotelicum*, II.2, p. XI.

<sup>14</sup> Aristotle *De caelo* said that the movement of the heavens is eternal by nature: see e.g. I.2, 269a5-7; II.7, 289a15-16.

it is mediated by the spheres and it preserves species on earth.<sup>15</sup>

*Quaestio* 2.3<sup>16</sup> can be related in another way to the *Peri pronoiias*. At least three points stated in the *Peri pronoiias* are reworked in *Quaestio* 2.3. That is, the latter states that the divine power acts upon the sublunary world by contact starting from the first sphere of fire and through it upon the other "simple bodies"; and that the divine power is in matter according to the receptivity of the various matters, some of which are purer and more subtle, and so capable of being ensouled; and, most important, that providence makes human beings rational.

Here *Quaestio* 2.3 most probably refers<sup>17</sup> to the *Peri pronoiias* when it says "*It was supposed (ekeito) that it was through this power that providence made human being[s] rational creature[s].*"<sup>18</sup> Here Alexander, after a first solution which makes the heavenly power only the source of the soul of ensouled being, suggests in a second solution that the divine power is also the cause of bodies being what they are, whether they are just simple bodies such as fire and air which are affected according to their proximity to the divine heavenly body,<sup>19</sup> or compound, ensouled bodies. This solution is presented as a suggestion rather than as a proper statement, and reflects therefore more a work-in-progress report than a dogmatic conclusion.

Here, however, Alexander's inquiries about the physical rela-

<sup>15</sup> See R.W. Sharples, "The unmoved mover and the motion of the heavens in Alexander of Aphrodisias," *Apeiron*, 17 (1983): 62-6, esp. p. 62, who pointed out in *Quaestiones* 2.19 and 1.25 that, although the movement of the heavens depends on the first *ousia* they ceaselessly desire, their relationship with the latter is not analysed by Alexander in terms of *pronoia*.

<sup>16</sup> "What the power is that comes to be, from the movement of the divine body, in the body adjacent to it (*geitniōnti*, see Arist. *Meteor.* 338b21-2 quoted above, pp. 120-1) which is mortal and subject to coming to be"; English trans. R.W. Sharples, *Alexander of Aphrodisias Quaestiones 1.1- 2.15* (London, 1992); Italian translation in S. Fazzo, "Alessandro d'Afrodisia e Tolomeo: aristotelismo e astrologia fra il II e il III sec. d.C.," *Rivista di Storia della Filosofia*, 4 (1988): 627-49, transl. pp. 644-9.

<sup>17</sup> Contra P. Moraux, "Alexander von Aphrodisias Quaest. 2.3," *Hermes*, 95 (1967): 159-69, esp. p. 163 n. 2.

<sup>18</sup> 48.19-20 Bruns, trans. Sharples.

<sup>19</sup> Again, see Arist. *Meteor.* I.1-3 on the action by proximity; an even closer parallel is between 48. 5-8 Bruns and Ps. Arist. *De mundo* 397b27-30, see P. Moraux, "Alexander von Aphrodisias Quaest. 2.3," p.163.

tionship among heavenly and sublunary bodies “according to Aristotle” reach their culmination. As a result of Alexander’s effort, we find that a link has been established between an Aristotelian physics and the strong belief common among his contemporaries in the submission of sublunary phenomena to the configurations of stars and planets.<sup>20</sup> It is difficult to say which reasons led our author to this kind of compromise. Previous development of Aristotle’s theories by Alexander’s predecessors and the criticism of certain opponents are likely to have played an important part. However, it is clear that Alexander concentrates considerable energies on avoiding the extreme positions which regarded the stars as efficient causes of every single event on earth – an assumption which is shown in the *De fato* to be the point Alexander was most worried about, as it did not leave any place (whether theoretical or practical) for human free will and choice.

The interest of these three texts for our research (*Peri pronoias*, *Quaestiones* 2.3 and 2.19) lies not only in their intrinsic value (for they provide, with *Quaestio* 1.25, on which see above, pp. 123-4, the most explicit statements on how the celestial spheres affect sublunary bodies) but also in the fact that all of them were, as we have said, available to the Kindī-circle.

But in what form were they available? For it is well known that the Kindī-circle’s translations were not especially literal or faithful to the text.<sup>21</sup> Kindī-circle translations are well known as texts reflecting an agenda.<sup>22</sup> Actually, they did not need to be literal, if we may take al-Kindī’s own attitude toward Greek philosophy as indicative – that is, it needs completion.<sup>23</sup>

A full survey of the destiny of Alexander texts in the Kindī-

<sup>20</sup> See Fazzo, “Alessandro d’Afrodisia e Tolomeo...,” esp. pp. 640-3.

<sup>21</sup> See G. Endress, *Proclus Arabus* (Beirut, 1973), and F.W. Zimmermann, “The origins of the so-called Theology of Aristotle,” in J. Krayer, W. Ryan, C. Schmitt (eds.), *Pseudo-Aristotle in the Middle Ages*, Warburg Institute Surveys and Texts, 11 (London, 1986), pp. 110-240.

<sup>22</sup> Endress, *Proclus Arabus*, p. 326 remarks on the Proclus’ translations in the Kindī-circle that they “contain a number of considerable additions and alterations (...). While some of these are merely explanatory glosses, most of the corollaries, insertions, and modifications, also a few omissions, involve a deliberate revision of the author’s metaphysical system.”

<sup>23</sup> He says this about his own philosophical endeavors, in the best Greek fashion, but it evidently applies to the translations as well; see al-Kindī, *On First Philosophy*, Abū Rida I. 103.10 f.



circle is outside our present purpose.<sup>24</sup> Instead, we wish to concentrate our attention on what happens to these three texts. This will give essential information for understanding al-Kindī's use of them and will show their close connection with al-Kindī's own philosophy, which is voiced in his own treatises and in the translations of his associates.<sup>25</sup>

We shall see how al-Kindī's idea of the need to improve and complete Greek philosophy affects the form and the content of these texts.

If we compare the Greek *Quaestio* 2.3 with vE34,<sup>26</sup> i.e. its Kindī-circle adaptation, it is quite evident that for this text the kind of improvement the adaptor intended was chiefly to clarify this aporetic, dense, and sometimes obscure treatise.

To this end, the text is completely reworked and rewritten. A detailed account of all the changes would take too long for the present article, since hardly a sentence is left without new arrangement or relocation. Surprisingly enough (at least if we compare this with what happens to the other texts we are concerned with), in spite of such extensive manipulation, the difficult doctrine laboriously expounded by Alexander is not misinterpreted.<sup>27</sup> True, the original distinction between first and sec-

<sup>24</sup> However, it is worth mentioning that G. Endress was apparently the first to analyse in detail the Arabic translation of a number of *Quaestiones* (among which *Quaestio* 2.3 and *Quaestio* 2.19) as Kindī-circle's texts. See his *Proclus Arabus*, esp. pp. 64-7. On *Peri pronias*, see F.W. Zimmermann, "The origins", p. 180.

<sup>25</sup> See F. Zimmermann's remarks on the Kindī-circle adaptors; "Since they changed what they disliked, they must have liked what they retained. [Such texts] give a much fuller picture than do al-Kindī's own writings of the kind of philosophy he was commending to his public." F. Zimmermann, "Al-Kindī," in M.J.L. Young, J.D. Latham, R.B. Serjeant (eds), *Religion, Learning and Science in the 'Abbasid Period*, The Cambridge History of Arabic Literature (Cambridge, 1990), chap. 20, pp. 364-9, see on p. 366.

<sup>26</sup> vE34, "On the power <coming> from the movement of the sublime body to the bodies falling under generation and corruption," is text number 34 in van Ess's supplement to Dietrich's list (J. van Ess, "Über einige neue Fragmente des Alexander von Aphrodisias und des Proklos in arabischer Übersetzung," *Der Islam*, 42 (1966): 148-68). A list of the correspondences between Dietrich's and van Ess's lists and the surviving Greek texts of Alexander is given by R.W. Sharples, "Alexander of Aphrodisias: scholasticism and innovation," *Aufstieg und Niedergang der römischen Welt*, XXXVI, 2 (1987): 1176-243, on pp. 1192-3. We read the text from MS Carullah 1279, fol. 64a13-64b21.

<sup>27</sup> Only the idea of two powers in the simple bodies and three powers in the compound bodies ("in the simple, changing bodies are two powers, the first of them from the first body and the other from themselves. In the compound bodies are three pow-

ond solution is eliminated: the adaptor combines the arguments of both solutions into one single doctrine. Still, such a transformation succeeds in reflecting what Alexander after all encourages the reader to do: for the argument of the first solution about ensouled bodies (48.27-49.12 Bruns) should be assumed as true also in the second one, which speaks just about simple and compound bodies (49.28-50.27 Bruns), and therefore needs to be completed by the former.

We must then postulate behind vE34 an adaptor whose understanding in Greek philosophy was advanced, and who had the freedom to manipulate the text. But also, the considerable amount of work he does to understand and explain this text and his basic faithfulness to Alexander's doctrine show that at least on this topic Alexander's authority enjoyed the highest consideration.

Some minor changes which occur from *Quaestio* 2.3 to vE34 deserve to be at least mentioned.

The typical Alexandrian expression "divine body" (*theion sōma*), said of heavenly spheres, becomes systematically "sublime (*sharīf*) body" (the same happens consistently in D15, the Kindī-circle adaptation of *Peri pronoiās*).

We also find interpolation of astrological developments – namely, fuller details on how different influences from the stars are efficient causes of the various organic compounds. Also, the activity of the heavenly power on the earth is described in a more astrological and more concrete way, in terms of *emanation* (*fayḍ*). Moreover, some references to various works of Aristotle are inserted.<sup>28</sup> It is clear that the adaptor felt moti-

ers, the first of them from the first sublime body and the second from the simple, changing bodies and the third from themselves," see below, Appendix, p. 150) does not seem to have a direct parallel in the Greek original, and I'm not sure it reflects exactly what Alexander intended to say. Anyway, it may well be seen as an exegesis of Alexander's statement about the compound bodies having a share in more powers (*pleionōn koinonounta dynameōn*, p. 50.18 Bruns).

<sup>28</sup> The first is: "I say that because of this power come the movements of these bodies to their proper places, and because of these movements every one of them comes to its completion and its perfection, just as the Sage related in the *De caelo* (*kitāb al-samā'*) in the fourth book (*maqāla*)"; but this idea appears nowhere in *De caelo*. A second is: "... I say that the vegetative soul is first, then the animal, then the intellectual and rational. The Sage has treated how that is in the *De anima* (*kitāb al-nafs*)"; somehow the adaptor may be referring to *De anima* II.3, 414a29-415a14; but the reference is so generic that it does not need to refer to any specific passage. The third reference is: "This first form coming to be from the sublime heavenly body in matter <is> the form of the first bodies and <is> the cause of the oppositeness of

vated to make explicit references so often as possible to individual works of Aristotle, in order to give the text a stronger authority. We shall see better from the adaptations of *Peri pronoiās* and of *Quaestio* 2.19 that the injection of quotations or references, whether correct or spurious, is a common practice of the Kindī-circle adaptors; this can sometimes give important information on the knowledge of Aristotle these scholars had.

Now, in what form could al-Kindī have read Alexander's *Peri pronoiās*?

We have from the Kindī-circle, an anonymous, partial translation, earlier than D18 (the literal translation of Abū Bishr Mattā referred to and quoted above), called *Fī al-tadbīrāt al-falakiyya*, approximately translated "On the Direction of the Spheres."<sup>29</sup> This title shows what the Kindī-circle adaptor and his colleagues were seeking from this text. As mentioned above, since the original Greek is lost, only the later translation, which we call D18, enables us to appreciate the most relevant discrepancies between D15 and its *exemplar*.

Here is the *incipit* of this Kindī-circle adaptation:

*Maqāla* of Alexander of Aphrodisias on the Directions (*pronoias*) of the Spheres (*al-tadbīrāt al-falakiyya*).

He said: the Sage related in his book which is called the Book of Pronoia (*tadbīr*) that the cause of the generation (*kawn*) of the things falling under generation and their preservation (*ḥifẓ*) and their endurance (*dawām*) in their forms is the sublime heavenly bodies (*al-ajrām al-samāwiyya al-sharīfa*), for they are directing and preserving them, I mean that the power (*quwwa*) of the sun and the rest of the stars (*kawākib*) like the sun is the cause of the generation of the natural, changing things and their endurance

their substances and their natures just as the Sage related in his book which is called the *Metaphysics* (*ba'd al-ṭabī'ā*) and that is sufficiently treated here"; this also is not found as such in *Metaphysics*, not at least in the Greek original of it.

<sup>29</sup> *Tadbīr*, lit. "direction" or "governing," is the only word *this* translator has for *pronoia*; its plural form appears only here in the title. Abū Bishr Mattā will use *ināya* instead. Kindī tends to use *tadbīr* or various phrases (see below, pp. 142-3). R. Goulet and M. Aouad's article "Alexandros d'Aphrodisias," in R. Goulet (ed.), *Dictionnaire des Philosophes Antiques* (Paris, 1989), vol. I, p. 137 translates D15's title "Traité d'Alexandre sur le gouvernement des sphères." Cf. above, note 4 on Ruland's edition. Whereas D18 is very likely to come from a former Syriac version of the Greek *Peri pronoiās* (since apparently Abū Bishr Mattā did not know Greek), there is no reason to assume that D15 was translated from Syriac, contra Ruland, pp. 107-8.

(*ʿillat kawn al-ashyāʾ al-ṭabīʿiyya al-mustaḥīla wa-dawāmiḥā*). For, among all the heavenly bodies, especially the movement of these stars (*ḥarakat ḥādhihi al-kawākib khāṣṣatan min jamīʾ al-ajrām al-samāwiyya*), the arrangement of some of them in relation to others and the proportion of their distance from these natural things falling under generation and change (*wa nazm baʿdihā ilā baʿd wa iʿtidāl buʿdihā min ḥādhihi al-ashyāʾ al-ṭabīʿiyya al-wāqiʿa taḥt al-kawn wa al-istiḥāla*) are the cause of their generation and of the endurance of their forms (*wa dawām ṣuwariḥā*), especially (*wa lā siyyamā*) the sun and its movement. (p. 33.1-11 Ruland; see below, p. 144 for parallel passage in al-Kindi)

More strikingly is the substantial difference from the *incipit* of the original *Peri pronoiās*, which we quoted in a summarized translation just above (p. 122). In fact, D15 omits the whole first section of the treatise,<sup>30</sup> which is mostly devoted to a doxographical discussion. The parallel passage in D18 to the opening of D15 is:

For Aristotle said that the well-being (*salāma*) of the things which are here below, of their coming-to-be (*kawn*) and of their subsistence, [well-being] which is essential, eternal (*abadiyya*) and which they have by species, is said to be not without divine *pronoia* (*al-ʿināya al-ilāhiyya*) and [he said] that the power emitted from the sun and the moon and the other stars which travel the way of the sun according to his view, is the reason (*sabab*), in his opinion, for the generation (coming-to-be) of the things whose upholding (*qawām*) is through nature and for their preservation (*wa li-ḥifẓihā*). For he thinks that the ordered movement of these stars and the proportion of their distances from the things which are here are the causes of these things, and preeminent to the rest of the stars in that is the sun (*wa al-mutaqaddam fi dhālika li-sāʿir al-kawākib al-shams*). (p. 33. 1-8, Ruland)

Although both texts derive from a common source, D15 gives a more general resumé of what is reported as Aristotle's opinion about providence in *Peri pronoiās*, and introduces the passage – strangely enough – with “the Sage related in his book which is called the Book of Pronoia”; we will return both to this quotation and to the omission of the first section of the original *Peri pronoiās* in D15.

It is worth noting here that from the outset D15 assumes a strongly astrological colour, which is totally missing in D18's

<sup>30</sup> In the Escorial manuscript of D18, 87b-93a, that is more than two fifths of the whole treatise.

*incipit*, although, as mentioned above, the common astrological beliefs of Alexander's time may have influenced Alexander's treatises both on *pronoia* and on fate. In fact, no reference to the "divine *pronoia*," i.e. the *pronoia* exercised by God, is preserved in D15. On the other hand D15's reference to the "arrangement of some of the stars in relation to others" must have been missing in the Greek original of this passage, as we can judge from D18. It is then clear that D15, unlike D18, appears to be a treatise mostly concerned with the physical and astrological influence of the stars on the world, rather than with the theoretical and philosophical problems connected with the concept of *pronoia* and its formulation in Aristotelian terms. This is confirmed by the title of D15, "On the Direction (*pronoia, tadbīrāt*) of the Spheres."

The two treatises also differ considerably in style.

In D15, many features characteristic of Alexander's style are – more or less regularly – missing. Among them is a certain kind of demonstration. In D18 Alexander, in accordance with his usual practice, gives arguments for every concept he introduces which is not directly stated in any work of Aristotle. This is the case, for instance, when he speaks about a *dynamis* from the heavens; when he mentions a *pronoia* acting in the sublunary world (both points at p. 33 Ruland); when he assumes that the gods exist, and that they are ensouled and rational (p. 51 Ruland); when he introduces his main doctrine of the *pronoia* conceived in two ways, "according to Aristotle" (p. 59 Ruland); when he gives a physical explanation of the interaction by contact among heavenly and corruptible bodies (p. 87 Ruland, a parallel passage to *Quaestio* 2.3). In all these cases Alexander's arguments, whether short or long, are mostly left out of D15, which is, for that reason chiefly, almost one fourth shorter than the corresponding part of D18. That means that the same concepts are assumed in D15 in a more dogmatic and much less problematic way. The same effect is given by the omission of the whole first section of the *Peri pronoias*, that is, the doxographical survey which Alexander introduces to show (following Aristotle's custom) his own arguments and doctrine as issuing from the difficulties raised by the analysis of predecessors' opinions. Instead, D15 often gives details lacking in D18, details which for the most part reflect an astrological interest. So, any author's reference to the power (*dynamis* in Greek) exercised by the heavens (which according to D18 is the physi-

cal way providence acts to preserve species) is reinterpreted and developed in an astrological sense.

But there is much more. Every mention both of God and of the gods that we find in D18 is transformed by D15 into a reference to the heavenly bodies and their power. Consequently, the adaptor draws conclusions Alexander would not have easily agreed with. When for instance D18 says that God is provident toward the world by his own choice (p. 67 Ruland), D15 attributes free choice to the stars, which does not really fit with Alexander's conception of free choice.<sup>31</sup> On the other hand, D18 also says that God does not exist or act primarily for our sake. D15 twists this into a statement that the stars act primarily for their own sake, and therefore the providence which they exercise on us is a mere accident of their activity. In contrast, Alexander stated elsewhere, on a strong Aristotelian basis, that providence is *not* accidental.<sup>32</sup>

Other spurious alterations and interpolations cannot be explained other than as effects of a sort of astrological speculation: among the stars, some are more, others less pure (p. 77 Ruland; al-Kindī himself wrote a treatise "On the Explanation of the Difference among the Heavenly Bodies"<sup>33</sup>). D18 says instead that the mixture of bodies on earth may differ because of the disposition of the stars (and *Quaestio* 2.3 says the same in its second solution) – different stars, claims also D15, direct different entities (bodies or souls) on earth; but Alexander never says so: according to him it is the whole heavenly body, by its complexity, which makes possible complex organic and ensouled bodies on earth, cf. *Quaestio* 2.3, 49. 14-22 Bruns.

Sometimes, D15's adaptor does not appear to be fully consistent. At p. 67 Ruland, he says about the stars that "nothing comes to be (...) without their will (...) except that this is not intentional on their part" (as mentioned above, Alexander could hardly have left any free will to the stars). Again: D15 says very clearly at p. 55 that the stars act only accidentally on the sublunary, but at p. 63 it just denies that they may act "only to direct the substances of the earthly world" which

<sup>31</sup> For Alexander, the heavens govern our world by their own natural movement; how could they be free to do otherwise? For they can't act against their nature, and also, the circular movement doesn't have any opposite (see Arist. *De caelo* I.4, 270b32 ff.).

<sup>32</sup> See above, pp. 123-4.

<sup>33</sup> See *al-Fihrist*, Flügel, p. 257 line 17.

seems a considerably softer position. Anyway, as just mentioned, neither in D18 nor elsewhere does Alexander say providence is accidental, and his *Quaestio* 1.25 shows that he could not have admitted that.<sup>34</sup> It is worth anticipating that al-Kindī did affirm both that the stars acted accidentally on the sublunary world, and that they act by free choice.

All the details mentioned until now show in D15 a clear shift of interest in the direction of astrology. Another important un-Aristotelian and un-Alexandrian view-point probably reflects the adaptor's religious background: twice during the text he not only says, but reports as Aristotle's view, that the power exercised by the heavenly bodies must have an end in time. The adaptor evidently alludes to Christian/Islamic doctrine on the end of the world. This is emphasized by al-Kindī in many treatises, including his treatise *On the Proximate Efficient Cause of Generation and Corruption*, the text of al-Kindī that most directly reflects – as we will see in detail – Alexander's influence. The way D15 introduces this totally un-Aristotelian concept by quoting and affirming Aristotle deserves particular interest. This will lead us also to a more general investigation of the several *independent* Aristotelian quotations in D15.

We turn, then, to those references in D15 to Aristotelian works which are not found in the corresponding passages of D18.

In the first passage where we find the idea of an end to the heavenly power (p. 81 Ruland), D15 mentions, unlike D18, Aristotle's *De gen. et corr.* as a source for Alexander's statement that every natural process of generation has a *telos* (*ghāya*), i.e. a point of perfection in which the process of generation ceases. Although the topic discussed here is generation, no close parallel passage is to be found to this idea in *De gen. et corr.*;<sup>35</sup> rather, Alexander here seems to refer to another passage from Aristotle, namely *Phys.* 199b15-17. Perhaps, D15's adaptor intended to support the authority of the text with a closer reference to Aristotle, but he had to guess, and failed to quote

<sup>34</sup> Cf. note 31.

<sup>35</sup> The parallels Ruland suggests (*De gen. et corr.* 336b32, and *De caelo* 273a4-6) appear to be misleading (*De gen. et corr.* is also quoted according to a *lectio deterior*, i.e. *entelechē* instead of the correct *endelechē*). Unfortunately, we cannot explore here the possibility that Philoponus is the source for this use of Arist. *De gen. et corr.* See H.A. Davidson, *Proofs for Eternity, Creation and the Existence of God in Medieval Islamic and Jewish Philosophy* (New York and Oxford, 1987), esp. pp. 86-116.

right source. Then, once it is assumed with Aristotle that every process of generation has a *telos*, D15 says that “the end (*nihāya*) of generation is the end of the sublime heavenly creative power”: is that a reference to the end of the world? Apparently so.

The second, more explicit passage occurs at p. 89 f. Ruland; here also we find a quotation lacking in D18. This quotation is from Aristotle’s *De caelo*, but again it is interesting to see the use Alexander makes of Aristotle’s argument. While in D18 (93,1-4 Ruland) we find an Aristotelian quotation about the perfection and the *eternity* of the world,<sup>36</sup> this is lacking in D15. Instead, D15 uses a section in the *De caelo* I.7 which demonstrates the spatial finitude of the universe.<sup>37</sup> But the passage is reworked in D15 where, coupling *ghāya* and *nihāya* as in the previous example (Ruland p. 81), D15 shifts the concept from spatial to temporal finitude. In that way, the end of the universe becomes associated with chronological ending:

For the essence (*huwiyya*) [of the first bodies] is terminable (*tabṭul*), just as the Sage explained in the *De caelo* by sufficient arguments. For he said there that there is no body without a termination (*nihāya*) and ultimate end (*ghāya*), neither a straight body nor a round one. If there is no unending body (*jirm ghayr mutanāhin*), every terminable body (*jirm mutanāhin*) has a terminating power (*quwwa mutanāhiya*), because it is not possible that the terminable body have an unending (*lā nihāya*) power.<sup>38</sup> And if this is so, and if the heaven is a terminable body; its power was not other than terminable, and if it is terminable, then it will cease one day (*sataqifu yawman*), and when it ceases it will be no more (*fa-idhā waqafat, baṭalat*). (Ruland pp. 89-91)

<sup>36</sup> *De caelo* I. 9, 279a25-30.

<sup>37</sup> I.e. the world cannot be an infinite (*apeiron*) body because then it could not move circularly, because for doing so it would need an infinite power, and since “nothing of what is limited has an infinite power” (275b 22-3) there should be something also infinite to move the infinite; but two infinities cannot exist.

<sup>38</sup> Cf. *De caelo* I.7, 275b22-3. The same statement of Aristotle, *outhen echei apeiron dynamis tōn peperasmenōn*, occurs among Philoponus’ arguments against the Aristotelian doctrine of the eternity of the world. Both here and by Philoponus, the argument is accepted, but used to claim the opposite of what Aristotle did. Nevertheless, there is an important difference between these two un-Aristotelian uses of this argument: Philoponus fights openly and at length against Aristotle and claims that he is wrong, whereas here it is striking that D15, while claiming the temporal finitude of the universe, not only never openly rejects Aristotle’s view, but even pretends to report Aristotelian views. On the fortune of Philoponus’ arguments against the eternity of the world among the Arabs, see H.A. Davidson, *Proofs for Eternity*; *idem*, “John Philoponus as a source of Medieval Islamic and Jewish proofs of creation,” *Journal of the American Oriental Society* (1969): 357-91.



Up to now we have seen two citations of Aristotle (always, “the Sage”), which D15 introduces in the text. For the mention of *De gen. et corr.* saying that every natural process of generation has a *telos* we did not find any fitting parallel in Aristotle’s original. This reference does not need to reflect a direct knowledge of this treatise, but seems rather a guess on the part of the adaptor; whereas the reference to *De caelo* about the spatial finitude of the universe is accurate, although very freely reinterpreted. The same can be said about another reference to the *De caelo* in D15: where D18 says “we have already shown,” D15 says: “The Sage has explained that in *De caelo*” (p. 73 Ruland). With this, D15 gives another correct reference to *De caelo*, where parallel passages to the idea here expounded can be found *passim*, for example at I.3, 270a13 ff., and II.4, 287a23 ff.<sup>39</sup>

As for pseudo-Aristotelian quotations, let us recall the opening of D15: “He [Alexander] said: the Sage related in his book which is called the Book of Direction...” (again, “direction” is *tadbîr*, i.e. the word that D15 uses for *pronoia*). An odd citation, but fortunately in this case we can check the Greek text, which luckily survives as a fragment, quoted by Cyril of Alexandria. Instead of this quotation, Alexander says “Aristotle affirms” (*aristotelês phêsi*), and in fact D18 faithfully translates exactly this: “Aristotle says.” But an examination of the passage and of its possible parallels in Aristotle’s work shows that Alexander did not intend to give a quotation, but rather a paraphrase of Aristotle’s statements in general (the closest passage is *De gen. et corr.* II.10, esp. 336b31 ff.). Thus far, D15’s “The Sage said” is correct.

But what is this supposed treatise by Aristotle about *pronoia* cited by D15? No Aristotelian nor pseudo-Aristotelian work ever circulated under this name. Nevertheless, other passages

<sup>39</sup> Other quotations of Aristotle in D15 (from *Phys.* at p. 59; from *Met.* at p. 93) are not independent but derive from the original Greek of Alexander, as the parallel with D18 shows. A couple of citations from *De caelo* (93.1-4 and 93.5-7 Ruland) which are found in D18 are missing in D15, and so is missing in D15 another couple of citations (p. 59.8 and 61.5 Ruland) whose origin is rather obscure: they both claim that according to Aristotle the providence extends “until the heaven of the Moon.” Although they are not found in any preserved work of Aristotle, they have parallels in later reports of Aristotle’s views, e.g. Diogenes Laertius 5.32, Atticus fr.3.56 f., 69 ff. des Places. See for further details: Sharples, “Alexander of Aphrodisias on Divine Providence,” p. 198 n. 10; *idem*, “Alexander of Aphrodisias: scholasticism and innovation,” p. 1216.

too give references similar to this first one: at p. 51, where D18 says “as Aristotle said,” D15 injects a gloss: “as the Sage said (...). The Sage has already clarified and explained that in the book which is called The Book of Direction; there, he has dealt with it exhaustively.” Then we read at p. 65.1 Ruland “The Sage also said in the book which we named above” (no similar reference is in D18). Moreover, it is worth saying now that vE33, that is the Kindī-circle adaptation of Alexander’s *Quaestio* 2.19 also refers to an Aristotle’s Book of Direction: “The whole world has a director in two ways (...) as the Sage related in his book called The Book of Direction.” Neither this reference to “the Book of Direction” nor the idea that “the whole world has a director in two ways” are in the Greek *Quaestio* 2.19. The reference is clearly to Alexander’s *Peri pronoias*.<sup>40</sup> Once more, the treatise is attributed to Aristotle.

Now, to better understand the reason for such occurrences, we may call to mind the omission of the whole first section of the *Peri pronoias* in D15 (see above, p. 130). In the title of the *Peri pronoias*, as D18 translates it, it is said that Alexander “reports and clarifies the opinion of Democritus and Epicurus and the rest of the accounts of the remaining philosophers on *pronoia*.” That is, Alexander is reported as giving information about various philosophers’ works on *pronoia*. The whole first section is devoted to others than Aristotle. Then, at p. 31 of D18 Alexander complains that some people think that some doctrine about *pronoia* could possibly be better than Aristotle’s. After that, the proper exposition of Aristotle’s theory begins with “For Aristotle said that the well-being of the things which are here... (etc.)” This means basically, as mentioned before, that Alexander will now explain what one could say on *pronoia* according to the fragmentary statements of Aristotle. But Kindī-circle scholars could hardly have been aware of this hidden meaning of our text.<sup>41</sup> This means that they must have understood that Alexander in the main section of his treatise

<sup>40</sup> See both D18 and D15 at p. 60 Ruland.

<sup>41</sup> Modern scholars also have failed to recognize it. For example, Ruland at pp. 34 n. 1 and 115.2 suggests that the quotation may come from Aristotle’s *Peri philosophias*; I. Bruns (“Studien zu Alexander von Aphrodisias -III, Lehre von der Vorsehung,” *Rheinisches Museum*, 45 (1890): 223-35, esp. p. 234) prefers to eliminate the reference to Aristotle from the Greek fragment; whereas Grant (“Greek literature in ‘De Trinitate’,” p. 278) correctly suggests that “what Alexander taught he must have regarded as Aristotle’s.”

on *pronoia*, having finished with the opinions of others, was now going to summarize and explain the contents of an original treatise of Aristotle on *pronoia*. This would logically be called *The Book of Pronoia (tadbīr)*.

Another pseudo-Aristotelian reference to Aristotle deserves particular interest. It comes at the very conclusion of D15, and does not have any parallel in D18:

It has now become clear and evident how the heavenly bodies direct the earthly world with a universal direction (*tadbīran kullīyyan*). As for the particular direction (*al-tadbīr al-juz'īyy*), the Sage explained how that is in the book which is called *Astrologia*, by sufficient, irrefutable arguments. (p. 105 Ruland)

This in turn resembles the Arabic translation of Aristotle's *De caelo* 291a30, which mentions the ordering, arrangement, placement, priority and distance of the stars, saying "We have spoken of these things in our book which is called *Astrologia*, and we have given a satisfactory account of them in it."<sup>42</sup>

This in turn is based on Aristotle's Greek *ek tōn peri astrologian theōreisthō* at the corresponding point in his *De caelo*, for he says that the ordering and priority and distances of the stars *should be studied in astronomical treatises*, where that is discussed satisfactorily (*legetai gar ikanōs*).<sup>43</sup> The Kindī-circle translator of D15 may then have been familiar with this Kindī-circle *De caelo*, and he also identifies "particular" direction with astrology.<sup>44</sup>

We come then to vE33, that is the Kindī-circle adaptation of *Quaestio* 2.19, which also gives a good example of how both knowledge of various Greek texts and non-Alexandrian theories circulating in the Kindī-circle can have affected the work of adaptation of individual treatises by Alexander.

<sup>42</sup> *Aristotelis De caelo et Meteorologica*, ed. 'A. Badawi, *Islamica*, 28 (Cairo, 1961), p. 267. See G. Endress, *Die arabischen Übersetzungen von Aristoteles' Schrift De Caelo*, diss. (Frankfurt am Main, 1966), p. 244.

<sup>43</sup> *De caelo* II.11, 291a31-3. "Pour les détails relatifs à l'ordre des astres, le philosophe renvoie aux travaux des spécialistes, comme Platon l'avait fait quelques années plus tôt," P. Moraux, *Aristote Du Ciel* (Paris, 1965), p. CIV. This is therefore not a reference to a real work of Aristotle in D15; contra Ruland on this passage (p. 105 n. 2), who suggests that D15 refers to the treatise *Astronomikon* which Diogenes Laertius attributes to Aristotle.

<sup>44</sup> On general and particular astrology (*katholikon, eidikōteron*) see, for example, Ptolemy's *Tetrabiblos* II.1.

vE33's title is: "On the world and which of its parts have need in their endurance and in their perpetuation of the direction of other parts; and which of its parts do not have need of the direction of other parts." This shows already by itself that *Quaestio* 2.19 has here been read in the light of the *Peri pronoias*' discussion about parts of the world having or not having need of other parts (cf. D18, p. 61 Ruland).

As it is preserved in MS Carullah 1279 (fols 63b21-64a13), vE33 is a considerably longer treatise than the Greek *Quaestio* 2.19. It can be easily divided into two halves.

The first half summarizes or translates the whole of the Greek text, except for a couple of points, i.e. it excludes – deliberately, it is evident – both the idea of the world being “eternal by its own nature,” and *Quaestio* 2.19's first solution, which suggested that in one sense the whole of the world does not need any providence from outside. These are incompatible with al-Kindī's views and are missing in vE33.<sup>45</sup> In spite of these omissions, close similarities and *loci paralleli* give strong evidence that the adaptor did work on *Quaestio* 2.19's whole Greek text.

But already in this first part of vE33 we find passages without parallel in the Greek. Some are mere paraphrases and explanations. Another, as we have seen above, inserts in the text a reference to what Aristotle said in “the Book of Direction,” actually a reference to Alexander's *Peri pronoias*.<sup>46</sup> Another injects a spurious reference to the action of the “first director” (i.e. agent of *pronoia*) as “originator,” “adorner,” “perfector” and “preserver” of the heavenly bodies: this is a theory which does not have any parallel in *Quaestio* 2.19.<sup>47</sup>

<sup>45</sup> Unless one of them is cryptically preserved at the very beginning of vE33 in the obscure statement that the world's essence “has no *telos* (*ghāya*) over it”, see below, Appendix, p. 152.

<sup>46</sup> See above, p. 135.

<sup>47</sup> This theory is in harmony with al-Kindī; and with the treatise D16, wrongly attributed to Alexander, preserved also in the same Carullah 1279 (69a-b). The attribution of D16 to Alexander, although never questioned until now, is false. Matter is here said to be a non-existent, and privation an existent: which is just the opposite of what Aristotle (*Phys.* I. 8. 192a 2 ff.) and consequently Alexander says (e. g. *Quaestio* I.24. 38.17-20 Bruns). Moreover, D16 discusses a passage of Arist. *Phys.* I.8 which Alexander discusses in his *Quaestio* 1.24 and ap. *Simpl. In Phys.* 236.24 ca.-238.14 with utterly different arguments. I intend to give fuller arguments elsewhere [S. F.]. Another treatise misattributed to Alexander is D29 “That every separate cause is present in everything as well as in nothing, according to Aristotle.” Already P.

The second part of vE33<sup>48</sup> does not have any direct parallel in the Greek *Quaestio* 2.19. Again, as in the Arabic title, we read here about parts of the world having need and parts not having need of other parts. This could come from a continued paraphrase of *Quaestio* 2.19. p. 63.16-24 Bruns, but is also very close to the very same passage of the *Peri pronoiias* (see in part. D18, p. 61 Ruland), already quoted in the first part of vE33 as “the book called the Book of Direction.”

Shortly afterwards, another quotation deserves our attention: “the first Director (*mudabbir*) is the cause of the genesis (*hudūth*) of the essence (*huwiyya*) of all the parts of the world, just as the Sage related in The Book of Causes.” Such a reference tied to such a Proclan concept encourages the hope that this might be the earliest appearance of the *Liber de causis*, appearing anomalously by the name under which it travelled to the west. The phrase does not exactly match any in the *Liber de causis*, although the terminology and the notion are at home in it.<sup>49</sup>

In this second part, vE33 reaches the conclusion that “the first Director,” already mentioned in the first part, originated and now oversees the upper world directly, while the generation of the lower world

is by the First Agent, except that it comes from him only by the intermediary of nature, and nature is the caretaker of it. I say that nature organises it and preserves its arrangement in its state eternally, not letting it cease from

Thillet ap. Goulet – Aouad, “Alexandros d’Aphrodisias,” (p. 137) doubted its attribution to Alexander, and F. Zimmermann recently recognized in this text Procl. *El. Theol.* prop. 98, whose *incipit* is: “Every separate cause (*aition chōriston*) is at once everywhere and nowhere.” See Zimmermann’s forthcoming article “Proclus Arabus Rides Again.” From the content of both D29 and Procl. *El. Theol.* prop. 98, it is now clear that the translation of the title of this treatise “Que toute cause séparée est dans toutes les choses, et non pas dans une seulement selon l’opinion d’Aristote” given by Thillet in *Alexandre d’Aphrodise, Traité du destin* (Paris, 1984), p. LIV n. 3 is inaccurate.

<sup>48</sup> The second part starts from: “So if this is as we have described, we resume and say also that the world has two parts...,” see below, Appendix, p. 153.

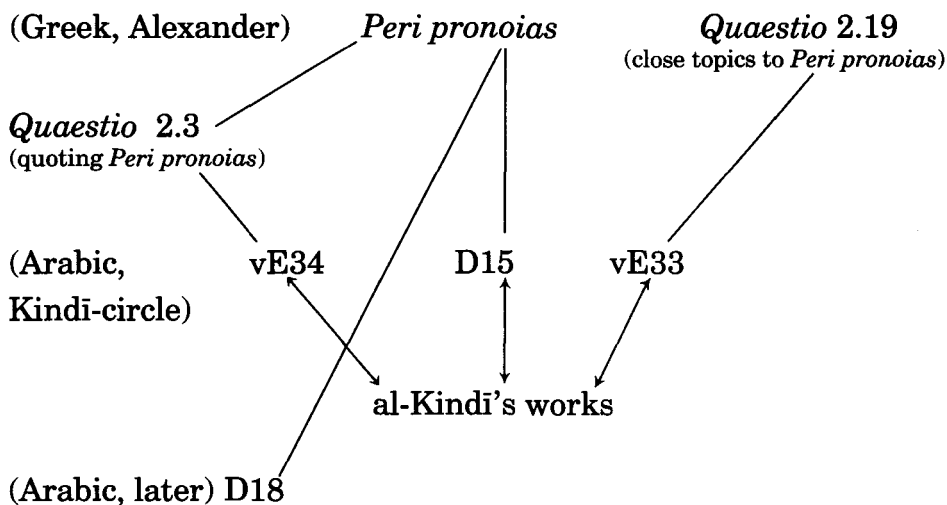
<sup>49</sup> Section 17 says that all things possess being because of the first being (‘A. Badawi (ed.), *Neoplatonici apud Arabes. Procli: Liber (Pseudo-Aristotelis) de expositione bonitatis purae (Liber de Causis). Procli: De aeternitate mundi. Procli: Quaestiones naturales. Hermetis: De castigatione animae. Platonis (Pseudo-): Liber Quartus*, Islamica, 10 (Cairo, 1955), p. 19) Section 8 describes how the intellect is director (*mudabbir*) to all things beneath it (*ibid.*, pp. 11-12). Section 22 calls God the *mudabbir* (*ibid.*, pp. 23-4).

its state. *I mean by nature the first heavenly bodies*, for nature is the beginnings of the movement of bodies, as the Sage said, and the beginnings of the movement of the changing bodies and their cause are the sublime heavenly bodies.

In the *Quaestio* 2.3 Alexander does say that nature is a power coming from the heavenly bodies. But to *identify* nature and heavenly bodies is a step Alexander never took.<sup>50</sup> Such an identification effects a total astral determinism, subordinated to God, which is at home in al-Kindī.

vE33 appears, finally, as a composite text which combines a translation from the Greek *Quaestio* 2.19 with some extraneous developments and injections of ideas which must have been very familiar to the adaptor and his colleagues.

The fact that the “Book of Direction” (which indicates, as we have seen, Aristotelian opinions expressed in Alexander’s *Peri pronoiias*) is clearly referred to in vE33, allows us to conclude our section on these three Kindī-circle adaptations of Alexander’s text with the following stemma:



Al-Kindī’s own cosmological work shares certain concepts and vocabulary with the Kindī-circle Alexander. In their Greek form and even more in their Arabic form, Alexander’s writings com-

<sup>50</sup> The idea of nature as a subordinate creator under God is rather found in Philoponus ap. Simpl. *in Phys.* p. 1145.9-11.

municated an authentically Aristotelian physics with an enhanced celestial causality – an appealing combination.

Key thematic points which al-Kindī and the Arabic Alexander share are:

The heavenly bodies and their movements bring about and preserve the existence of all that comes to be, and cause all generation and corruption.

The heavens are therefore the dispensers of the divine *pronoia*.<sup>51</sup> The heavenly power acts by contact, beginning from the uppermost sphere of pure fire; different sublunary bodies have differing receptivities, affecting what they become.

Variations in the heavens cause various mixtures of elements upon the earth; in this way the heavens ensoul compound bodies capable of ensoulment with the three types of souls (vegetative, animal and rational).

What is ensouled and rational is nobler.

Proximity and distance give rise to opposite effects being produced by the same heavenly body.

The obliquity of the ecliptic is critically important for all life on earth.

The doctrine that the duration of the spheres' existence and power is temporally finite is sporadically inserted into some of the Arabic Alexander texts, while it is pervasive in al-Kindī, for whom the spheres, although incorruptible and perfect, have a lifespan set by God.

God, the First Agent, originated, preserves, and perfects the creation through the mediation of the celestial spheres which he created. Like the previous idea, this is not a formulation of the Greek Alexander.

The most relevant texts of al-Kindī on these matters are *On the Proximate Efficient Cause of Generation and Corruption* (Abū Rīda I. 214-37)<sup>52</sup> and *The Explanation of the Prostration of the*

<sup>51</sup> Therefore, in al-Kindī's physical, cosmological and astrological writings there is no contradiction between astral causality and providence, as one might otherwise assume. For example Atiyeh ("but neither does he explain how the Divine Providence works": G. Atiyeh, *Al-Kindī* (Rawalpindi, 1966), p. 69) and Fakhry ("his repeated insistence on the all-pervasiveness of divine providence and God's role as the creator and superintendent of the world ... would appear to run counter to the thoroughgoing determinism of popular astrology": M. Fakhry, *A History of Islamic Philosophy* (New York, 1970), p. 101).

<sup>52</sup> The fact that al-Kindī quotes D15 in this text was first noticed by A. Hasnawi, "Al-Kindī, al-Ibāna 'an al-'illa al-fā'ila al-qariba li al-kawn wa al-fasād (Éclaircisse-

*Furthest Body and its Obedience to God* (Abū Rīda I. 244-61).

The former treatise begins with a summary of Aristotelian physics, particularly reflecting the *De gen. et corr.* This appears to derive from some intermediate reformulation of Aristotle, and al-Kindī punctuates his text with recurring phrases like “it has been explained in the physical discussions (*fī al-aqāwīl al-tabīʿiyya*,” p. 219, line 12).<sup>53</sup> It is a summary explaining the types of movement, the four causes, the arrangement of the spheres, the elements, and their compounds. Of course it is Aristotelian at its root, but it is condensed and elaborated like an interpretive epitome of Aristotle. Alexander’s influence is felt only indirectly, if at all.<sup>54</sup>

At the point in this summary where al-Kindī turns to cosmological matters, he says that he has already explained about the remote efficient cause and First Cause, that God, “the innovator (*al-mubdiʿ*) of all, the completer (*al-mutamim*) of all, is the cause of causes and innovator of every agent” in his *On First Philosophy* (p. 219).<sup>55</sup> He then announces his intention to describe the divine *pronoia*: “So let us now examine the proximate efficient cause of everything that comes-to-be and corrupts, so that it become clear to us how the universal direction is by divine, foregoing wisdom” (*al-tadbīr al-kullī bi-al-ḥikma al-sābiqa al-ilāhiyya*, p. 219). The mention of *al-tadbīr al-kullī* here bears an interesting resemblance to the conclusion of the

ment de la cause efficiente prochaine de la génération et de la corruption),” in A. Jacob (Gen. ed.), *L’Encyclopédie philosophique universelle*. Vol. III: *Les oeuvres philosophiques*, ed. J.F. Mattéi (Paris, 1992), t.I, p. 656.

<sup>53</sup> Compare his reference to “our physical discussions” beginning the section on the four causes, at p. 217.16.

<sup>54</sup> As Abū Rīda pointed out (p. 219 n. 7), some of the ideas found here were also put by al-Kindī into his *On the Explanation that the Nature of the Heavens is Different from the Natures of the Four Elements* (Abū Rīda II. 40-6), to which al-Kindī refers in *On the Prostration of the Furthest Body* (Abū Rīda I. 253), which in turn was written after *On the Proximate Efficient Cause*. *On the Explanation that the Nature of the Heavens is Different from the Natures of the Four Elements* describes in an Aristotelian way the elements and their properties and describes the celestial sphere as incorruptible, having no opposite into which it may corrupt since it does not contain the four qualities.

<sup>55</sup> Note the similarity to *De gen. et corr.* I.3, 318a6 f. where Aristotle leaves aside discussion of the first cause which belongs to first philosophy to turn to the second, material cause and later to the moving cause of the heavens, saying “to know the unmoved principle [i.e. God] is work of the other philosophy, the first philosophy (*tēs heteras kai proteras ... philosophias*). Similarities make it appear that in his *On the Proximate Efficient Cause* al-Kindī is producing his own version of *De gen. et corr.*



Kindī-circle D15, with its universal and particular *tadbīr*.<sup>56</sup>

This summary of Aristotelian physics, as it progresses, comes increasingly closer to the contents of Alexander's *Peri pronoiās* (D15), *Quaestiones* 2.3 and 2.19, until it arrives at the distinctively Alexandrian idea of ensoulment through the influences of the heavenly bodies. Like D15, vE34, the Arabic version of *Quaestio* 2.3, deals with this process in detail, saying:

As for the compound (i.e. ensouled) bodies coming to be from the mixing (*mizāj*) of the elements and their transformation, they come to be because of the many different powers which are in them, and the variety of their forms comes about from the variety of the heavenly powers from which they come to be at their generation from the mixing of the elements and their transformation." (vE34, Carullah, fol. 64b14 f.)<sup>57</sup>

One may compare al-Kindī's statement that "the actions of the soul follow from the mixings of the bodies (*mizājāt al-ajsām*),<sup>58</sup> and the mixings vary with the variation of the elevated bodies (*al-ashkhāṣ al-āliya*) by place and movement and time and quality, as we have advanced" (Abū Rīda I. 224-5). For astrological purposes, the actions of the soul, along with its composition, must somehow depend upon the spheres.

An interesting parallel is al-Kindī's *Discussion on the Soul, Summary and Brief*, in which he says of Plato and Aristotle:

They both affirm together in a place among all their treatises that *the soul's actions appear in the bodies (al-ajrām) which are under generation only by mediation (bi-tawassuṭ) from the celestial sphere (falak)*. The statement of Plato, 'united with a body (*jism*) by which she makes her actions appear in bodies (*al-ajrām*)', is not that she is united with a body (*jism*). He meant by it that she acts in bodies (*al-ajrām*) only by mediation of the body (*jism*) which is the celestial sphere (*falak*). (Abū Rīda I. 281, lines 14-17).

While interpreters have tried to make sense of this by taking it as a discussion of the World Soul,<sup>59</sup> al-Kindī himself says that

<sup>56</sup> And its pseudo-reference to Aristotle's *Astrologia* (see above, p. 137).

<sup>57</sup> Even more detailed on this point is the Greek *Quaestio* 2.3, 48.27-49.14 Bruns.

<sup>58</sup> Note also that the statement "the actions of the soul follow from the mixings of the bodies," is strikingly close to the title and to the *incipit* of the work of Galen, *Quod animi mores (Hoti tais tou sōmatos krasēsīn hai tēs psychēs dynamēis hepontai)*.

<sup>59</sup> Al-Kindī, *Cinq épîtres*, Centre d'histoire des sciences et des doctrines, Histoire des sciences et de la philosophie arabes, C.N.R.S. (Paris, 1976), pp. 71-2.

he is describing the Aristotelian soul which is “simple substance whose actions appear in bodies” (p. 281), and reconciling it with Plato’s vision. If the individual soul’s actions result from heavenly intermediaries as well, this treatise could apply to all types of soul.

Al-Kindī says later in *On The Proximate Efficient Cause* that a change in the path of the sun would change the distributions of the four qualities “in the bodies which are beneath it, because of (their) reception of the sorts of characters and customs and volitions of the soul according to the measure of their more general (*al-a’amm*) mixing arising among them (or: from it) and the more particular (*al-akhaṣṣ*) mixing of each one of the beings coming-to-be and corrupting under it” (Abū Rīda I. 236, lines 1-4).<sup>60</sup> This is another application of the same concept shared by D15 and *Quaestio* 2.3, although al-Kindī does not explain the mechanism of celestial influence by contact in quite the same way as Alexander.

Al-Kindī repeatedly describes this process in *On the Proximate Efficient Cause*, supplying examples taken from D15 and from Ptolemy<sup>61</sup> and from his own resources of astronomical, astrological, and meteorological information.

We may now look at al-Kindī’s version (in *On the Proximate Efficient Cause*) of the opening passage of the Kindī-circle *Peri pronoias*, that is D15, which is quoted above (pp. 129-30):

For, among the heavenly bodies, especially these stars (*fa-inna hādhihi al-kawākib khāṣṣatan min bayni jamī’ al-ajrām al-samāwiyya*), the arrangement of them in relation to one another (*wa naẓm ba’ḍihā ilā ba’ḍin*), and the proportion of their distances from these natural things falling under generation and change (*wa-ta’dīl ab’ūdhā min hādhihi al-ashyā’ al-ṭabi’iyya al-wāqi’a taht al-kawn wa al-istiḥāla*), and the number of their movements, some of them from east to west and some from west to east, and their proximity and distance from the center show, more than the heavenly bodies, that the [above-mentioned stars] are the cause of the generation (*kawn*) of the things falling under generation and corruption and the endurance of their forms (*wa dawām ṣuwarihā*) for the duration for which their Creator destined them, and especially (*wa lā siyyamā*) the sun. (Abū Rīda I. 226-7)

<sup>60</sup> See also Abū Rīda I. 226, lines 3 ff., that every body has from its origination a character according to the measure of its mixture, following the variation of proximity, speed, positioning of the planets, etc.

<sup>61</sup> E.g. Ptolemy, *Tetrabiblos* II.2 seems to be the source for al-Kindī’s remarks about the physical characteristics of the inhabitants of the different climes.

A look at the Arabic shows that al-Kindī is paraphrasing the Arabic Alexander (D15, Ruland p. 33, see above), sometimes copying out phrases almost word for word and sometimes inserting additional concepts and details. The phrase limiting the duration of the heavens is not present at the corresponding point in D 15, but this important issue is dealt with at length by the Kindī-circle adaptor later on in the text (see above pp. 133-4).

Al-Kindī follows this passage with an astronomical analysis of the sun's distance, mass and movement, "as has been shown in the views of the mathematicians," intended to show that the sun's influence must indeed be the greatest of all (pp. 227-8).

While Aristotle had mentioned only the sun and moon as influencing bodies, and Alexander mentioned all the planets, al-Kindī recognizes influences from all the planets and the stars as well, for the other planets move in the ecliptic like the sun and moon (p. 233, line 3 ff.). He concludes that:

The great benefits of the rest of the planets in the generation and corruption of beings coming-to-be and corrupting are not hidden, nor the benefits of the stars which are not planets, because there attaches to them what is attached to the planets, with respect to their greatness and their smallness and their association with the sun, the moon, and the rest of the planets. (p. 235)

This is followed by an illustration of a potential effect of Sirius Major.

The longest passage from Alexander incorporated by al-Kindī is taken from the first pages of the Kindī-circle adaptation of the *Peri pronoias* (D15) and begins from page 226 of *On the Proximate Efficient Cause*. It concerns the angle of the ecliptic and the effects of the sun and moon on the regions, the climate, and the seasons of the earth.<sup>62</sup> Beginning from the first page of D15 (Ruland 33), the Kindī-circle Alexander's version reasons that if the distance of the sun from the earth were other than it is, there would be no plants or animals; this is verified by the uninhabitability of certain latitudes of the earth, excessive in heat and cold (pp. 37-9). If the sun moved in a parallel circle instead of the inclined ecliptic, then there would be no seasons,

<sup>62</sup> For another reworking of an originally Greek source by al-Kindī, see F. Rosenthal, "al-Kindī and Ptolemy," *Studi orientalistici in onore di Giorgio Levi della Vida*, 2 vols. (Rome, 1956), vol. II, pp. 436-56.

but rather summer or winter perpetually (p. 43). And if the sun didn't pass across the constellations, there would be no daily cycle of night and day and all living things would suffer accordingly (p. 45). Likewise the moon, which determines the generation of clouds and rain, also needs to be in its proper position (pp. 47-9).

The parallel passages in *On the Proximate Efficient Cause* beginning from page 226 are extensive and often literal, although al-Kindī's version is enriched by supplementary illustrations, technical terms and analysis. We have quoted the first section of this just above. It continues with a description of the uninhabitable latitudes of the earth, giving specific details about the angles which produce these conditions (p. 228). Then he tells how, if the distance of the sun from the earth were greater, it would resemble those desolate northern latitudes, and if the sun were closer then the earth would be burned and barren as it is in those places already too near to the sun (p. 229). If the sun moved in a circle parallel to the equator, then there would be no seasons, but always either summer or winter or one of the other seasons (p. 229). Then all would be uniform and generation and corruption would be disrupted, as it is when we find seasonal abnormalities in our world. And if the sun didn't move across the great sphere once a day, there would be no daily cycle of night and day and plants and animals would suffer accordingly (p. 230). Here al-Kindī places some additional analysis about the disruptions of the seasons by an orbit of the sun not centered on the earth, which prompts a digression into the delicate correspondence of qualities, elements, and seasons which would be nullified by such a change, and praise of the Creator's placement of the sun and arrangement of these correspondences (pp. 230-1). Then he gradually returns to D15, to describe the effects of the moon and its proper placement in a way which includes and enlarges upon what D15 has to say, always with a tendency toward greater detail.

In the following pages (esp. p. 233) al-Kindī emphasizes the role of the other heavenly bodies, in addition to the sun and moon, which accounts for diverse meteorological conditions experienced through the years. He then gives specific examples of the effects of the heavenly bodies on heat and moisture on the earth, which in turn directly affect the physical conditions and constitutions of the human body (pp. 234-5). The total effect is to fill in all the implicit possibilities of Aristotle's par-

tial observations on the effects of the sun and moon. Al-Kindī is most concerned to attribute influence to all the heavenly bodies and to specify the variables which affect their influence: size, distance, speed, regularity of orbit, and their placement relative to one another in the sky and relative to points on the earth.

A less clear but very interesting passage occurs near the rhetorically elaborate beginning of *On the Proximate Efficient Cause* :

In the arrangement (*nazm*) of this world and its ordering (*tartīb*) and the action of some (part) of it in another (*ba'dihi fi ba'din*) and the submission (*inqiyād*) of some (part) to another and the subjugation (*taskhīr*) of some (part) to another and the perfection (*itqān*) of its shape according to the best way in the generation of everything that exists and the corruption of everything that corrupts, and the endurance (*thabāt*) of everything that endures and the cessation (*zawāl*) of everything that ceases, is the greatest proof of the most perfect direction (*pronoia: tadbīr*), and with every direction there is a director (*mudabbir*)... (Abū Rīda I. 215, 10 ff)

Such a passage is reminiscent of the Arabic adaptation of *Quaestio* 2.19, yet enriched in language and at home in the cultural and religious milieu of al-Kindī's time and place.

The treatise *On the Explanation of the Prostration of the Furthest Body* was written after *On the Proximate Efficient Cause*, to which it makes reference (pp. 247 and 255). It therefore shares with the latter some points originally taken from the Kindī-circle adaptation of the *Peri pronoias* (as at p. 247.1-3, 12-13), but these are incidental to the main argument of the treatise, which constructs proofs to show that the heavenly bodies obey the command of God, that they can obey only if they have free choice, and that if they have free choice then they must have rational souls and are the source of our rationality (Abū Rīda I. 246). There is a similarity to the *De principiis* on *ikhtiyār* (choice), but on the whole this argument is part of a larger one to prove that the universe is a living, rational being with the senses of sight and hearing in the Proclan fashion,<sup>63</sup> and Alexander is not the source.

The heavens as a whole are ensouled for Alexander as well but not like this.<sup>64</sup> This treatise asserts of the world organism

<sup>63</sup> On this see R. Walzer, *Greek into Arabic, Essays on Islamic Philosophy*, Oriental Studies, 1 (Oxford, 1962), p. 202.

<sup>64</sup> See Alex. *Quaestio* 1.25, 40.10 Bruns ff, Alex. ap. Simplicius *In Phys.* 1218.20-36 and 1261.30-1262.4; *De principiis*, French trans. 'A. Badawi in *La transmission de la*

as a whole that the celestial sphere is the proximate cause of the life of its living body, saying that the life in the living body is its form, and the celestial sphere effects the form in it (p. 258).

Al-Kindī's arguments that the heavenly bodies are the source of our rationality are different from but in harmony with Alexander's particular theory of ensouling, which comes about from the mixing of the *dynameis* proceeding from the heavenly bodies with the elemental substrate of the sublunar world. In *On the Prostration of the Furthest Body* he emphasizes that the heavenly bodies are the cause of our rationality, fundamentally because the rational is superior to the irrational and a cause is superior to what it influences, but using a number of very distinctive arguments which do not pertain here.

In adopting and transmitting an astrologically activated Aristotle, al-Kindī was in agreement with, in particular, the Sabians of Harran. We find a significant union of astrolatry and Aristotle in al-Kindī's account of the beliefs of the Harranians preserved in the *Fihrist* (Book 9, Chapter 1; Flügel, pp. 318-20). Moreover, in describing their beliefs as concretely Aristotelian, al-Kindī comes close to describing his own theories as well, on cosmological issues like those which attracted him to Alexander of Aphrodisias. For example, al-Kindī says that the Harranians "say that the heaven moves with a freely chosen (*ikhtiyāriyya*) and intelligent (*'aqliyya*) motion," (p. 318.24) which is the central point of his own *On the Prostration of the Furthest Sphere*. They also recognize the planets as intermediary in God's *tadbīr* (p. 319.9). They take their physics from the *Physica auscultatio*, the fifth nature of the incorruptible heavens from the *De caelo*, the derivation of living things from the elements from the *De gen. et corr.*, sublunary phaenomena from the *Meteorologica*, the incorporeal soul from the *De anima*, perception from the *De sensu*, the ineffability of God from the *Metaphysica*, and proofs from the *Analytica Posteriora* (p. 319.31 ff). So it was that al-Kindī's Aristotelian inclinations found their sources and effected their synthesis of Aristotle and astral causality, in his works and those of his contemporaries.

*philosophie grecque au monde arabe*, 1st ed. (Paris, 1968), p.124.7 ff. [2nd ed. (Paris, 1987), pp. 135-53, on p. 138 ff.]; Sharples, "Alexander of Aphrodisias on Divine Providence," esp. Appendix: "Sphere-souls and unmoved movers," p. 208 ff.

**Appendix: an English translation of  
vE34 and vE33 from Carullah manuscript**

For the convenience of the reader, we give translations of the texts we use which are not available in an Arabic edition, nor in translation.<sup>65</sup> They rely only on MS Carullah 1279 and are only provisional until a proper edition is made. There are some gaps in the translation because the manuscript is damaged. Our warm thanks to F.W. Zimmermann for some corrections.

**vE34** = Carullah 1279, fols 64a13-64b21 (from Alexander *Quaestio* 2.3)

*On the power <coming> (lit. being, al-quwwa al-anniyya) from the movement of the sublime body (al-jirm al-sharif) to the bodies falling under generation and corruption.*

We intend to examine the power coming to be in the simple, changing bodies which we call a nature and whether it is the beginnings of the movement and rest of every natural body, or whether they are that in themselves (*bi-'aynihā*).

So we say that every body among the simple bodies comes to be a body in actuality according to the state they are in from the power of the first sublime body and its movement. We will tell how that is in the future. As for now, let us say that among bodies there are the simple and the compound, and that the first body pours forth (*yufidu*) its power firstly upon the simple bodies then after that upon the compound bodies. Yet (for) those simple bodies proximate to it, adjacent to it, the emanation of its power upon them is more, and (for) those distant from it, the emanation of its power upon them is less and more distant from it. And we say also that because of this sublime power every one of the simple bodies comes to be in the state in which they are.

Now I say that because of this power come the movements of these bodies to their proper places, and because of these movements every one of them comes to its completion and its perfection, just as the Sage related in the *De caelo* (*kitāb al-samā'*) in the fourth book (*maqāla*).

<sup>65</sup> We are looking forward to the edition with French translation, Emma Gannagé is preparing of these and other Arabic translations of Alexander's texts preserved both in Arabic and in Greek.

If this is in accordance with what we have described, we resume and say: in the simple, changing bodies are two powers, the first of them from the first body and the other from themselves (their own essence, *min dhātihā*). In the compound bodies are three powers, the first of them from the first sublime body and the second from the simple, changing bodies and the third from themselves.

We say that the compound bodies are better (*afdal*) and nobler (*akram*) than the simple changing bodies and that they come from them, and that among them are the vegetative and the animal and the intellectual and rational. These faculties are not in the first changing bodies; these faculties are in the compound bodies from the first sublime body. For the compound bodies come only from the mixing (*mizāj*) of the simple changing bodies, so when certain ones mix with others, that body emanates upon them from its power also, producing in the compound body what was not in the things from which they came to be.

The variety of the compound bodies corresponds to the variety of the power coming to be from the first sublime body, more and less. And that power varies also corresponding to the variety of the mixing of the simple changing bodies, except that this happens only by arrangement and ordering (*sharḥ wa-ṭaqs*). I say that the vegetative is first, then the animal, then the intellectual and rational. The Sage has treated how that is in the *De anima* (*kitāb al-nafs*). I say how the vegetative body comes firstly from the mixing of the elements and the sublime power, then the animal body after it, possessing sense, then the intellectual and rational body, summing up the enquiry. And he relates there that the simple bodies coming-to-be under the sphere of the moon are like matter for the sublime heavenly bodies in the genesis of the perfect ensouled bodies, meaning by this statement that the four elements, when they relate to the compound bodies, are to them like prime matter without property or shape since there is absolutely nothing in it which comes to be. So the heavenly bodies are the imparters of the forms by their varying movement and by their sublime power coming from them to them.

[64b] The heavenly bodies [...] the simple changing [bodies] coming to be under the sphere of the moon according to the materiality [...] forms firstly from those sublime bodies, then generation occurs from their mixing, I mean the generation of



the [...] bodies [...] the forms of the elements corresponding to their proximity and distance from the heavenly bodies. For that one of them which is close to the sublime bodies, in it there is more of their power, and its form is hot (and) dry and there is much movement. This body informed with this form is the first of the bodies falling under generation and corruption to receive the influences. That one of them which is distant, their power is not in it except slightly, weakly; its form is cold (and) dry.

If that is so, we resume and say that the sublime heavenly bodies are the cause of the oppositeness (*tadādd*) of the forms of the simple changing bodies. It receives a form and an influence opposite to the form of its fellow corresponding to its proximity and its distance from the sphere of the constellations in which the sun and moon and the rest of the planets travel. For the simple bodies which are under the sphere of the moon are like matter to them, as we have said previously. As for that one of them which is close to it, its motion is very uniform and its form is hot (and) dry. So therefore the first sublime heavenly body is cause to this form, I mean the heat and dryness by which fire is fire, and after that it is also the cause of the form of heat and moisture by which air is air and it is also the cause of the moisture and cold by which water is water and it is also the cause of the form of dryness and cold by which earth is earth. This first form coming to be from the sublime heavenly body in matter <is> the form of the first bodies and <is> the cause of the oppositeness of their substances and their natures just as the Sage related in his book which is called the *Metaphysics* (*ba'd al-ṭabī'a*) and that is sufficiently treated here.

As for the compound bodies coming to be from the mixing of the elements and their transformation, they come to be because of the many different powers which are in them, and the variety of their forms comes about from the variety of the heavenly powers from which they come to be at their generation from the mixing of the elements and their transformation.

We resume and say in summation that that one of the first changing bodies proximate to the first sublime heavenly body is more active than (mere) passivity and reception of the influences, and in that distant from it, passivity and reception of the influences prevail over activity and influencing.

It has now been made clear and sound that a power reaches from the first body to these simple changing bodies falling

under generation and corruption, and that it is the cause of the form of the bodies opposite to one another, and that it is different from the power which is in the first simple bodies, by a sound, sufficient account.

**vE33** = Carullah 1279, fols 63b21-64a13 (from Alexander *Quaestio* 2.19)

*On the world and which of its parts have need in their endurance (thabāt) and their perpetuation (dawām) of the direction (tadbir) of other parts; and which of its parts do not have need of the direction of other parts.*

The world has an essence (*huwiyya*) and an arrangement (*sharḥ*), and an essence which has no end over it (*wa-huwiyya lā yafūquhā ghāya min al-ghāyāt*). So, we would like to find out which parts of the world have need of the direction of other parts, in the endurance of their arrangement and their upholding (or, <perpetuation>) and which of its parts do not have need in their endurance and perpetuation of the direction of other parts.

So we say: every director (*mudabbir*) is either a director of a new thing (I say that it originates the being (*al-anniyya*) of the thing) or it is a director for the improvement of the essence of the thing and its organisation (*tartīb*) (I say that it improves the thing and organises it and brings it to a *telos* (*ghāya*) in beauty and perfection). If that is so, we resume and say that the whole world has a director in two ways (I say for origination and for adorning and perfecting), just as the Sage related in his book called *The Book of Direction*, although the sublime part of the world not falling under generation and corruption is, rather, eternal in one state and one motion, desiring to imitate the first agent – like the heavenly bodies, for they have no need in that endurance of the direction of any part of the world (I say in improvement and their preservation and their perpetuation). For the first director is their director (I say that he is their originator and their adorer and their perfecter and he is the preserver of their being and their perfection and their perpetuation).

What is in the world falling under generation and corruption does have need of the direction of certain parts of the world in the preservation of its being and its perfection and its perpetuation – like the changing, opposite bodies. (I say that the heavenly bodies are the directors of these changing bodies and they

are the ordering of their changing and of the endurance of their forms by their continual (*dā'ima*) movement, and they keep them from ceasing, although their preservation and their endurance and their perpetuation are in form, not by number.)

So if this is as we have described, we resume and say also that the world has two parts: one of them not generated from any other thing and not falling under corruption, constant (*dā'im*) in movement, not changing and not undergoing alteration and having no need of the direction of any other part of the world (I say in [64a] the improvement of its arrangement (*nazm*) and its preservation in its state [...] in its state eternally; and the other part is generated, falling under [corruption... having need in] its endurance of the direction of certain parts of the world, which are the heavenly bodies without any need of [...] at all, for the first director is the cause of the origination of the essence of all the parts of the world, just as the Sage related in The Book of Causes.

And we say also that every one of the world's parts whose essence and form came to be together, and whose form did not come from another form changing, <that part is> from the first agent without intermediary (*bi-lā tawassuṭ*). He is the director of that part also, preserving it always in its state; they are the first sublime heavenly bodies. Every part of the world whose form did not come to be together with its essence, given that what comes to be by changing from another form also changes into another form, the generation of that part is by the first agent, except that it comes from him only by the intermediary of nature, and nature is the caretaker of it. (I say that nature organises it and continually preserves its arrangement in its state, not letting it cease from its state; I mean by nature the first heavenly bodies, for nature is the beginnings of the movement of bodies, as the Sage said, and the beginnings of the movement of the changing bodies and their cause are the sublime heavenly bodies.)

It has now been made clear and sound <which> parts of the world have need, in their endurance and their preservation and their organisation and their perpetuation, of the direction of other parts of the world, and which of its parts do not have need, in their organisation and their endurance and their perpetuation, of the direction of other parts of the world.