

Power and Limits of the Human Mind: On the Arabic Reception of the Analogy of Bats and Daylight in Aristotle's Metaphysics (II [a], 993 b 9-11)

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Abstract

This paper examines how some of the leading exponents of the so-called formative or classical age of Arabic philosophy responded to the puzzling analogy found in the first chapter of book *Alpha Elatton* of Aristotle's *Metaphysics* (993 b 9-11), in which the intellectual capacity of the human soul in relation to the most evident things of all is compared to the visual capacity of the eyes of bats in relation to daylight. Against the background of the two extant Arabic translations of Aristotle's passage, the paper analyses the interpretations of al-Kindī, Avicenna, and Averroes in three different types of works they devoted to the *Metaphysics* (original metaphysical treatise in the case of al-Kindī; summa of philosophy in the case of Avicenna; literal commentary on the work in the case of Averroes). These interpretations explicitly address the problem posed by the analogy and answer the question of its compatibility with Aristotle's more general conception of the nature and aims of metaphysics, and with his more optimistic view of the power of the human mind elsewhere. The three authors in question creatively modify the analogy through considerations that are, respectively, methodological, eschatological, and teleological: al-Kindī rephrases it in the context of a sharp distinction between intellectual and sensory knowledge; Avicenna locates its ultimate cause in the body-soul relationship during earthly life; Averroes retains its content but subverts its purport on the basis of the idea that the innate human desire for knowledge cannot remain unfulfilled.

Introduction

Batman, the protagonist of the famous cartoon and of many Hollywood movies, can vindicate an illustrious pedigree in ancient Greek poetry and philosophy, long before the time of Bill Finger and Bob Kane. On the one hand, Homer identifies bats and men at the end of the *Odyssey*: in the last chant of the poem (XXIV, 6-9), the souls of the suitors of Ulysses' wife Penelope, killed by Ulysses upon his return to Ithaca, are likened to bats dwelling in a cave in the afterlife. On the other hand, in the third book of the *Republic* (III, 387 A-B) Plato quotes with disdain Homer's passage, inviting the reader to dismiss this and similar poetical comparisons, regarded as too scary and conducive to an undue fear of death. Plato apparently

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disliked not only Homer's way of canvassing the afterlife, but also the idea of comparing human beings and bats, since later in the *Republic* he asserts mankind's capacity of staring at the light of the sun, both in a physical and in a metaphorical sense, contrary to what bats can do: in the account of sight in the sixth book (VI, 508 b 9-10) and in the famous simile of the cave in the seventh book (VII, 516 b 4-6), he holds mankind as capable of staring at the sun, taking this as an indication of the human soul's ability of knowing and intelligizing what is enlightened by truth and being. Finally, a comparison involving bats and men can be found in Aristotle's *Metaphysics*: the first lines of the second book of the work (993 b 9-11) portray the relationship of the human beings' intellect with respect to the most luminous knowable things as similar to the relationship of the bats' eyes with respect to daylight, according to an equation of two distinct binary relationships which amounts, properly speaking, to an analogy. Since in the passage of the *Metaphysics* at stake this analogy is meant to exemplify the subjective difficulty in knowing the truth, one can interpret this passage as purporting that human intellects are baffled in knowing outstanding intelligible things as the bats' eyes are dazzled by daylight. In this way, the analogy turns out to differ from both Homer's account of bat-men and Plato's recantation of it: differently from Homer, it takes human beings to be similar to bats not in the afterlife, but in the present life; contrary to Plato, it makes unlikely that such bat-men can ever stare at the light of the sun.

The analogy is provoking, in so far as it compares mankind to an animal species which is not exactly "noble" like the bat, and is interesting in many respects, staying at the intersection of various doctrinal areas and historical trends. It is the only reference to bats in the *Metaphysics*, among the relatively few cases in which Aristotle refers to animals in this work,¹ thus providing a relevant example of adoption of a zoological simile outside the province of zoology.² The analogy apparently relies on the simile of the cave in Plato's *Republic*: it shares with Plato's text many key-concepts (truth, eyes, light, soul, intellect) and it looks like to portray as the ordinary human situation the state of dazzlement that, in Plato's figuration, the human beings experience in front of the ambient light of the sun once they first exit the cave. Thus "freezing" the human situation in an intermediate phase of Plato's account, the analogy attests, at the same time, a high consideration of Plato's position in the *Republic* but also an independence from it, in as much as Plato's cognitive optimism – according to which, after this first bafflement, human beings outside the cave can gradually arrive to the vision of the sun itself – is not endorsed, so that the Platonic setting of the discourse incorporates a relevant instance of anti-Platonism.

The analogy is succinct and elliptic, resulting shadowy if approached in an Aristotelian perspective. From the point of view of epistemology, it is not clear how it harmonizes with Aristotle's idea, expressed in the *Physics* and the *Metaphysics*, that human knowledge naturally and advantageously progresses "from what is more obscure by nature, but clearer to us, towards what is more clear (τὰ σαφέστερα) and more knowable by nature", without any outspoken difficulty.³ From the point of view of psychology, in the *De Anima* Aristotle grants the intellect

¹ See, for instance, the references to bees in *Metaph.* A 1, 980 a 27-b 25; to horses, mules, and donkeys in Z 8, 1033 b 33-1034 a 2; to horses in Z 10, 1035 b 27-28.

² Similar intrusions of zoological tenets in other areas of philosophy can be found in the Aristotelian tradition: for the interpretation of the heavenly motion in terms of animal locomotion, see M. Rashed, "Imagination astrale et physique supralunaire selon Avicenne", in G. Federici Vescovini – V. Sorge – C. Vinti (eds.), *Corpo e anima, sensi interni e intelletto dai secoli XIII-XIV ai post-cartesiani e spinoziani*, Brepols, Louvain-la-Neuve, 2006, pp. 103-17.

³ *Phys.* A 1, 184 a 16-21, a passage which starts as: "The natural way of doing this is to start from the things which

the ability to know “an object that is highly intelligible” (τὸ ... σφόδρα νοητόν, 429 b 3), and – although he considers both sensation and intellection as receptive processes, in which the form of the known object migrates into the knowing subject – he clearly distinguishes the case of the incorporeal intellect, which is not weakened by a too intense object of intellection, from the case of all bodily organs of sensation, which are temporarily weakened by too intense sensory objects.⁴ Finally, and most importantly for the present purposes, from the point of view of metaphysics itself the analogy, if taken at face value, looks to pose a precise limit to the range of things that, according to Aristotle, mankind can know, a limit that the *Metaphysics* itself looks to transcend. More specifically, the analogy questions the human capacity of knowing things which only metaphysics looks entitled to know and which elsewhere in the work Aristotle proposes as knowable (like the highest beings, i.e. God and the heavenly intelligences, in book *Lambda*, and the supreme logical principles, namely the so-called axioms of non-contradiction and of the excluded-middle, in book *Gamma*).

We now know that the explanation of the theoretical gap between the analogy at stake and the rest of Aristotle’s philosophy probably lies in the composite nature of the *Metaphysics*, a work framed out, under the name of Aristotle, by Andronicus of Rhodes (I c. BC) from different doctrinal material about first philosophy penned by Aristotle in the course of time and circulating within the Peripatetic school. As regards the second book of this work (*Alpha Elatton*), recent scholarship has diverged between the more radical view that sees it as not authored by Aristotle, a view presently outdated; and the more nuanced, now prevailing, position that takes it as a youthful production of Aristotle, probably meant *in origine* to introduce a treatment of natural philosophy (as attested by the mention of “nature” in the first lines of the first chapter, 993 b 2 and b 11, and of “physics” and “nature” at the end of the last chapter, 995 a 16-19) or of theoretical philosophy in general, and later incorporated into the *Metaphysics* when this work was edited in post-Aristotelian times.⁵ The chronological earliness and the

are more knowable and clear to us and proceed towards those which are clearer (τὰ σαφέστερα) and more knowable by nature”. In *Metaph. Z 3*, 1029 b 3-12, Aristotle states that “learning proceeds ... through that which is less intelligible by nature to that which is more intelligible”, and that “it is an advantage to advance to that which is *more intelligible*”. Cf. *An. Post. A 2*, 71 b 33-72 a 4. Unless otherwise note, all the translations of Aristotle are taken from *The Complete Works of Aristotle. The Revised Oxford Translation*, ed. J. Barnes, Princeton U.P., Princeton 1984.

⁴ *De An. Γ.4*, 429 a 30-b 5. This incongruence is signaled in Thomas Aquinas’ *Commentary on the Metaphysics*: see Thomas de Aquino, *In duodecim libros Metaphysicorum Aristotelis Expositio*, II.1, §286, ed. M.-R. Cathala, R.M. Spiazzi, Marietti, Torino-Roma 1950 (3^a ed. 1977), p. 82 (#283); Engl. trans. in *Commentary on the Metaphysics by Thomas Aquinas*, translated by J. P. Rowan, 2 vols, Henry Regnery Company, Chicago, 1961, consulted online at <<https://isidore.co/aquinas/Metaphysics.htm>> (14 May 2024): “But it is evident that this simile is not adequate; for since a sense is a power of a bodily organ, it is made inoperative as a result of its sensible object being too intense. But the intellect is not a power of a bodily organ and is not made inoperative as a result of its intelligible object being too intelligible. Therefore, after understanding objects that are highly intelligible our ability to understand less intelligible objects is not decreased but increased, as is stated in Book III of *The Soul*”. On Thomas Aquinas’ interpretation of Aristotle’s analogy in his *Commentary on the Metaphysics* and in other philosophical and theological works, see C. Steel, *Der Adler und die Nachteule. Thomas und Albert über die Möglichkeit der Metaphysik (Lectio Albertina 4)*, Aschendorff, Münster 2001, part. pp. 6-10, 13-19, 26-9.

⁵ A useful *status quaestionis* can be found in E. Berti, “La fonction de *Métaph. Alpha Elatton* dans la philosophie d’Aristote”, in P. Moraux – J. Wiesner (eds.), *Zweifelhaftes im Corpus Aristotelicum: Studien zum einigen Dubia. Akten des 9. Symposium Aristotelicum, Berlin, 7-16. September 1981*, De Gruyter, Berlin 1983, pp. 260-94, and in M. Hecquet-Deviene, “L’authenticité de *Métaphysique ‘Alpha’ (meizon ou elatton)* d’Aristote, un faux problème? Une confirmation codicologique”, *Phronesis* 50 (2005), pp. 129-49.

different original context of book *Alpha Elatton* can explain the discrepancies noted above about the analogy. Although some suspect about the authorship of book *Alpha Elatton* with respect to the rest of the *Metaphysics* was circulating in ancient philosophy (some hints can be retrieved in Alexander of Aphrodisias' commentary), no "genetic" explanation of the doctrinal difficulties posed by this book in general, and by the bats' analogy therein in particular, was ever proposed until recent times, and no ancient or medieval interpreter of Aristotle ever thought of secluding *Alpha Elatton* from the rest of the work as something heterogeneous or out of place.

This being the case, the analogy at stake here has engaged the exegetes of Aristotle's *Metaphysics* of all times, in the many cultures and languages in which this work – arguably the most important and influential specimen of Aristotle's philosophy – was translated and commented. The series goes from the first Greek interpreters of the *Metaphysics* whose exegesis of the place in question is preserved (Theophrastus of Eresus, 371-287 BC; Nicholas of Damascus, 64 BC-after 14 AD, according to the traditional identification of this author; Alexander of Aphrodisias, II-III c. AD; Ammonius Son of Hermeias, V-VI c. AD, through the report of his lessons by the disciple Asclepius), to the Latin commentators of the *Metaphysics* (famous are the cases of Albert the Great, d. 1280, Thomas Aquinas, d. 1274, and Duns Scotus, d. 1308, among others), until later accounts in vernacular idioms, like the one which occurs in the first work of philosophy written in Italian, the *Convivio* of Dante Alighieri (d. 1321).⁶ The analogy sounded especially provocative to the Arabic readers of Aristotle, because of the special position of book *Alpha Elatton* within the Arabic *Metaphysics*, where it represented the first, and not the second, book of the work, and on account of relevant peculiarities of the Arabic translations of the passage, thus triggering a wide series of reactions. In the present paper, leaving in the background the previous Greek exegetical tradition and the subsequent Latin accounts, I will try to document how Arabic philosophers responded to the puzzles raised by the analogy, examining its interpretations in three main exponents of the so-called formative or classical age of *falsafa*, namely al-Kindī (IX c.), Avicenna (X-XI c.), and Averroes (XII c.), in three different geographical areas – respectively the Center, the East, and the West of the Muslim World, in Mesopotamia, Transoxania, and Andalusia. These interpretations are especially significant since they address and provide a solution to the metaphysical issue

⁶ Theophrastus, *On First Principles (known as his Metaphysics), Greek Text and Medieval Arabic Translation. Edited and Translated with Introduction, Commentaries and Glossaries, as Well as the Medieval Latin Translation, and with an Excursus on Graeco-Arabic Editorial Technique* by D. Gutas, Brill, Leiden-Boston 2010 (Philosophia Antiqua 119), pp. 144-5, 206-207, 359-368 (passage 9 b 11-13); Nicolaus Damascenus on the philosophy of Aristotle. *Fragments from the first five books translated from the Syriac* with an Introduction and Commentary by H.J. Drossaart Lulofs, Brill, Leiden 1965; repr. 1969, pp. 76-77; Alexandri Aphrodisiensis *In Aristotelis Metaphysica Commentaria*, ed. M. Hayduck, Reimer, Berlin 1891 (CAG I), pp. 141.36-143.2; Alexander of Aphrodisias, *Commentary on Aristotle, Metaphysics (Books I-III). Critical edition with Introduction and Notes*, ed. P. Golitsis, De Gruyter, Berlin 2022 (CAGB – Series academica 3.1), pp. 112.51-113.25 (see the English translation of Hayduck's edition in Alexander of Aphrodisias, *On Aristotle Metaphysics 2 & 3*, trans. by W.E. Dooley – A. Madigan, Duckworth, London 1992, pp. 16-17); Asclepii *In Aristotelis Metaphysicorum libros A-Z Commentaria*, ed. M. Hayduck, Reimer, Berlin 1888 (CAG VI.2), p. 114.3-9; p. 114.29-36; p. 117.24-32; Steel, *Der Adler und die Nachteule* (above, n. 4); A. Bertolacci, "Aquila o herodius? Alberto Magno interprete della *Metafisica* di Aristotele nel Prologo della *Summa Theologiae*", *Bulletin de Philosophie Médiévale* 65 (2023), pp. 99-128; Dante Alighieri, *Convivio*, II.iv.16-17, in *Opere minori di Dante Alighieri*. Vol. II. *Il convivio*, ed. F. Chiappelli, E. Fenzi, UTET, Torino 1997, p. 115 (see Giorgio Stabile, s.v. "Vispistrello", *Enciclopedia dantesca*, 1970, consulted online at <https://www.treccani.it/enciclopedia/vispistrello_%28Enciclopedia-Dantesca%29/>>).

that the analogy poses, namely the question of its compatibility with Aristotle's more general conception of the nature and aims of metaphysics.

The present contribution first outlines the content of Aristotle's passage (section I), then it surveys the two extant Arabic translations of this passage and the overall context of the reception of the analogy in Arabic (section II), and finally it analyzes the interpretations provided by the three aforementioned main Arab receptors of the *Metaphysics* in the classical or formative age of Arabic philosophy (sections III, IV, and V, respectively).

I. Aristotle

As it is known, the first two books of the *Metaphysics* are both called "Alpha" in Greek, being solely distinguished by their length. The longer of the two, *Alpha Meizon* ("Bigger Alpha"), precedes the shorter *Alpha Elatton* ("Smaller Alpha"), which is overshadowed in Greek not only, beforehand, by its namesake, but also, immediately afterwards, by the decidedly lengthier book Beta. Outshined by its two neighboring books in the material arrangement of the *Metaphysics*, and being considered either pseudo-epigraphical (at worse) or authentic but chronologically immature (at best) by scholars, book *Alpha Elatton* is consequently understudied with respect to the other books of the *Metaphysics*.⁷

Aristotle likens human beings and bats in the first lines of *Alpha Elatton*, at the beginning of the first chapter of the book (993 b 7-11):

T1: Aristotle, *Metaph.* α 1, 993 b 7-11

However, since difficulty [in investigating the truth] also can be accounted for in two ways, its cause may exist not in the objects but in ourselves: just as it is with bats' eyes (τὰ τῶν νυκτερίδων ὄμματα) in respect of daylight (τὸ φέγγος ... τὸ μεθ' ἡμέραν), so it is with the intellect in our soul (τῆς ἡμετέρας ψυχῆς ὁ νοῦς) in respect of those things which are by nature most evident of all (τὰ τῆ φύσει φανερώτατα πάντων).⁸

⁷ In W.D. Ross' commentary (*Aristotle's Metaphysics. A Revised Text with Introduction and Commentary*, ed. W.D. Ross, Oxford U.P., Oxford 1924, p. 214), the analogy is merely paraphrased ("Further, the difficulty lies not in the facts but in our reason, which is dazzled by the very brightness of the object") without any further explanation. Ross (*Introduction*, p. XXV), on the footsteps of W. Jaeger, regards *Alpha Elatton* as authored by Pasicles of Rhodes.

⁸ The proposed translation depends on the English version by H. Tredennick (*Aristotle in 23 Volumes*, Vols. 17, 18, trans. by H. Tredennick, Harvard U.P. William Heinemann Ltd., Cambridge MA-London 1933, p. 1989: "However, since difficulty also can be accounted for in two ways, its cause may exist not in the objects of our study but in ourselves: just as it is with bats' eyes in respect of daylight, so it is with our mental intelligence in respect of those things which are by nature most obvious"), revised according to the English translations by D.W. Ross and J. Barnes (*The Complete Works of Aristotle* [above, n. 3], Vol. II, p. 24: "Perhaps, as difficulties are of two kinds, the cause of the present difficulty is not in the facts but in us. For as the eyes of bats are to the blaze of day, so is the intellect in our soul to the things which are by nature most evident of all"; the original translation by D.W. Ross differs from the one revised by J. Barnes only at the beginning, where it reads: "Perhaps, too, as difficulties ...") and by C. Reeve (*Aristotle, Metaphysics*. Translated, with Introduction and Notes, by C.D.C. Reeve, Hackett Publishing Co., Cambridge MA 2016 (The New Hackett Aristotle), p. 27: "Presumably too, since difficulties occur in two ways, it is not in the things but in us that the cause of this one lies. For as the eyes of bats are to the light of day so is the understanding in our souls to the things that are by nature most evident of all"). Greek text in Arist., *Metaph.* α 1, 993 b 7-11, ed. Ross: ἴσως δὲ καὶ τῆς χαλεπότητος οὐσης κατὰ δύο τρόπους, οὐκ ἐν τοῖς πράγμασιν ἀλλ' ἐν ἡμῖν τὸ αἴτιον αὐτῆς: ὥσπερ γὰρ τὰ τῶν νυκτερίδων ὄμματα πρὸς τὸ φέγγος ἔχει τὸ μεθ' ἡμέραν, οὕτω καὶ τῆς ἡμετέρας ψυχῆς ὁ νοῦς πρὸς τὰ τῆ φύσει φανερώτατα πάντων (identical to *Aristotelis Metaphysica*, recognovit brevisque adnotatione critica instruxit W. Jaeger, Oxford U.P., Oxford 1957, p. 34).

The four elements of the analogy are straightforwardly paired: as the eyes of bats cannot stand daylight, so the intellect of humans is unable to know the things that have the highest degree of cognitive evidence.⁹ The animal species at stake (*νοκτερίς*) is discussed in various passages of Aristotle's zoological works (*Historia animalium*; *De Partibus animalium*; *De Incessu animalium*; *De Respiratione*), where however Aristotle does not say much about the bats' reluctance to being exposed to daylight, besides the fact that they are nocturnal animals. He never writes that they are blind, contrary to what we presently know about them, and our text can be taken to contend that bats have some kind of sight, which is, however, hampered by daylight.¹⁰ The "daylight" (*φέγγος*) in question – meaning the so-called "ambient light", the light spread in an ambient, as opposed to the "radiant light", the light emanating from its source¹¹ – is variously recalled in the *Meteorologica*, in which the last of the occurrences of this term (*τὸ φέγγος τὸ τῆς ἡμέρας*, 370 a 21) is almost *verbatim* identical to the one at stake in the *Metaphysics*.¹² The "intellect in our soul" of which Aristotle is speaking can be generically identified with "the part of the soul with which the soul knows" mentioned at the beginning of chapter four of the third book of Aristotle's *De Anima* (429 a 10), in disregard of the two types of intellect (the so-called potential intellect and active intellect) that Aristotle famously poses in the following chapter of this work.¹³ Finally, the "things which are by nature the most evident of all") can be understood either in an ontological perspective, as fully existent and utmost evident entities, or in an epistemological key, as supreme logical principles.

The analogy falls in a context in which Aristotle is saying that investigating the truth, i.e. the true knowledge of reality, is both difficult and easy: speaking of the difficulty of the investigation of truth, he alludes to both external, objective causes of difficulty (truth is too big for individual investigators, 993 b 2-3, and it is too dense and detailed to be caught precisely,

⁹ The only inconformity is that in the first segment of the analogy, a plurality of things (the bats' eyes) are related to a single thing (daylight), whereas in the second segment of it a single thing (human intellect) is related to a plurality of things (the things most evident of all by nature).

¹⁰ This is confirmed by a passage at the end of book *Theta* of the *Metaphysics* (1052 a 1-4), where Aristotle states that there is neither falsity nor error about non-composite entities (*τὰ ἀσύνθετα*), but only ignorance, an ignorance however which is not like blindness (*τυφλότης*), since blindness is similar to the total lack of the faculty of intelligizing (*τὸ νοητικόν*).

¹¹ A.M. Smith, *From Sight to Light: The Passage from Ancient to Modern Optics*, University of Chicago Press, Chicago-London 2014; S.M. Costello, "Aristotle on Light and Vision: An 'Ecological' Interpretation", *Apeiron* 55.2 (2022), pp. 247-79.

¹² *Meteor.* A 6, 343 b 13, b 22, A 8, 346 a 26, B 9, 370 a 21. The expression *τὸ φέγγος τὸ τῆς ἡμέρας* is translated as *lumen existens quod diei* in the Greek-Latin translation by William of Moerbeke (Aristoteles, *Meteorologica. Translatio Guillelmi de Moerbeke*, ed. G. Vuillemin-Diem, Vol. I: *Praefatio*, Vol. II: *Editio textus*, Brepols, Turnhout 2008, vol. II, p. 84.1034). This same expression is not literally rendered in the Arabic translation of the *Meteorology* and, as a consequence, does not have a precise correspondence in the Arabic-Latin translation of the *Meteorology* by Gerard of Cremona (see *Aristotle's Meteorology in the Arabico-Latin Tradition. A Critical Edition of the Texts, with Introduction and Indices*, ed. P.B. Schoonheim, Brill, Leiden-Boston-Köln 2000 [Aristoteles Semitico-Latinus 12], pp. 114-15).

¹³ E. Berti in Aristotele, *Metafisica*, traduzione, introduzione e note di E. Berti, Laterza, Bari 2017 (Biblioteca Filosofica Laterza), p. 77, identifies the intellect mentioned in the analogy with the potential intellect of *De Anima* Γ 5. In a passage of the third book of the *De Anima*, Aristotle uses in a more positive key an analogy involving light, in order to explain how the human intellect functions, more specifically to account for the way in which the potential intellect, resembled to colors, passes from potentiality to actuality by means of the action of the active intellect, resembled to light (Γ 5, 430 a 15-18).

993 b 6-7), and internal, subjective causes. To exemplify these latter, Aristotle introduces the analogy at stake.

The two objective causes of the difficulty in investigating the truth of which Aristotle is speaking, namely its vastity and its multifariousness, are mitigated by the four causes of the easiness of this search, recalled in the same context, namely the fact that anyone can grasp some part of truth (truth's universal accessibility, 993 b 1-2), that a collective inquiry of it is sizeable (possibility of a corporate investigation of truth, 993 b 3-4), that truth cannot be totally missed (truth's constant attainability, 993 b 1), and that the grasp of truth increases over time (progressiveness of the truth's acquisition, 993 b 11-19). In this respect, Aristotle's account looks quite balanced and encouraging: the objective difficulties in the investigation of truth are compensated by much more numerous reasons of facility.

In this scenario, our analogy stands out from the overall context. On the one hand, the sharp distinction between a cognitive difficulty whose cause is in the objects and a cognitive difficulty whose cause is in us turns out to be hardly consistent with the very notion of "difficulty", which looks always to entail an involvement of the subject of knowledge. On the other hand, Aristotle does not mention in this case any cause of easiness compensating this surreptitiously introduced type of subjective difficulty. This being the case, regardless of whether bats, according to Aristotle, not being totally blind, suffer from photophobia (intolerance to visual perception of light) or hemeralopia (the inability to see clearly in bright light), if the force of the human intellect does not exceed, comparatively, the visual power of bats, no human being will ever get adequate knowledge of the "things which are by nature the most evident of all". No matter how easily truth can be accessed and attained by humans on a general scope, or how effectively individuals unite their forces, both synchronically and diachronically, to this end, this particular group of especially evident things looks to remain outside the human cognitive reach.

Nonetheless, Aristotle's metaphysics turns out to be entitled and able to convey knowledge of this kind of things. Already in the immediate sequel of chapter 1 of book *Alpha Elatton*, for example, Aristotle baldly calls philosophy "science of truth" (993 b 19-20), affirming that we can know truth only by knowing the causes of truth (993 b 23-24), and he assigns to theoretical philosophy the task of knowing what is eternal (993 b 22-23). More broadly, the first causes and principles (in general, or of being qua being, or of substance) are a specific concern of metaphysics, according to a constant refrain of the *Metaphysics*, from chapters 1-2 of book *Alpha Meizon*, to the first chapters of books *Gamma* and *Epsilon*, until book *Lambda*, the core of Aristotle's philosophical theology. In the same vein, the discussion of the logical axioms of non-contradiction and excluded-middle ranges over the entire second part of book *Gamma*.

The fact that in the analogy the "things which are the most evident of all" are such "by nature" (τῆ φύσει) is usually understood by scholars at the light of the polarity "by nature" vs. "to us" that Aristotle applies to the knowability of things in *Posterior Analytics*, *Physics*, and *Metaphysics*. The connection, however, is partial, since the analogy mentions only an evidence "by nature", without any reference to a corresponding evidence "to us". In other words, in the analogy at stake the reader is alerted about the impossibility for humans of having a direct acquaintance with things most evident in themselves, without any hints on how to avoid this situation *ex parte ante* or how to overcome it *ex parte post*. This incomplete resumption of Aristotelian conceptuality is interpreted in opposite ways by scholars. It is taken as one of the hallmarks of the non-Aristotelian authorship of *Alpha Elatton* by some of

the interpreters who have regarded this book as inauthentic: according to them, the analogy thus formulated is compatible with a Platonic world view, in which the immediate presence of pure being to mind is contemplated, whereas it hardly fits in the framework of Aristotle's more empiric epistemology and psychology.¹⁴ By contrast, those interpreters that incline to admit Aristotle's authorship of *Alpha Elatton*, from Hermann Bonitz until Enrico Berti, strive to show that the cognitive difficulty exemplified by the analogy is compatible with Aristotle's epistemology, in as much as it regards the lack of intelligibility "to us" of things that are "by nature" fully intelligible, if we attempt to know them directly, without the gradual mediation of sensory knowledge.¹⁵

Schematically speaking, one can say that the bats' analogy is ambivalent, being neither fully Platonic nor fully Aristotelian. It is not fully Platonic, since it captures a problematic epistemic situation that does not end up in an ensuing quiet contemplation of divine realities. It is not fully Aristotelian, since it does not explain how one arrives from ordinary perceptions of everyday realities to this epistemic impasse. In this way, the analogy is provoking and prompts the interpreter to avoid the risk of a too narrow or superficial reading that may jeopardize the epistemic prerogatives of metaphysics and weaken the cognitive capacities of the supreme discipline of Aristotle's philosophical system "from within", so to speak, on account of a pronouncement by the father of metaphysics, Aristotle, in the *Metaphysics* itself.

II. The Arabic Translations of the Analogy and Its Reception in Arabic

The analogy was particularly challenging for interpreters of the *Metaphysics* in the Arabic-Islamic environment. All Arab readers of Aristotle's work regarded book *Alpha Elatton*, our passage included, as *de iure* belonging to the work, as their fellow Greek and Latin interpreters did. In addition to this, however, they encountered the analogy at the very beginning of the Arabic translations of the *Metaphysics* at their disposal, due to the initial absence of *Alpha Meizon* among the books of the *Metaphysics* translated in the Arabic, and the subsequent postponement of its translation to that of *Alpha Elatton*, which always represented the *incipit* of Aristotle's work in Arabic.¹⁶ In this way, the possible solution of the riddle that contemporary scholarship has devised, namely the possibility that book *Alpha Elatton* originally was an introduction to natural philosophy, or to theoretical philosophy in general, later "recycled" in the *Metaphysics* as we presently know it, gets completely

¹⁴ See, for instance, C. Mitcham, "A Non-Aristotelian Simile in *Metaphysics* 2.1", *Classical Philology* 65 (1970), pp. 44-46.

¹⁵ H. Bonitz, *Aristotelis Metaphysica: Commentarius*, A. Marcus, Bonn 1849, p. 129; G. Reale, *Introduzione, traduzione e commentario della Metafisica di Aristotele*, testo greco a fronte, Bompiani, Milano 2004 (Il pensiero occidentale), p. 786; Aristotele, *Metafisica*, introduzione, traduzione e note di M. Zanatta, Rizzoli, Milano 2009, pp. 488-9; Aristotele, *Metafisica*, traduzione, introduzione e note di E. Berti (above, n. 13), pp. 76-7. Cf. L. Bruce-Robertson, *A Commentary on Book Alpha Elatton of Aristotle's Metaphysics*, MA Thesis, Dalhousie University 1998, pp. 52-3.

¹⁶ See A. Bertolacci, "On the Arabic Translations of Aristotle's *Metaphysics*", *Arabic Sciences and Philosophy* 15 (2005), pp. 241-75; Id., *The Reception of Aristotle's Metaphysics in Avicenna's Kitāb al-Šifā': A Milestone of Western Metaphysical Thought*, Brill, Leiden-Boston 2006 (Islamic Philosophy, Theology and Science 63), pp. 5-35. The absence in Arabic of the polemical book *Alpha Meizon* at the beginning, and the parallel absence of the equally polemical book *Ny* at the end, conveys a much more harmonic view of Aristotle's *Metaphysics*, and of Greek philosophy in general, than it does the original Greek disposition of books.

obliterated in Arabic: in the Arabic *Metaphysics*, book *Alpha Elatton* not only firmly belongs to the *Metaphysics*, but it also represents its starting point.

Moreover, some interpretative renderings of the key-terms of the analogy in the two main Arabic translations of the *Metaphysics* – the one made by Uṣṭāṭ in the IX c., and the one made by Iṣḥāq Ibn Ḥunayn (d. 910) shortly later – significantly modify the original purport of Aristotle’s analogy, making it more challenging than in Greek:

T2: Uṣṭāṭ’s (IX c.) Arabic Translation of *Metaph.* α 1, 993 b 7-11

Since arduousness is of two kinds (*naw‘ayn*), it is convenient that the cause (*‘illa*) of that is not in the things, but in ourselves. Thus, as the eyes of the bat (*waṭwāt*) stand towards daylight (*daw’ al-nabār*), so the intellect of our souls stands to the things very evident (*al-zāhira ... ġiddan*) in nature.¹⁷

T3: Iṣḥāq Ibn Ḥunayn’s (d. 910) Arabic Translation of *Metaph.* α 1, 993 b 7-11

Since difficulty is in two ways, it is convenient to experience difficulty not with respect to the things themselves; the cause of the difficulty depends instead on us, since the state of the intellect of our soul with respect to what in nature is at the extreme of clarity (*ġāyat al-bayān*) is like the state of the bat’s (*ḥuffāš*) eyes with respect to sunlight (*diyā’ al-šams*).¹⁸

Despite some infelicities, Uṣṭāṭ’s translation remains literal and substantially faithful to the Greek text of current editions.¹⁹ By contrast, Iṣḥāq’s translation stands out as a free translation, in three main regards. First, Iṣḥāq inverts the two members of the analogy, speaking first of the human intellect with respect to the things most evident of all and then of the bat’s eyes with respect to light. In this way, the second, anthropic member of the analogy is more forcibly brought to the fore. Second, he translates the Greek term “bat” with an Arabic equivalent (*ḥuffāš*), which stresses the idea of the visual weakness of this animal much more than it does the term adopted by Uṣṭāṭ (*waṭwāt*), in as much as *ḥuffāš* stems for the Arabic root conveying the idea of day blindness, whereas *waṭwāt* sounds like a sort of onomatopoeic term.²⁰ Finally, Iṣḥāq renders one of the pivotal elements of the Aristotelian analogy, that is, “daylight” (τὸ

¹⁷ Averroës, *Tafsir ma ba’d at-Tabi’at*, Texte arabe inédit établi par M. Bouyges, Beirut 1938-1948, vol. I, p. 4.1-3 of the text at the bottom of page. The proposal of reading the lacunose passage of p. 4.3 Bouyges (*al... ḥādīhi*) as *al-ašyā’ al-zāhira* is by N. Mattock, “The Early Translations from Greek into Arabic: An Experiment in Comparative Assessment”, in G. Endress – M. Schmeink (eds.), *Akten des Zweiten Symposium Graeco-Arabicum, Ruhr-Universität Bochum, 3.-5. März 1987*, B.R. Grüner, Amsterdam 1989 (Archivum Graeco-Arabicum 1), pp. 73-102 (part. pp. 80-1). A new critical edition of this translation, and of Iṣḥāq Ibn Ḥunayn’s translation, is in preparation by Matteo Di Giovanni.

¹⁸ Averroës, *Tafsir ma ba’d at-Tabi’at*, vol. I, p. 4.6-10 Bouyges (within T.1 in Bouyges’ edition); p. 7.11-14 (lemma C.1h in Bouyges’ edition). The text of Iṣḥāq Ibn Ḥunayn’s translation is identical in both occurrences. Cfr. Yaḥyā Ibn ‘Adī, *Tafsir li-l-maqāla al-ūlā min Kitāb Mā ba’d al-ṭabi’a li-Aristātālīs al-mawsūma bi-l-alif al-ṣuġrā*, in *Rasā’il falsafiyā li-l-Kindī wa-l-Fārābī wa-Ibn Bāġġa wa-Ibn ‘Adī*, ed. ‘A. Badawī, Bengasi 1973, repr. Beirut 1980, pp. 168-203 (part. pp. 168.16-169.3; p. 173.12-15); Yaḥyā Ibn ‘Adī, *Tafsir li-l-maqāla al-ūlā min Kitāb Mā ba’d al-ṭabi’a li-Aristātālīs al-mawsūma bi-l-alif al-ṣuġrā*, in *Maqālāt Yaḥyā Ibn-‘Adī al-falsafiyā*, ed. S. Ḥalīfāt, al-Ġāmi’a al-Urdunniyya, Amman 1988, pp. 220-62 (part. pp. 220.15-221.3; pp. 226.15-227.1).

¹⁹ The only serious shortcoming is the rendering of the final relative superlative in Greek (“those things ... most evident of all”) as an absolute superlative (“the things very evident”).

²⁰ In both Arabic translations, the terms conveying the idea of bat appear at the singular, whereas Aristotle speaks of bats at the plural, because the morphology of the Arabic renderings is, in both cases, that of a *nomen generis*.

φέργρος ... τὸ μεθ' ἡμέραν), faithfully translated by Uṣṭāṭ as “luminosity of the day” (*daw' al-nahār*), as “sunlight”, literally “luminosity of the sun” (*diyā' al-šams*), thus conveying an idea of radiant light, rather than of ambient light as in Aristotle’s intentions. In all these ways, the polarity between the feebleness of the bats’ eyes and the type of light that dazzles them is much stronger in Ishāq’s Arabic translation than in the original Greek text and in Uṣṭāṭ’s translation. The reasons of Ishāq’s distance from the original text of Aristotle in this specific case are worth considering, although a full investigation of this issue surpasses the limit of the present paper.²¹ For sure, having been more widely commented by Arabic philosophers than Uṣṭāṭ’s translation, as far as book *Alpha Elatton* is concerned,²² Ishāq’s translation set the standard of the Arabic reception of Aristotle’s analogy, with important repercussions also on its Latin aftermath, in as much as Ishāq’s version was translated into Latin in the framework of the so-called *Translatio nova*, namely the Latin version of the *lemmata* of the *Metaphysics* extracted from Averroes’ *Long Commentary* on Aristotle’s work.

Various strategies of qualification, integration, sometimes even subversion of the content of the analogy took place over the centuries in distinct types of works of Arabic-Islamic philosophy and theology. Limiting the scope of investigation to the “classical” or “formative” age of *falsafa* and *kalām* (IX-XIII cc.), one encounters a series of interpretations of particular relevance. In chronological order, and without excluding equally interesting cases in other authors and kinds of works, they are the ones provided by al-Kindī (d. after 870) in the specific treatise on metaphysics in which he originally reworked Aristotle’s *Metaphysics*; by Yaḥyā Ibn ‘Adī (d. 974) in his literal exegesis of Aristotle’s work; by Miskawayh (d. 1030) in a metaphysical treatise on God’s existence, the states of the soul, and prophecy; by Avicenna (Ibn Sīnā, d. 1037) in his major summa of philosophy; by al-Ġazālī (d. 1111) in his largest systematic treatise of theology; by Averroes (Ibn Ruṣd, d. 1198) in the most extensive lemmatic commentary he wrote on the *Metaphysics*; and by ‘Abd al-Laṭīf al-Baġdādī (d. 1231), in his paraphrase of Aristotle’s work.²³

In what follows, I do not delve into the interpretations provided by Yaḥyā Ibn ‘Adī, Miskawayh, al-Ġazālī, and ‘Abd al-Laṭīf al-Baġdādī, which, for different reasons, just

²¹ For instance, for Ishāq’s rendering of the Greek “daylight” as “sunlight”, one can figure out three main reasons: i) Ishāq’s acquaintance with the Arabic translation of Plato’s *Republic*, which historical sources ascribe to his father Ḥunayn Ibn Ishāq: in the two passages of books VI and VII of the *Republic* recalled at the beginning of this paper, Plato tightly associates daily light and the sun, and the first of these two passages is comprised in one of the fragments of Plato’s *Republic* (VI, 506 D 3-509 B 10) which are extant in Arabic: see D.C. Reisman, “Plato’s *Republic* in Arabic: a Newly Discovered Passage”, *Arabic Sciences and Philosophy* 14 (2004), pp. 263-300, part. p. 291.8-10; ii) a Qur’anic influence: in the Sūra of Jonas (X:5), the same term “luminosity” (*diyā'*) used by Ishāq is closely associated with the sun (*šams*); iii) John Philoponus’ or al-Kindī’s influence: as we are going to see in section III, al-Kindī interprets Aristotle’s analogy, which he reads in Uṣṭāṭ’s translation, emphasizing the role of the sun as source of radiant light, possibly on the footsteps of Philoponus. I have dealt with this topic, in the talk “What is it like to be a bat? Sulle traduzioni arabe e latine di un passo aristotelico (*Metafisica* II.1, 993 b 7-11)”, held at the conference “Filosofia in traduzione. Philosophy in Translation”, Università degli Studi di Bologna, 9-11 November 2023, org. E. Caramelli, A. Colli, D. Donna, S. Pieroni, M. Santarelli.

²² Both Averroes and Yaḥyā Ibn ‘Adī (d. 974; for which, see below) commented on *Alpha Elatton* according to this translation.

²³ The ways according to al-Kindī, Miskawayh, and Averroes resume the analogy are sketched by J. Jolivet, “Les yeux des chauves-souris”, in É. Chaumont *et al.* (eds.), *Autour du regard: Mélanges Gimaret*, Peeters, Louvain-Paris 2003, pp. 53-62.

reiterate the content of Aristotle's text or deform its purport, without grappling the more general problems it poses. In his commentary on book *Alpha Elatton* of the *Metaphysics*, Yaḥyā limits himself to explaining Aristotle's passage, placing it in the wider context of the first commented pericope of the text of *Alpha Elatton* 1 (993 a 30 - b 11) in which the bats' analogy precisely comes at the end of the pericope in question.²⁴ In the exegesis of the passage, Yaḥyā provides a plain explanation of Aristotle's text which is commendable for its classificatory endeavor, that is, for the articulation of the objects of external reality, as to their difficulty in being apprehended, in three main types: i.e. sensible objects, purely intelligible and immaterial objects, and intelligible forms existing in matter.²⁵ Yaḥyā's classificatory grid, however, is not as coherent and perspicuous as one would wish,²⁶ and his interpretation of "the things which are by nature most evident of all" in Aristotle's analogy as the starting-points of demonstrative procedures, in an epistemological perspective, rather than as first causes and principles of existence, from an ontological point of view, moves from metaphysics to logic the crux of Aristotle's analogy. In this way, the problematic character of Aristotle's text remains unexplored. Miskawayh's *Al-Fawz al-aṣḡar* (*Minor Book of Triumph*) presents the analogy in a strongly modified form and rephrases it with Platonic overtones, in the context of a work whose textual status still waits definitive assessment.²⁷ Al-Ġazālī resumes Aristotle's analogy in his most important theological work, the *Iḥyā' 'ulūm al-dīn* (*Revivification or Revival of the Religious Sciences*), in the course of a section (Part IV, Book 6, Delucidation 8) whose title significantly reads "An Exposition of Why the Human Understanding Is Unable to Know God".²⁸ Al-Ġazālī's intent in this section is to avail himself of the poignancy of Aristotle's

²⁴ Yaḥyā Ibn 'Adī, *Tafsīr li-l-maqāla al-ūlā*, pp. 173.12-174.15 Badawī; Yaḥyā Ibn 'Adī, *Tafsīr li-l-maqāla al-ūlā*, pp. 226.15-227.19 Ḥalīfāt. The content of the bats' passage is anticipated in the initial overview of the pericope (p. 170.3-5 Badawī; p. 222.3-6 Ḥalīfāt); first principles and causes are equated with blaze in the course of the exegesis of the pericope (pp. 170.22-171.2 Badawī; p. 223.7-9 Ḥalīfāt).

²⁵ See C. Martini, "Un commento ad *Alpha Elatton sicut litterae sonant* nella Baġdād del X secolo", *Medioevo* 28 (2003), pp. 69-96, part. pp. 88-9; P. Adamson, "Yaḥyā ibn 'Adī and Averroes on *Metaphysics Alpha Elatton*", *Documenti e Studi sulla Tradizione Filosofica Medievale* 21 (2010), pp. 343-74, part. pp. 334, 358, 365 n. 49.

²⁶ In the aforementioned threefold classification, the sensible objects are said difficult to apprehend both in themselves and because of the weakness of our sensation; the purely intelligible and immaterial objects are said to be difficult to apprehend only because of us; and the intelligible forms existing in matter are said to be difficult to apprehend prevalently because of themselves, sometimes because of us. In the second case, however, the reason of the difficulty in apprehension is located in an objective cause, namely the remoteness of the objects in question from our senses. Likewise, in the third case, Yaḥyā does not specify whether the alleged subjective occasional difficulty (the intellect's inability of abstracting the forms in question and of making them intelligible) is related to a particular class of objects, or to a particular class of humans trying to apprehend them.

²⁷ Miskawayh, *Le Petit Livre du Salut*, traduction française et notes par R. Arnaldez, Maison Arabe du Livre, Tunis 1987, p. 15: "Le Sage en a donné un exemple en disant: l'intelligence est atteinte par la lassitude (*kaḷāl*) quand elle regarde le Vrai primordial (*al-Ḥaqq al-Awwal*), comme il en est de l'œil de la chauve-souris quand elle regarde le disque solaire (*'ayn al-šams*)". For an analysis of Miskawayh's interpretation of the analogy and a comparison of his interpretation with al-Kindī's, see Jolivet, "Les yeux des chauves-souris" (above, n. 23), pp. 60-2. On the perplexing character of the structure and content of the *Minor Book of Triumph* in its present state and the possibility of its transmission through more than one recension, see E. Wakelnig, "A New Version of Miskawayh's *Book of Triumph*: An Alternative Recension of *Al-Fawz al-aṣḡar* or the Lost *Fawz al-akbar*?", *Arabic Sciences and Philosophy* 19 (2009), pp. 83-119.

²⁸ *Iḥyā' 'ulūm al-dīn, taṣnīf Abī Ḥamid Muḥammad ibn Muḥammad al-Ġazālī, wa-bi-dayli-hi al-Muġnī 'an ḥaml al-asfār fī al-asfār li-Zayn al-Dīn Abī al-Faḍl Al-'Irāqī*, i'tanā bi-hi wa-ḍabaṭa-hu wa-rāġa'a-hu wa-waḍa'a fahārisa-hu M. al-Dalī Baltah Sayda, 5 voll., al-Maktaba al-'aṣriyya, Beirut 1992, vol. IV, pp. 338-40; *Al-Ghazālī on*

analogy to argue that, as the bats' sight is feeble and overwhelmed by sunlight, so our intellects are feeble in front of the "beauty of God's presence", which "is utterly radiant and effulgent", and whose "very manifestation becomes the cause of its hidddness". As a matter of fact, Al-Ġazālī does not declare the Aristotelian provenience of the analogy, so that one may wonder whether the similarity with Aristotle's formulation may be coincidental.²⁹ For sure, the recourse to Aristotle's analogy – or to an analogy isomorphic with it – is not aimed at explaining Aristotle's text or at convey its precise purport,³⁰ but is rather oriented to give glory "to Him who is veiled in the radiance of His own light and concealed from both inner and outer vision by His own self-revelation". The way-out from this cognitive impasse, for al-Ġazālī, lies outside the realm of human intellection, and discloses a theological or mystical outcome: whereas "human understanding falls short", "he whose inner vision is forceful and whose vigour has not been sapped remains in a state of inner equilibrium, seeing God alone", in such a way that this person "does not acknowledge anyone other than Him". Finally, in the compendium of the *Metaphysics* entitled *Kitāb fī 'ilm mā ba'd al-ṭabi'a* (*Book on the Science of Metaphysics*), 'Abd al-Laṭīf al-Baġdādī awkwardly conflates stances that are similar to those, respectively, of Yaḥyā Ibn 'Adī and al-Ġazālī, mixing a dry paraphrase of Aristotle's passage with a final appeal to the "support of God and divine providence".³¹ The combination of a sketchy summary of Aristotle's text and a surreptitious *deus ex machina* conclusion prevents 'Abd al-Laṭīf al-Baġdādī from properly problematizing Aristotle's analogy.

Leaving aside the flat exegetical approach of Yaḥyā Ibn 'Adī, the Platonizing interpretation of Miskawayh, the theological and mystical accretions of al-Ġazālī, and the eclectic attitude

Love, Longing, Intimacy and Contentment, Kitāb al-maḥabba wa-l-shawq wa-l-uns wa-l-riḍā, Book XXXVI of the Revival of the Religious Sciences, Iḥyā' 'ulūm al-dīn, Translated with an Introduction and Notes by E. Ormsby, 2nd ed., with *al-Ghazālī's Introduction to the Revival of the Religious Sciences*, Islamic Texts Society, Cambridge 2016, pp. 81-7. Another English translation is available in A. Treiger, "From Dionysius to al-Ġazālī. Patristic Influences on Arabic Neoplatonism", *Intellectual History of the Islamicate World* 9 (2021), pp. 189-236 (part. pp. 208-9).

²⁹ Although it seems unlikely that al-Ġazālī was totally unaware of its Aristotelian background, he might have taken the analogy from other sources (al-Murtaḍā al-Husaynī al-Zabīdī, 1732-1790, for instance, in his commentary the *Iḥyā' 'ulūm al-dīn*, refers to poetical sources or resonances of the analogy of bats: see *Iḥāf al-sadāh al-muttaqīm bi sharḥ iḥyā' 'ulūm al-dīn*, IX, p. 597.2, quoted in *Al-Ghazālī on Love, Longing, Intimacy and Contentment* [above, n. 28], p. 83, n. A), or devised it himself. The same turns out to have happened in the Latin tradition (see the cases of Anselm of Aosta and Bonaventura of Bagnoregio mentioned in Stabile, "Vispistrello" [above, n. 6]). In case of a reliance on the *Metaphysics*, al-Ġazālī's recourse to the term "sun" (*šams*, p. 339.21) can be taken as indicative of his dependence on Iṣḥāq Ibn Ḥunayn's translation, although he refers to the sun's "luminosity" by means of the term *daw'* (p. 339.22), which occurs in Uṣṭāṭ's translation, rather than the term *diyā'* as in Iṣḥāq Ibn Ḥunayn's version.

³⁰ Contrary to what Aristotle implies, al-Ġazālī maintains, for example, that the bats' inability to see things during the day is due not only to the feebleness of their sight, but also to the power of the sun's light at daytime. From the exegetical point of view, it is noteworthy the presence in al-Ġazālī's account of the idea that the bat "does not see anything unless the blaze (*daw'*; "brightness" in Ormsby's translation, p. 83) is tinged (*imtazaġa*) with shadow" (p. 339.22), according to a mixture of light and darkness which will also occur in the Latin exegesis of Aristotle's analogy (see, for instance, the "lux solis immixta tenebris" in Albert the Great's *Commentary on Aristotle's Metaphysics*, II.2, ed. B. Geyer, Aschendorff, Münster 1960, p. 92.74-76).

³¹ The English translation of the relevant passage is available in C. Martini, *'Abd al-Laṭīf al-Baġdādī's Philosophical Journey: From Aristotle's Metaphysics to the Metaphysical Science*, Brill, Leiden-Boston 2013 (*Islamic Philosophy, Theology and Science. Texts and Studies* 88), p. 223, together with the English version of the rest of 'Abd al-Laṭīf al-Baġdādī's work.

of ‘Abd al-Laṭīf al-Baġdādī, in what follows, as indicated, I will concentrate on the analyses of Aristotle’s passage provided by al-Kindī, Avicenna, and Averroes. In all these three cases, we are in front of original and creative stances, in which the authors enter in a tight dialogue with Aristotle’s text, seriously take up its challenges, and provide insightful solutions. As we are going to see in detail in the next three sections, al-Kindī alerts the reader that the situation canvassed by Aristotle only applies when the metaphysical realities are investigated by means of sensible representations, forgetting that they are immaterial and therefore evident by themselves to the intellect without the need of sensory mediations. Avicenna puts forward an argument which has anthropological roots and eschatological offshoots, in as much as it involves human nature in its full scope and postpones the solution to the problem in the life to come: according to him, the human intellect is unable to grasp the highest realities, as Aristotle maintains, not per se, but because it is weakened by its association with the body in the present life, having however the possibility in the afterlife of overcoming the bodily constraints and of attaining a knowledge that is presently prevented to it. Averroes, finally, advances a finalistic argument, according to which the Aristotelian analogy should not be taken to imply that it is impossible for man to conceive separate realities: in case of such an impossibility, Averroes argues, the desire of knowledge imprinted in the human heart would be disappointed and these realities would remain unknown. For the sake of brevity, I label these approaches, respectively, “methodological”, “eschatological”, and “teleological”, for the reasons which will emerge more perspicuously in due course. From the point of view of the relationship with Aristotle’s text, al-Kindī transforms Aristotle’s analogy, Avicenna replaces it with a different one, Averroes subverts its purview.

III. Transforming the Analogy: Al-Kindī’s Methodological Solution

Already in the most important original essay on metaphysics by the “father” of *falsafa*, al-Kindī (d. after 870), one finds the bats’ analogy submitted to an interesting interpretation, which can be labelled “methodological”. In the second chapter of the extant first part of the *Kitāb fī l-falsafa al-ūlā* (*Book on First Philosophy*), al-Kindī inserts the analogy into a theoretical framework given by a clear-cut distinction between the metaphysical and the physical realm, on the ontological level, and between the intelligible access to the former and the sensible knowledge of the latter, on the epistemological level. Once the analogy is framed in this context, al-Kindī stresses the obfuscating cognitive effects that the transgression of this ontological and epistemic bipartition conveys:

T4: Al-Kindī, *Kitāb fī l-falsafa al-ūlā* (*Book on First Philosophy*), chapter I.2

[a] Whoever examines things which are beyond nature, i.e., those which have no matter and are not joined to matter, will not find for them a representation (*maṭāl*) in the soul, but will perceive them by means of intellectual inquiries. Preserve – may God preserve you [with] all virtues and defend you from all vices – this premise (*muqaddima*), that it may be your guide (*dalīl*), leading to like truths; and a flame (*ṣihāb*), removing the darkness of ignorance and cloudiness of perplexity from the eye (*‘ayn*) of your intellect.

[b] By these two ways (*al-sabīlāni*) is the truth on the one hand easy and on the other hand difficult: for one who seeks a representation (*tamattul*) of the intelligible in order to perceive it thereby, despite its clarity in the intellect, will be blind (*‘amiya*) to it as the eye of the bat (*al-waṭwāt*) is night-blind (*‘aṣā*) to acquiring [perception of] the individual objects which are distinct and clear to us (*la-nā*) in the rays (*ṣu‘ā*) of the sun (*al-šams*).

[c] For this reason, many of the inquirers into things which are beyond nature remained perplexed, since they, as children [do], have used in the investigation of them their representation (*tamattul*) in the soul, corresponding to their customary practices for the sense.³²

Although Aristotle is not quoted in this text and in its immediate context – as it famously happens, instead, with the extolling praise of Aristotle in the introduction of *Al-Falsafa al-ūlā* in the first chapter of the extant part of the work³³ – what al-Kindī writes is obviously related to the *Metaphysics*. In fact, in this text al-Kindī conflates three distinct passages of *Metaphysics Alpha Elatton*: the idea that the search of truth is difficult and easy in different respects, from *Alpha Elatton* 1, 993 a 30-31, at the beginning of section [b]; the bat’s analogy in the rest of section [b]; and “the childish elements” (τὰ παιδαριώδη), and “custom” (τὸ σύννηθες) and “habit” (τὸ ἔθος) of *Alpha Elatton* 3, 995 a 3-6, in the references to “children” (*ṣabī*) and “customary practices” (*ādāt*) in section [c].³⁴ Al-Kindī recourse to Uṣṭāṭ’s Arabic translation of the *Metaphysics* – a translation which was made for him, according to historical sources – is attested by term by means of he refers to the “bat” (*waṭwāt*). Although the idea of the bat’s visual weakness in front of the “sun” (*šams*) is consonant with Ishāq Ibn Ḥunayn’s version and absent in Uṣṭāṭ’s translation, the fact that in T4 al-Kindī mentions the sun and its “rays” (*šū‘ā*) – insisting consequently on the bat’s blindness – probably depends, rather than on a recourse to Ishāq Ibn Ḥunayn’s translation, chronologically unavailable to al-Kindī, either on other sources or on theoretical reasons proper to al-Kindī’s interpretation of Aristotle’s passage, as we are going to argue.³⁵

³² *Kitāb al-Kindī ilā l-Mu‘tašim bi-llāh fi l-falsafa al-ūlā*, in *Rasā’il al-Kindī al-falsafyya*, ed. M.‘A. Abū Rīda, vol. I, Dār al-Fikr al-‘Arabī, Cairo 1950, p. 110.7-16; *Œuvres philosophiques et scientifiques d’Al-Kindī*. Vol. II. *Métaphysique et Cosmologie*, ed. R. Rashed – J. Jolivet, Leiden-Boston-Köln 1998 (Islamic Philosophy, Theology and Science. Texts and Studies 29/2), p. 23.8-17. English translation in A.L. Ivry, *Al-Kindī’s Metaphysics. A Translation of Ya’qūb al-Kindī’s Treatise “On First Philosophy” (fi al-Falsafah al-Ūlā)*, State University of New York Press, Albany 1974, p. 64, revised (Ivry translates as “preface” the term *muqaddima*, and as “star” the term *shihāb* in section [a]; in section [b], Ivry eliminates the duality of verbs expressing the idea of blindness, ‘*amiya* and ‘*ašā*, by reading ‘*ašā* also in the first case; in section [c], Ivry translates the verb *taḥayyara* as “to be confused”, rather than as “to remain perplexed”, chose here to mark its proximity with the noun *al-ḥayrāt*, “perplexity”, in section [a]). French translation in *Œuvres philosophiques et scientifiques d’Al-Kindī*. Vol. II, p. 22; another English translation is available in P. Adamson – P. Pormann, *The Philosophical Works of Al-Kindī*, Oxford U.P., Oxford 2012 (Studies in Islamic Philosophy), pp. 16-17. For other passage of *Al-Falsafa al-ūlā* and of other works of al-Kindī relevant for his interpretation of the analogy, see Jolivet, “Les yeux des chauves-souris” (above, n. 23), pp. 55-60.

³³ See C. D’Ancona, “Al-Kindī on the Subject-matter of the First Philosophy. Direct and Indirect Sources of *Falsafa l-ūlā*, Chapter One”, in J.A. Aertsen – A. Speer eds.), *Was ist Philosophie im Mittelalter*, De Gruyter, Berlin-New York 1998 (Miscellanea Mediaevalia 26), pp. 841-55; A. Bertolacci, “Different Attitudes to Aristotle’s Authority in the Arabic Medieval Commentaries on the *Metaphysics*”, *Antiquorum Philosophia* 3 (2009), pp. 145-63 (part. pp. 152-3).

³⁴ Al-Kindī’s reliance on the first two passages of *Metaphysics Alpha Elatton* is signaled in Ivry, *Al-Kindī’s Metaphysics* (above, n. 32), p. 140 (commentaries on pp. 110.12 and 110.13 Abū Rīda), *Œuvres philosophiques et scientifiques d’Al-Kindī*, Vol. II (above, n. 32), p. 22, n. 22, and Adamson–Pormann, *The Philosophical Works of Al-Kindī* (above, n. 32), p. 82.

³⁵ The “sun” and its “rays” are mentioned, for example, by John Philoponus when he resumes the bats’ analogy in his Commentary on Aristotle’s *De Anima* (see below, n. 55); through channels still to assess, Philoponus’ commentary seems to have influenced al-Kindī’s treatise on the intellect (see J. Jolivet, *L’intellect selon Kindī*, Brill, Leiden 1971 [Uitgaven der De Goeje-Stichting 22], pp. 50-73). In a reverse perspective, one might wonder how

The methodological overtones of **T4** are evident from the outset, with the mentions of a “premise” (*muqaddima*), which serves as a procedural “guide” (*dalīl*) in section [a], and entails two “ways” (*al-sabīlāni*) of action in section [b]. According to al-Kindī, anyone who complies with the methodological guidelines set in the premise is safe from the situation depicted in Aristotle’s text. Thus, on the one hand, anyone who inquires metaphysical matters in the proper way, i.e. by means of intellectual tools and abstaining from sensible representations, is not going to experience the impasse signaled by Aristotle, and has an easy access to the immaterial realities he is interested in. This person is granted a sort of “enlightened” intellection, free from the darkness of ignorance and perplexity. On the other hand, anyone who errs in adopting the required methodology, by seeking a sensitive rather than intellectual representation of the metaphysical realities, has a difficult access to these realities and remains blinded in front of them like a bat is dazzled in front of the objects enlightened by the sun. In as much as it relies on a deeply bipartite view of reality and knowledge, Al-Kindī’s solution parts company with Aristotle’s epistemology and this latter’s idea of a gradual progression from what is better known to us to what is better known by nature, in an early period of Arabic philosophy in which the *Posterior Analytics* were not yet translated into Arabic and the epistemological hints present in the *Physics* and the *Metaphysics* remained still to be digested.

In a way, al-Kindī pinpoints the four elements of Aristotle’s analogy, by assigning an “eye” (*‘ayn*) to the human intellect, as the bats have eyes in Aristotle, and by providing a source of light for the human intellect (the “flame”, *ṣihāb*), corresponding to the “sun” (*al-šams*) – in al-Kindī’s report of Aristotle’s daylight – in the case of the bat. Conversely, however, al-Kindī recasts the four elements of Aristotle’s analogy into a different mold, breaking the parallelism between the situation of the bat’s eye, which is blind, and the eye of the human intellect, which is instead free from darkness and cloudiness, contrary to what Aristotle contends. As A.L. Ivry has noticed, al-Kindī transforms Aristotle’s original analogy into a different one: the bat’s daytime vision stands to the human daytime vision, as the human sensory perception of immaterial realities stands to the human intellectual grasp of immaterial realities.³⁶ This new setting explains why al-Kindī stresses the force of the physical source of daytime light (the “sun”) that makes the bat blind, insisting on its radiant character (“rays”, *šū‘ā‘*, a collective singular in Arabic), and why he underscores the bat’s blindness, emphasized by means of two distinct verbs (*‘amiya* and *‘ašā*). This emphasis on the bat’s visual inability is accompanied by an *e converso* stress on the distinctness and clarity of the human vision of physical things at daytime, which is tantamount to underscore, in force of al-Kindī’s revised analogy, the clarity and distinctness of the human intellectual grasp of metaphysical realities. To put it bluntly: in al-Kindī’s revised analogy, the more the bat is blind and the more, by contrast, humans clearly see, the more the human intellect is capable of acquiring knowledge of the highest realities. As Ivry poignantly states with regard to our passage: “Philosophy is not difficult, for al-Kindī, if properly pursued”,³⁷ a contention which can be squarely applied to the metaphysical province of philosophy on the footstep of **T4**.

much the presence of the “sun” and its rays in al-Kindī’s interpretation of the bats’ analogy might have inspired the specific traits of Iṣḥāq Ibn Ḥunayn’s translation of this passage, written sometime after al-Kindī’s *Al-Falsafa al-ūlā*.

³⁶ Ivry, *Al-Kindī’s Metaphysics* (above, n. 32), p. 140 (commentary on p 110.13 Abū Rīda).

³⁷ *Ibidem*.

IV. Replacing the Analogy: Avicenna's Eschatological Solution

A second way of interpreting Aristotle's analogy in Arabic is the eschatological solution, deployed in an anthropological setting, by Avicenna (Ibn Sīnā, d. 1037) in his massive encyclopedia *Kitāb al-Šifā'* (*Book of the Cure/Healing*). A work of Avicenna's maturity, which for scope and comprehensiveness – with its more than five thousand printed pages in the current edition – surpasses all the other major works of Avicenna, the *Šifā'* is not, properly speaking, a commentary on Aristotle, but rather an original interpretation of Aristotle's corpus, in the form of a free reworking of Aristotle's writings. Avicenna's interpretation of Aristotle's analogy in the *Šifā'* rests on the idea that the human intellect is unable to grasp the highest realities not because of an ingrained deficiency regarding its ontological status, but because of relational impediment, namely because it is weakened by its association with the body in the present life. Through channels of transmission still to be explored, this argument shows a striking similarity to what Alexander of Aphrodisias, Themistius, and Philoponus wrote in their commentaries on Aristotle, namely that our intellect experiences difficulty in understanding the most evident things of all because it is not separated from matter, being united with the passive powers of the soul. On this basis, Avicenna builds an eschatological way-out of the difficulty, pointing at a future situation in which the human intellectual soul, severed from the body, will be able to know those realities which it cannot know during its earthly life.

Book *Alpha Elatton* of Aristotle's *Metaphysics* holds great importance in Avicenna's philosophy, and the study of its reception by Avicenna allows a glimpse on the author's philosophical education, his evolving way of commenting on Aristotle's works, and the junctures of metaphysics that he regarded as fundamental.³⁸ Unsurprisingly, this book exerted a profound influence on the metaphysical part of the *Šifā'*, the last and culminating element in the work's organization, in which chapter two of *Alpha Elatton* grounds Avicenna's proof of God's existence.³⁹ However, as regards Avicenna's interpretation of the specific passage of *Metaphysics Alpha Elatton* at stake here, the Persian master surprises us, providing a glaring example of what he writes in the Prologue of the *Šifā'*, where he alerts the reader of possible transpositions of doctrines from one part to another of the *Šifā'* with respect of the normative models in ancient philosophy (in our case: in Aristotle's *Metaphysics* and *De Anima*).⁴⁰

³⁸ A. Bertolacci, "From al-Kindī to al-Fārābī: Avicenna's Progressive Knowledge of Aristotle's *Metaphysics* according to his Autobiography", *Arabic Sciences and Philosophy* 11.2 (2001), pp. 257-95 (part. pp. 274-8, 285-8); Id., *The Reception of Aristotle's Metaphysics* (above, n. 16), pp. 50-3, 57-8, 321-7, 338-9; Id., "An Excerpt of Avicenna's Early Exegesis of Aristotle's *Metaphysics* in a Later *Summa*: The Account of *Metaph. Alpha Elatton* 2 in the *Ilāhiyyāt* of the *Šifā'*", forthcoming in the proceedings of the conference "Philosophy and Translation in the Islamic World", Zurich, 21-22 June 2018, org. U. Rudolph and R. Wisnovsky.

³⁹ H.A. Davidson, "Proofs of the Existence of God from the Impossibility of an Infinite Regress of Efficient Causes", in Id., *Proofs for Eternity, Creation and the Existence of God in Medieval Islamic and Jewish Philosophy*, Oxford U.P., New York-Oxford 1987, pp. 336-77 (part. pp. 339-40); A. Bertolacci, "Avicenna and Averroes on the Proof of God's Existence and the Subject-Matter of *Metaphysics*", *Medioevo* 32 (2007), pp. 61-97; D. De Haan, "Where Does Avicenna Demonstrate the Existence of God?", *Arabic Sciences and Philosophy* 26.1 (2016), pp. 97-128.

⁴⁰ Avicenna, *Prologue of the Šifā'*, in Ibn Sīnā, *Al-Šifā', al-Mantiq, al-Madḥal*, ed. Ğ.Š. Qanawātī – M. Al-Ḥudayrī – A.F. Al-Ahwānī, Al-Maṭba'a al-amīriyya, Cairo 1952, pp. 9.17-10.7: "There is nothing of account to be found in the books of the ancients which we did not include in this book of ours; if it is not found in the place where it is customary to record it, then it will be found in another place which I thought more appropriate for it" (Engl. trans. in D. Gutas, *Avicenna and the Aristotelian Tradition. Introduction to Reading Avicenna's Philosophical Works*, Brill, Leiden [etc.] 1988; *Second Revised and Enlarged Edition, Including an Inventory of Avicenna's Authentic Works*, Brill, Leiden 2014, p. 43, slightly modified). Cf. S. Di Vincenzo, *Avicenna. The Healing, Logic:*

In fact, the expectation that Aristotle's analogy would be tackled by Avicenna in the metaphysical part of the *Šifā'*, at the end of this encyclopedia, is disappointed: it is instead resumed long before, in the part of the work devoted to natural philosophy, more precisely in psychology, the *Kitāb al-Nafs* (*Book of the Soul*), the sixth section of the natural philosophy of the *Šifā'*. Avicenna's reworking of the Aristotelian text is given in the part of the *Kitāb al-Nafs* in which he deals with the theory of intellect, in a chapter (chapter 5 of the fifth treatise) whose crucial importance in Avicenna's noetics is well-known.⁴¹ A fresh glance to Avicenna's elaboration of the bats' analogy in this chapter provides an insightful specimen of the way in which he freely relates to the Aristotelian philosophical heritage.

T5: Avicenna, *Kitāb al-Šifā'*, *Kitāb al-Nafs* chapter V.5

[a] The inability ('ağz) of the [human] intellect (*al-ʿaql*) to conceptualize things that are at the upper limit of being intelligible and abstracted from matter (*al-ašyāʾi llatī hiya fī gāyati al-maʿqūliyyati wa-l-tağrīdi ʿani l-māddati*) is not on account of something in those things themselves, nor on account of something innate to the intellect (*fī ġarīzati al-ʿaqli*), but rather on account of the fact that the soul (*al-nafs*) is distracted (*mašġūla*), while in the body (*fī l-badanī*), by the body. [The soul] needs the body for many things, but the body keeps it at a remove (*yubʿidubā*) from the most noble of its perfections.

[b] The eye (*al-ʿayn*) cannot bear (*lā tuṭīqu*) to gaze at the sun (*al-šams*), certainly not on account of something in the sun nor that it is not clearly visible, but rather on account of something about the natural makeup of the body [of the eye] (*fī ġibillati badanihā*).

[c] When this state of being immersed [in the body] (*al-ġumūr*) and impeded [by the body] (*al-ʿawq*) is removed from the soul we have (*mina l-nafsi minnā*), the soul's intellection (*taʿaqqul*) of these [extreme intelligibles] will be the noblest, clearest, and most pleasurable among the intellections that the soul has.

[d] Our discussion in this place (*fī hādā l-mawḍiʿi*), however, concerns the soul only inasmuch as it is a soul, and that only inasmuch as it is associated with this matter (*mādda*). So we should not discuss the return (*maʿād*) of the soul when we are discussing nature, until we move on to the discipline of wisdom (*šināʿa hikmiyya*, i.e., metaphysics) and investigate in it (*fīhā*) the things that are separate [from matter]. The investigation in the natural philosophy, however, is restricted to what is appropriate to natural things, and they are the things that bear relation to matter and motion.

[e] So we say instead (*bal naqūlu*) that the intellect (*al-ʿaql*) conceptualizes differently depending upon the existence of things (*wuġūdi al-ašyāʾi*). So with things very strong [in existence], the intellect may not be able to perceive them because they overwhelm it, and with things very weak in existence, like motion, time, and first matter (*al-hayūlā*), the soul may find it difficult to conceptualize them because they are weak in existence.⁴²

Isagoge. A New Edition, English Translation and Commentary of the Kitāb al-Madḥal of Avicenna's Kitāb al-Šifā', De Gruyter, Berlin 2021 (Scientia Graeco-Arabica 31).

⁴¹ The importance of this passage as representative of Avicenna's thought is remarked in Gutas, *Avicenna and the Aristotelian Tradition* (above, n. 40), p. 293, and in T. Alpina, *Subject, Definition, Activity. Framing Avicenna's Science of the Soul*, De Gruyter, Berlin 2021 (Scientia Graeco-Arabica 28), pp. 122 and n. 89; p. 143, and n. 41.

⁴² *Avicenna's De Anima (Arabic Text), being the Psychological Part of the Kitāb al-Shifā'*, ed. F. Rahman, Oxford U.P., London-New York-Toronto 1959; repr. 1970, pp. 237.16-238.12; English translation in *Classical Arabic Philosophy: An Anthology of Sources*, trans. with introd. and notes by Jon McGinnis & David C. Reisman, Hackett,

That Avicenna in this passage is dealing with Aristotle's text, without mentioning it, is clear enough if one considers that Avicenna describes the difficulty of intelligizing the most immaterial and intelligible things in section [a] as a subjective difficulty, rather than an objective one, and that he compares this situation with the inability of the "eye" (*al-ʿayn*) of staring at the light of the "sun" (*al-šams*) in section [b], with possible echoes of Iṣḥāq Ibn Ḥunayn's translation of Aristotle's text.⁴³ However, with respect to Aristotle, Avicenna introduces a series of relevant overtones, which in some cases amount to important modifications. First, he makes clear that Aristotle's subjective difficulty is in fact an impossibility: he speaks of cognitive "inability" (*ʿağz*) in section [a], of visual "incapacity to bear" (*lā tuṭīqu*) in section [b], of psychic "impediment" (*ʿawq*) in section [c]. The fact that the visual counterpart of the "eye" at stake is the "sun", rather than the daylight, surely drives Avicenna in this direction.

Second, in section [a] Avicenna contends, differently from Aristotle, that the problem of the human inability to intelligize the utmost immaterial and intelligible things does not lie in the intellect as such, but in the soul of which the intellect is one of the faculties: the cause of the inability at stake is the fact that the soul, to which the intellect belongs, is united with the body and distracted by it. As Aristotle does, also Avicenna makes clear that the difficulty in knowing "things that are at the upper limit of being intelligible" is not due to these things themselves; differently from Aristotle, however, he also adds that this difficulty is not due to a constitutive deficiency of the human intellect ("not on account of something innate to the intellect"). The reason of the difficulty, according to Avicenna, is more profound and lies in the constitution of the human being, in the fact that humans are compounds of a soul and a body. As a matter of fact, Avicenna expressly mentions the intellect (*al-ʿaql*) only twice in section [a] and once in section [e]: for the rest, he mainly speaks of the soul (*al-nafs*), its intellection (*taʿaqqul*), and its relationship with the body (*badan*) which performs the role of the soul's matter (*mādda*). Accordingly, in sections [a]-[c], Avicenna portrays passive states of the soul with respect to the body, saying that the soul is "distracted" and "impeded" by the body, "kept at a remove" from its perfection by the body, and "immersed" in the body. In other words, according to Avicenna the difficulty in question does not stem from a noetic deficiency, but involves the more general body-soul relationship, and is therefore not absolute, but relational.

Third, Avicenna replaces Aristotle's analogy with a different one. Of Aristotle's original analogy, Avicenna in section [a] takes up only the second half with its two elements, namely the intellect, nested into the soul that hosts it, and the "things that are at the upper limit of being intelligible and abstracted from matter", corresponding to the "things which are by nature most evident of all" in Aristotle. The first member of the analogy, by contrast, is totally changed in section [b]: the bats are completely omitted, the eye in question is specified as the eye of man, and the luminous thing which baffles the human vision is neither

Indianapolis-Cambridge 2007, pp. 201-202 (modified). For a further English translation of this passage, see Alpina, *Subject, Definition, Activity* (above, n. 41), Appendix, pp. 237-8.

⁴³ Avicenna's replacement of Aristotle's daylight with the source of it (the sun) is consonant with Iṣḥāq Ibn Ḥunayn's translation (see above, T3). One can also compare "what in nature is at the extreme of clarity" (*mā huwa ...fī ḡāyati al-bayāni*) in Iṣḥāq's translation (see above, T3) with *al-ašyāʾi llatī biya fī ḡāyati al-maʿqūliyyati wa-l-taḡrīdi ʿani l-māddati* in Avicenna. That the present passage of *Kitāb al-Nafs* V.5 conveys Avicenna's interpretation of *Metaph.* α 993 b 7-11 is noticed in Bertolacci, *The Reception of Aristotle's Metaphysics* (above, n. 16), p. 339, n. 45.

daylight nor sunlight, but rather the sun itself.⁴⁴ Avicenna's new analogy, in sections [a]-[b], can be rephrased as follows: as the intellectual faculty of the soul is unable to know the most intelligible things, i.e. those things that are supremely immaterial, so the visual faculty in the human eye is unable to stare at the most luminous thing of all, i.e. the sun. Here, as in the rest of T5, the focus is exclusively on the human situation. As in section [a] the human intellect is delivered from any responsibility of being the cause of the difficulty at stake, so in section [b], in the context of this visual analogy, Avicenna points out that the cause of the human eye's inability to see the sun is "something about the natural makeup of the body [of the eye] (*fī ḡibillati badanihā*)", a reference to the body's constitution that Avicenna does not develop further either in the present context or with respect to the body linked to the human soul. As a result, Avicenna's way of transforming Aristotle's analogy is much deeper and far-reaching than al-Kindī's: in fact, Avicenna conveys a radical replacement of the Aristotelian analogy with a different one.

One may wonder why Avicenna so drastically "humanizes" the example. In other works of his as well, when speaking of the human difficulty in knowing divine realities, Avicenna employs an anthropic example (a lightning in that can be seen only suddenly and furtively by humans, in the role of passive observers), inspired by a Qur'anic passage.⁴⁵ His reluctance in T5 to mention bats – animals which he examines in his zoological writings, on the footsteps of Aristotle and with clear echoes of our passage of the *Metaphysics*⁴⁶ – can be considered a sign of implicit, silent dissent towards Aristotle's analogy: Avicenna might disagree with Aristotle about the comparison that this latter establishes between human intellection and the bats' sight, being unwilling however to express openly this dissent in a work like the *Šifā'* which is meant to be the most Aristotelian of his *summae* and in which disagreement towards

⁴⁴ Since Avicenna in the *Šifā'* ascribes to the sun both "luminosity" (*daw'*) and "light" (*nūr*), the same two concepts that he associates with the radiating force of the Agent Intellect (see Alpina, *Subject, Definition, Activity* [above, n. 41], p. 150; p. 152, n. 64), it is difficult to say which precise notion of sun's lucency Avicenna has in mind in the present case. Alpina, *Subject, Definition, Activity* (above, n. 41), p. 152, n. 64, notices that the use of the terms *daw'* and *nūr* in the noetics of the *Šifā'* (*Nafs* V.5) is not consistent with the use displayed in the theory of vision in the same work (*Nafs* III.1). This is one of the recurrent cleavages in Avicenna's system, worth of a comprehensive examination.

⁴⁵ This happens in the late *summa Kitāb al-Inṣāf* (*Book of the Fair Judgment*), written after the *Šifā'* and fragmentarily preserved in students' reports: see Avicenna, *Commentaire sur le livre Lambda de la Métaphysique d'Aristote*, ed. M. Geoffroy – J. Janssens – M. Sebti, Vrin, Paris 2014 (Bibliothèque des Textes Philosophiques), p. 59.153-154: "... and this is impossible to us, because we are corporeal beings and we cannot watch (*lā yumkinunā an našīma*) that divine lightning (*dālīka l-bāriqa l-ilāhiyya*) except in a flash (*ḥaṭfatan*) and furtively (*ḥulsatan*)" (Engl. trans. mine). This passage has a precise Qur'anic background in *Sūra* 2 ("The Cow"), line 20: "the lightning (*al-barq*) well-nigh snatches away (*yabṭafu*) their sight (*abṣārahum*)" (Engl. trans. A.J. Arberry). The editors of the *Kitāb al-Inṣāf* simply speak of a "tourneure littéraire" (p. 96, n. 46), providing an alternative interpretation of the meaning and purport of the reported passage. On Avicenna's view according to which divine light cannot be known intellectually, but through direct experience, with special regards to his commentary on the *Theologia Aristotelis*, see M. Chase, "Experience and Knowledge among the Greeks From the Presocratics to Avicenna", in K. Krause – M. Auxent – D. Weil, *Premodern Experience of the Natural World in Translation*, Routledge, New York-London 2023, pp. 23-48 (part. pp. 34-6).

⁴⁶ Ibn Sīnā, *Al-Šifā', al-Ṭabī'iyāt, al-Ḥayawān*, ed. 'A. Muntaṣir – S. Zāyid – 'A. Ismā'īl, al-Hay'a al-miṣriyya al-ʿamma li-l-ta'lif wa-l-naṣr, Cairo 1970, p. 3.5-6: "the eye of the bat (*al-ḥuṣṣāf*) gets easily baffled (*al-taḥayyur*) in the daylight (*al-daw'*)". The term *al-ḥuṣṣāf* chosen by the Cairo editors is synonym with *al-ḥuffāṣ*, which is witnessed by three manuscripts of the edition (see *An Arabic-English Lexicon*, ed. E.W. Lane (1801-1876), Williams & Norgate, London-Edinburgh 1863-1893, pp. 743-4).

Aristotle is often disguised.⁴⁷ Precisely on this point a Latin thinker well acquainted with Avicenna like Thomas Aquinas will make outspoken a dissent of this kind.⁴⁸

Fourth, Avicenna manifests that the situation depicted by Aristotle's analogy is temporary: according to him, it applies at the present state of mankind, without entailing a permanent shortcoming in the human nature. Avicenna's precisions in sections [a] and [c] that the aforementioned inability regards the human soul "while in the body" (*fī l-badan*) and "the soul we have" (*al-nafs minnā*), namely the soul we currently possess in this life, go in this direction. This discloses Avicenna's solution in section [c]: he envisages a future state of mankind in which the soul, after death, is separated from the body and can overcome all the cognitive obstacles that the body poses to it. In this future setting, the type of intellection which is presently unavailable to the human mind becomes the noblest, clearest, and most pleasurable intellection that the soul can have. In section [d], this future state is called "return" (*ma'ād*), namely the coming back of the soul in its place of origin, whose full account is delayed to the metaphysics section of the *Šifā'* (*Ilāhiyyāt*, IX.7) at the end of this *summa*, in as much as metaphysics is, for Avicenna, the only discipline deputed to investigate totally immaterial things like the human intellective soul in the afterlife.⁴⁹ The philosophical afterlife that Avicenna conceives in this terminal section of his encyclopedia is reserved to the souls separated from the mortal body, and is sharply distinct, by Avicenna's own admission, from the Islamic doctrine of the otherworld, with its bodily rewards and punishments. The connection of T5 with *Ilāhiyyāt*, IX.7 is emphasized by the very terminology that Avicenna employs: the name of metaphysics in section [d], i.e. "discipline of wisdom" (*šinā'a hikmiyya*) – a denomination of metaphysics which concentrates in the fifth treatise of the *Kitāb al-Nafs* of the *Šifā'*, being very rare in other parts of this *summa*⁵⁰ – connects directly with the "divine wise men" (*al-ḥukamā' al-ilāhiyyūna*) mentioned at the beginning of *Ilāhiyyāt* IX.7, as the protagonists of the eschatological discourse that Avicenna deploys in that chapter.⁵¹

Finally, in section [e] Avicenna points at what he takes to be another shortcoming of Aristotle's analogy, namely the fact that Aristotle's text considers only an upper limit of the human intellection, given by the things that are intellectually too bright, overlooking the complementary, lower limit of intellection, given by the things that are intellectually too dark,

⁴⁷ Bertolacci, *The Reception of Aristotle's Metaphysics* (above, n. 16), pp. 328-35; Id., "Different Attitudes" (above, n. 33), pp. 159-60.

⁴⁸ See above, n. 4.

⁴⁹ See the discussion of this reference in Bertolacci, *The Reception of Aristotle's Metaphysics* (above, n. 16), p. 291, nr. 10, in the context of an overview of the prospective references to metaphysics that occur in the natural philosophy of the *Šifā'*. For Avicenna's doctrine of the afterlife in *Ilāhiyyāt*, IX.7, besides the seminal study of J. Michot, *La destinée de l'homme selon Avicenne. Le retour à Dieu (ma'ād) et l'imagination*, Peeters, Leuven 1986, see O. Lizzini, "The pleasure of knowledge and the quietude of the soul in Avicenna", *Quaestio* 15 (2015), pp. 265-73; Ead., "Desiderio di sapere, piacere dell'intelletto ed elitarismo: Intorno all'escatologia di Avicenna", *Quaderni di Studi Arabi* 11 (2016), pp. 75-92; M. Sebtī, "Avicenne", in M. Sebtī – D. De Smet (eds.), *Noétique et théorie de la connaissance dans la philosophie arabe du IX^e au XII^e siècle*, Vrin, Paris 2019 (Études musulmanes 52), pp. 288-9.

⁵⁰ See the occurrences of "discipline of wisdom" (*šinā'a hikmiyya*) in *Nafs*, V.1, p. 207.3; V.5, p. 237.6; V.5, p. 238.6 Rahman (cf. "the first wisdom", *al-ḥikma al-ūlā*, in *Nafs* V.6, p. 247.1 Rahman). Among other occurrences of this expression, see the Prologue of the *Šifā'*, p. 10.6 Qanawātī-Al-Ḥudayrī-Al-Ahwānī, where however it occurs coupled with "first philosophy" (*al-falsafa al-ūlā*).

⁵¹ Ibn Sīnā, *Al-Šifā', al-Ilāhiyyāt* (2), ed. M.Y. Mūsā – S. Duniyā – S. Zāyid, al-Hay'a al-'amma li-šū'un al-maṭābi' al-amīriyya, Cairo 1960, IX.7, p. 423.10.

like motion, time, and first matter (*hayūlā*).⁵² In both cases, the cognitive difficulty is portrayed as depending on “the existence of things” (*wuğūd al-ašyā*), i.e. on an intrinsic feature of the things in question – whose existence in one case is overwhelmingly strong, in the other case is excessively weak – rather than on a defect of the human cognitive faculties. In a nutshell: whereas human knowledge is constitutively abstractive, the first type of things has no matter from which form can be abstracted, the second types of things has no proper form to be abstracted from matter. In this way, in section [e] Avicenna introduces a transformation of Aristotle’s discourse which is even more radical than the replacement of the bats’ analogy with a different one: Aristotle’s subjective difficulty in knowing the truth, with the analogy exemplifying it, is turned by Avicenna into an objective difficulty. The ontological overtones (three explicit mentions of the word “existence”, *wuğūd*), which introduce in psychology doctrinal considerations more suitable to metaphysics, are significant. The final adversative clause “we say instead” (*bal naqūlu*) stresses Avicenna’s distance from Aristotle and his originality.

T5 is an insightful specimen of Avicenna’s *modus operandi* in structuring his own system of thought. In section [d], he exemplifies one of the many interconnections by means of which he keeps jointed the various parts of his enormous encyclopedia – made of twenty-two distinct sections – by linking prospectively psychology, as part of natural philosophy, to metaphysics, and assigning to natural philosophy and metaphysics distinct subject-matters (things separated from matter for metaphysics, things related to matter and motion for natural philosophy). The adverbial expressions “in this place” (*fī hādā l-mawḍi*) and “in it” (*fihā*) point to this link of a current investigation with a future fuller discussion of the same topic.⁵³ In the same vein, more in general, by means of the double and polarized limit of knowledge that he establishes in section [e] – with an upper cognitive side in metaphysics, according to Aristotle’s analogy, and a lower side in natural philosophy, with respect to the three basic physical notions of motion, time, and first matter – Avicenna stresses the pivotal systemic role of psychology, as a key juncture interconnecting natural philosophy and metaphysics.⁵⁴

T5 also sheds light on Avicenna’s free reuse of the Aristotelian tradition. The range of sources that lurk in the background of this text is in fact of high importance: more specifically, his view of the reason of the difficulty at stake in section [a] shows keen similarities with writings of prime exponents of the Aristotelian Greek tradition, like the commentary on *Metaphysics Alpha Elatton* by Alexander of Aphrodisias,⁵⁵ the commentary on *Metaphysics*

⁵² For *hayūlā* in Avicenna as a term meaning “first matter”, i.e. the formless substratum of a form, see A. Bertolacci, “The Doctrine of Material and Formal Causality in the *Ilāhiyyāt* of Avicenna’s *Kitāb al-Šifā*”, *Quaestio* 2 (2002), pp. 125-54 (p. 130). Whereas the weak existence of first matter is due to its lack of any form, the weakness in existence of motion and time looks to be related to their transient and unstable nature (see A. Hasnaoui, “Le mouvement et les catégories selon Avicenne et Averroès: l’arrière-fond grec et les prolongements latins médiévaux”, *Oriens-Occidens* 2 [1998], pp. 119-22; Id., “Le statut catégoriel du mouvement chez Avicenne”, in R. Morelon – A. Hasnawi [eds.], *De Zénon d’Elée à Poincaré: Recueil d’études en hommage à R. Rashed*, Peeters, Louvain 2004, pp. 607-22).

⁵³ The doctrine of prophecy, partly expounded in psychology and partly in metaphysics, is another case in point. I have called “liminal approach” the interconnections that Avicenna establishes among the distinct parts of his philosophical masterpiece in A. Bertolacci, “The Metaphysical Proof of Prophecy in Avicenna”, in A. Palazzo – A. Rodolfi (eds.), *Prophecy and Prophets in the Middle Ages*, SISMEL-Edizioni del Galluzzo, Firenze 2020, pp. 39-75 (part. p. 74).

⁵⁴ On Avicenna’s psychology in the *Šifā*’ as a two-sided science of problematic disciplinary classification, see the detailed analysis in Alpina, *Subject, Definition, Activity* (above, n. 41), part. pp. 130-57.

⁵⁵ Alex. Aphrod., *In Metaph.*, pp. 142.19-143.2 Hayduck; English translation in *Alexander of Aphrodisias. On Aristotle Metaphysics 2 & 3*, trans. Dooley–Madigan (above, n. 6), p. 17: “Our intellect is related in this way to the

Lambda by Themistius,⁵⁶ and the commentary on Aristotle's *De Anima* by John Philoponus.⁵⁷ The passage at stake of Alexander's commentary on the *Metaphysics* is succinctly resumed in the later commentary by Ammonius on the same Aristotelian work, where an interesting polemical reference to the predecessor can be found:⁵⁸ Avicenna, however, had no attested access to either of these commentaries in Arabic translation. His recourse to Themistius' commentary, on the contrary, is well documented.⁵⁹ Equally promising is the mediating role of Philoponus' commentary on the *De Anima*, despite the lack of any extant or attested Arabic translation of it, both because of the documented influence of this commentary on Avicenna's thought, and because Avicenna is resuming the bat's analogy in the section of the *Šifā'* expressly devoted to psychology.⁶⁰

most perspicuous of existing things because it has not been set apart and separated [from the body], but exists [in union] with sense perception (*aisthesis*) and the affective (*pathetike*) powers of the soul (*psukhe*), all of which are a hindrance to the intellect's proper activity (*energeia*). For our continuous activity directed towards objects (*ta aistheta*) interferes with the activities that are separate from sense perception. Now if this is the reason why knowledge of the truth is difficult, Aristotle's previous statement is valid: 'knowledge of the truth is in one respect difficult, in another easy' - difficult, that is, for us but easy because of the nature of truth itself. And those [subsequent] remarks too would be made to establish this fact, that truth has both these aspects, and this for no other reason than that truth is by its own nature easy to know, but difficult for us to know because of our weakness".

⁵⁶ *Min šarḥ Tāmistyūs li-ḥarf al-lām*, in *Aristū 'inda l-'Arab*, ed. 'A. Badawī, Maktabat al-nahḍa al-miṣriyya, Cairo 1947, p. 16.15-18 (the passage is identical in Y. Meyrav, *Themistius' Paraphrase of Aristotle's Metaphysics 12. A Critical Hebrew-Arabic Edition of the Surviving Textual Evidence, with an Introduction, Preliminary Studies, and a Commentary*, Brill, Leiden-Boston 2019, p. 253.16-20); French translation of ed. Badawī in Themistius, *Paraphrase de la Métaphysique d'Aristote (livre Lambda)*, traduit de l'hébreu et de l'arabe, introduction, notes et indices par R. Brague, Vrin, Paris 1999, p. 90: "En effet, parce que nous sommes constitués de facultés différentes, nous trouvons peu le chemin de la science, car l'intellect en nous, dans la plupart des cas, est occupé sans avoir de loisir. Et pourtant celui-ci, même s'il est occupé par une quantité de choses, <et> mélangé avec le corps, rejette parfois de soi, ne fût-ce que pour un petit moment, le reste de ce qui l'empêche de comprendre, et intellige son essence sans (rien qui) l'empêche. Il se présente alors à lui, pour cette raison, un contentement et une joie perpétuelle d'une grandeur qu'on ne peut mesurer".

⁵⁷ Ioannis Philoponi *In Aristotelis De Anima libros commentaria*, ed. M. Hayduck, Reimer, Berlin 1897 (CAG XV), pp. 23.28-24.3; Engl. translation in *Philoponus: On Aristotle's On the Soul 1.1-2*, trans. by P.J. van der Eijk, Bloomsbury Academic-Cornell U.P., London-Ithaca NY 2006, p. 39: "For this reason he says in the *Metaphysics* that the study of the intelligibles is both very easy and difficult. It is very easy because it is concerned with the objects that are stable and always the same; the divine objects are clearest, because they are unchanging in respect of being, in respect of potentiality, and in respect of actuality all at once. For this reason it is very easy, but it is difficult because of our weakness, for being embodied and subjected to emotions we do not have the power to look into their light, just as what happens with bats: the sun being the clearest, they cannot look into its rays because of the weakness of their eyes. It would seem, then, to them that the light of the stars is brighter, since it is commensurate to them. The same applies to our relation to the intelligible objects".

⁵⁸ Ascl., *In Metaph. A-Z*, p. 114.36-115.2 Hayduck. It is noteworthy the particular way according to which, for polemical purposes which becomes clear soon afterwards (p. 115.1-2), Ammonius misreports Alexander's view of the inseparability of the human intellect from the body: "If [the intellect] were separate, he [i.e. Alexander] says, then it will apprehend [the intelligibles]" (εἰ δὲ χωρισθεῖη, φησί, ποτέ, ἀντιλήψεται, pp. 114.38-115.1 Hayduck), a statement which is not found as such in Alexander's text and in which the apprehension of the intelligibles is presented, at least grammatically, as a future consequence of the separation of the intellect from the body.

⁵⁹ Brague, *Thémistius. Paraphrase de la Métaphysique d'Aristote (livre Lambda)* (above, n. 56), pp. 26-7; Bertolacci, *The Reception of Aristotle's Metaphysics* (above, n. 16), pp. 447-51. The text of Themistius' commentary on *Metaphysics Lambda* quoted above, n. 56, looks to stay in the background of the passage of Avicenna's *Kitāb al-Inšāf*, reported above, n. 45.

⁶⁰ On the influence of Philoponus' psychology on Avicenna, through channels to assess more precisely, see

A full account of Avicenna's sources is worth further investigation. What is relevant for the present purposes is that Avicenna does not limit himself to explaining the difficulty posed by the bat's analogy by a sheer analysis of Aristotle's text and on the basis of motives developed by Aristotle's Greek commentators. With an original move, he makes a bold step forward: he does not regard the situation described by Aristotle and his Greek interpreters as unescapable, but he discloses a way-out from the puzzle in the afterlife of the disembodied souls which the metaphysics of the *Šifā'* deals with. In that future situation, no bodily impediment will prevent the human intellect from knowing the most intelligible realities. The idea that man will be able to stand the light of the most luminous intellectual realities once his soul will cease to be hampered by the body in which it temporarily resides calls to mind two assets of the Platonic tradition, which Avicenna might have accrued, as a sort of Platonic eschatology added *ex parte post*, to the Aristotelian psychology upon which he builds, *ex parte ante*, his description of the human soul's functions during the life on earth.

V. Subverting the Analogy: Averroes' Teleological Solution

The last account of Aristotle's analogy analyzed here is the teleological, i.e. finalistic, interpretation advanced by Averroes (Ibn Rušd, d. 1198) in his *Long Commentary* on the *Metaphysics*, about a century after Avicenna, at the opposite Western side of the medieval Muslim world. According to Averroes, the bats' analogy, contrary to what it apparently states, does not imply that it is impossible for man to conceive separate realities, because in this case nature would have acted in vain, by making ineffective the human desire of knowing these realities, and by making these realities themselves, that are eminently intelligible *ex parte obiecti*, totally unintelligible to mankind *ex parte subiecti*.

Among the three commentaries that Averroes wrote on Aristotle's *Metaphysics*, the so-called *Long Commentary* (*tafsīr*) – being more extensive and coming after the free summary of Aristotle's work in the *Short Commentary* and the paraphrase of it in the *Middle Commentary* – can be taken as his fullest and most mature account of the bats' analogy.⁶¹ Averroes' *Long*

D. Gutas, "Philoponos and Avicenna on the Separability of the Intellect: A Case of Orthodox Christian-Muslim Agreement", *Greek Orthodox Theological Review* 31 (1986), pp. 121-9 (also in Id., *Greek Philosophers in the Arabic Tradition*, Ashgate, Aldershot [etc.] 2000 [Variorum Collected Studies Series], XI); Alpina, *Subject, Definition, Activity* (above, n. 41), *passim*. An avenue of possible indirect transmission is disclosed in R. Arnzen, *Aristoteles' De Anima. Eine verlorene spätantike Paraphrase in arabischer und persischer Überlieferung. Arabischer text nebst Kommentar, Quellengeschichtlichen Studien und Glossaren*, Brill, Leiden-New York-Köln 1998 (Aristoteles Semitico-Latinus 9).

⁶¹ In the *Middle Commentary* on the *Metaphysics*, the passage is merely paraphrased (see M. Zonta, *Il Commento medio di Averroè alla Metafisica di Aristotele nella tradizione ebraica. Le versioni ebraiche di Zerahyah ben Ishaq Hen e di Qalonimos ben Qalonimos. Edizione e introduzione storica e filologica*, 2 vols., Pavia U.P., Pavia 2011, Vol. I, p. 81; Vol. II.1, p. 1.18-24), whereas in the *Epitome* it is neglected. In the case of Averroes' three commentaries on the *Metaphysics*, the chronological sequence goes straightforwardly from epitome, to middle commentary, to long commentary (although the *Epitome* of the *Metaphysics* presents traces of later revisions), whereas it is debated whether the same sequence applies to Averroes' all other commentaries on Aristotle's works, with special regard to those on the *De Anima* (see M. Di Giovanni, "The Commentator: Averroes' Reading of the *Metaphysics*", in F. Amerini – G. Galluzzo (eds.), *A Companion to the Latin Medieval Commentaries on Aristotle's Metaphysics*, Brill, Leiden 2014 (Brill's Companions to the Christian Tradition 43), pp. 59-94, p. 62; S. Harvey, "Unfounded Assumptions: Reassessing the Differences among Averroes' Three Kinds of Aristotelian Commentaries", in K. Krause – L.X. López-Farjeat – N.A. Oschman (eds.), *Contextualizing Premodern Philosophy: Explorations of the Greek, Hebrew, Arabic, and Latin Traditions*, Routledge, New York and London 2023, pp. 471-94, part. 473-4).

Commentary on the *Metaphysics* provides one of the most painstaking analyses of Aristotle's text ever made, being much more extensive and accurate than, for example, the commentary on this passage by William David Ross of 1924. Since for Averroes, and for all the readers of the *Metaphysics* in Arabic, book *Alpha Elatton* is the first book of the *Metaphysics*, Averroes' explanation of Aristotle's analogy lies in the very first pages of his *Long Commentary*. For his exegesis of *Metaphysics Alpha Elatton* Averroes relies on Iṣḥāq Ibn Ḥunayn's translation.⁶²

Two passages are relevant for the present investigation: Averroes' general introduction to book *Alpha Elatton* (T6), in which the bats' analogy is not mentioned, but in which Averroes first unfolds his teleological interpretation by means of a general argument which can be labelled "teleology of the subject of knowledge"; and his specific explanation of the analogy (T7) in the lemma of the commentary which incorporates it (993 a 30-b11, the sixth lemma that Averroes singles out in the first portion of book *Alpha Elatton* upon which he comments), in which a more focused teleological argument, complementary to the previous one, is presented, as a token of what we can call the "teleology of the object of knowledge". Although the first of these two teleological arguments has already attracted the scholarly attention,⁶³ the relationship between the two arguments and the second argument in itself are worth further analysis.

T6: Averroes, *Introduction to Metaphysics Alpha Elatton*

[a] Since this science is the [science] that examines the truth in absolute terms (*bi-ittlāqin*), [Aristotle] starts making known the state of the route (*al-sabīl*) that brings to the [truth] with respect to difficulty and easiness, since it is known by itself to all that there is a route (*sabīl*) that brings us to the truth and that grasping the truth, in most of the things (*fī akṭari l-ašyā'i*), is not impossible to us.

[b] The sign of this [i.e. that there is a route that brings us to the truth and that grasping the truth is not impossible] is that we believe with certainty (*na'taqidu 'tiqāda yaqīnin*) that we have already understood the truth in many things, and certainty (*al-yaqīn*) is joined to this [understanding] for those who pursue the sciences of certainty (*al-yaqīn*).

[c] Another sign [of this] is the desire (*al-tašawwuq*) we have of knowing the truth; for, if apprehending the truth were impossible, the desire (*al-šawq*) [in question] would be vain, whereas it is acknowledged (*mina l-mu'tarafi*) that nothing vain lies at the root (*aṣl*) of the natural disposition (*al-ḡibilla*) and of the inborn character (*al-ḥilqa*) [of man].⁶⁴

Averroes' introduction to *Alpha Elatton* contains a deeply revisionist account of Aristotle's incipit of book *Alpha Elatton* in general, and of the bats' analogy in particular. In this text, the only trace of Aristotle's analogy is the conclusive remark that "in most of the things is not impossible" to know the truth, which implies that in some unspecified things knowing the truth is, by contrast, impossible. From the very outset in section [a], contrary to Aristotle's hesitation, Averroes categorically presents metaphysics as the science of truth, and of a truth grasped "in absolute terms" (*bi-ittlāq*), namely without qualification. In the same vein, he

⁶² Only the short passage 995 a 17-19 at the end of book *Alpha Elatton* is commented by Averroes according to Uṣṭāṭ's translation. The last two lines of the book (995 a 19-20) are missing in Averroes' *Long Commentary*.

⁶³ Adamson, "Yaḥyá ibn 'Adī and Averroes on *Metaphysics Alpha Elatton*" (above, n. 25), pp. 355-7.

⁶⁴ Averroès, *Tafsir ma ba'd at-Tabī'at*, vol. I, pp. 4.11-5.7 Bouyges. A different English translation can be found in Adamson, "Yaḥyá ibn 'Adī and Averroes on *Metaphysics Alpha Elatton*" (above, n. 25), pp. 355-6.

assures that there is a “route” (*sabīl*) – we could say a method – that brings to the truth sought for. Whereas Aristotle, by means of the bats’ analogy, points out that knowing the truth, in some important things, is impossible to us, Averroes reverses the perspective and says that knowing the truth, in “most of the things” (*fī akṭari l-aṣyā’i*), is not impossible to us. The following two sections function as two consecutive proofs of this contention. Section [b] displays an empirical proof, namely the fact – attested by the *ratio studiorum* that has brought Averroes’ readers to get familiar with previous sciences, in particular the philosophy of nature, in order to approach now the pinnacle of Aristotle’s philosophy, i.e. his *Metaphysics* – that the human capacity of knowing the truth is not tentative, i.e. it does not advance by trial and error and gropingly, but proceeds with cogency.⁶⁵ This is confirmed by the three references to “certainty” (*yaqīn*) in this section, in so far as certainty is the utmost level of cogence that human reasoning can attain via demonstration, according to Aristotelian standards. Finally, in section [c], as a second proof of the contention made in section [a], Averroes devises his first teleological argument. The ordered articulation of this argument is as follows (the implicit elements of Averroes’s discourse are placed between square brackets):

mankind has an [inborn] desire of knowing the truth
 if mankind could not know the truth, this desire would be vain
 nothing vain is rooted in mankind’s inborn status
 [therefore, mankind’s inborn desire of knowing the truth is not vain]
 [therefore, mankind can know the truth]

The crucial step III in the above outline – namely the contention that nothing vain is rooted in mankind’s inborn status, so that the human natural desire of knowing the truth cannot remain unfulfilled – is based by Averroes on an unspecified consensus (“it is acknowledged”, *mina l-mu‘tarafi*), whose precise nature and strength is hard to define. On the one hand, the Qur’anic term “natural disposition”, *ḡibilla* (Qur’ān 26:184; 36:62), and the term “inborn character”, *ḥilqa*, from a root (*ḥ-l-q*) widely used in the Qur’ān for divine creation, in section [c] convey the idea that mankind’s inborn status depends on God’s agency, to the effect that the desire of knowledge is implanted in the human nature by God himself, who has created and formed this nature, as part of the divine providential plan. On the other hand, a more markedly philosophical finalism stemming from Aristotle’s worldview can surely be part of the picture,⁶⁶ in accordance with Averroes’ bare reference to “nature” in the second teleological argument. The initial step I is also worth attention: paradoxically, despite the inversion of the position of the first two books of the *Metaphysics* in Arabic, thanks to Averroes’ *Introduction* to book *Alpha Elatton*, Arab readers of his commentary could find at the very outset of Aristotle’s *Metaphysics* the same topic – the human natural desire of knowledge – that Greek readers of the *Metaphysics* could read in its famous *incipit* in book *Alpha Meizon*: “All men by nature desire to know” (πάντες

⁶⁵ Adamson, “Yahyá ibn ‘Adī and Averroes on *Metaphysics Alpha Elatton*” (above, n. 25), p. 356.

⁶⁶ On the famous statement of Aristotle in the *Politics* and in other works of his (*De Incessu animalium*; *De Cae-lo*) according to which “nature does nothing in vain” (οὐθὲν γάρ, ὡς φασί, μάτην ἢ φύσει ποιεῖ, *Pol.* A 2, 1253 a 9), see N. Rescher, “*Principia Philosophiae*: On the Nature of Philosophical Principles”, *The Review of Metaphysics* 56.1 (2002), pp. 3-17 (p. 10); for its reception in Averroes, see C. Cerami, “Le plaisir des femmes selon Aristote. Averroès contre Galien sur *Natura nihil facit frustra*”, *Philosophie Antique* 16 (2016), pp. 63-102.

ἄνθρωποι τοῦ εἰδέναι ὀρέγονται φύσει). On the basis of evidence like this, it looks like that Averroes was acquainted with the entire book *Alpha Meizon* of the *Metaphysics*, or at least of its *incipit*, although the extant part of his *Long Commentary* contains only the exegesis of a portion of it (from A 5, 987 a 6 onward).⁶⁷

T7: Averroes, *Explanation of Metaphysics Alpha Elatton* 1, 993 b 7-11

[a] He [i.e. Aristotle] means: since the difficulty in apprehending the intelligibles exists in two ways, it is suitable that the difficulty [experienced] with respect to the things that are at the extreme of truth, i.e. the First Principle and the separate principles lacking hyle [i.e. matter], depends on us, not on the things themselves.

[b] It is so because, in so far as they are separate [from matter], they are intelligible by themselves by nature; it is not the case that they are intelligible because we make them intelligible (since they are intelligible by themselves), as it happens with the material forms, as it has been clarified in the *Book of the Soul*. This happens because the difficulty in these latter [i.e. in the material forms] depends on themselves more than on us.

[c] Since the state of the intellect with respect to the intelligible thing is identical to the state of the sense with respect to the sensible thing, he has compared the faculty of the intellect in us, with respect to the learning of the intelligible things without hyle [i.e. matter], to the greatest among the sensible things, namely the Sun, with respect to the weakest among the sights, namely the bat's sight.

[d] But (*lākin*) this does not mean that it is impossible (*imtinā'*) to conceive the separate realities, as for the bat it is impossible (*imtinā'*) to look at the sun. If it were so, in fact, nature would have acted in vain, since it would have made what is, by itself and by nature, intelligible (*ma'qūl*) by something else not intelligized (*ma'qūl*) by anything, as if it had made the sun (*al-šams*) not perceived by any sight.⁶⁸

Averroes' dedicated explanation of the analogy in **T7** rests on an articulated exegetical strategy. The Commentator replies to four main questions raised by the analogy, corresponding to sections [a]-[d]. Section [d] contains a second teleological argument, which is similar to the one just observed in the Introduction, but is based on a different kind of finalism, regarding this time not the subject of knowledge, but its object.

The first question ([a]) is: Which are “the things that are at the extreme of clarity”, of which Aristotle speaks in the Arabic translation? For Averroes, as for al-Kindī and Avicenna before him, they are utterly immaterial things, i.e. things that are separate and therefore lack hyle in the sense of matter, which Averroes identifies with God (the First Principle) and all the heavenly intelligences (the separate principles). The second question ([b]) is: Why the cause of our difficulty in knowing these things lies not in them, but in us? Averroes' answer is that these things are “separate from matter”, and therefore they are “intelligible by themselves by nature”, differently from the material forms, which become intelligible only thanks to our action of abstraction, i.e. from the action by means of which we remove these forms from matter in our mind. The reference to the *De Anima* in this context, is a glaring example of “explaining Aristotle by means of Aristotle”. The third question ([c]) is:

⁶⁷ Cf. Adamson, “Yahyá ibn ‘Adī and Averroes on *Metaphysics Alpha Elatton*” (above, n. 25), p. 356.

⁶⁸ Averroès, *Tafsir ma ba'd at-Tabi'at*, vol. I, pp. 7.14-8.13 Bouyges.

Why Aristotle has proposed the bats' analogy? In answering, Averroes recalls an asset of Aristotle's psychology, namely the likeness of sensation and intellection. Although Averroes does not refer here to any specific place of Aristotle's writings, one can think, for example, of passages like *De Anima* III 4, 429 a 13-14 ("thinking is like perceiving"). Averroes does not elaborate on the limits which in *De Anima* Aristotle places to the likeness of sensory and intellectual knowledge. The fourth, crucial question ([d]) is whether the difficulty in knowing these things can be overcome. Averroes' answer is decidedly positive. On this point, the Commentator is even ready to go against Aristotle's text and to propose an interpretation of it that contradicts Aristotle's intentions: Averroes says "But this does not mean that it is impossible to conceive the separate realities, as for the bat it is impossible to look at the sun". Averroes speaks of the bat's visual "impossibility" (*imtinā*'), and hence of the corresponding intellectual impossibility, supposedly proper of humans, on the basis of the presence of the "sun" (*al-šams*) in Iṣḥāq Ibn Ḥunayn's translation.

This bold statement of Averroes is followed by his second teleological argument. This additional argument is objective in scope, rather than subjective as it was the first, since it regards the status of the immaterial things of which Averroes has spoken so far (God and the heavenly intelligences): according to Averroes, nature has made these things intelligible; since nature does not act in vain, it must guarantee that these things are de facto intelligized (according to a sort of "principle of plenitude" regarding the necessary actualization of the potential intelligibility of these things), something which is obtained, according to Averroes, if these things are known by the human intellect. In this case as well, the logical sequence of Averroes's argument can be more precisely deployed:

[The separate realities are essentially intelligible by nature]

If it were impossible [for men] to conceive the separate realities, nature would have made what is essentially intelligible [i.e. the separate realities] not intelligized by anything.

[Since human intellect is a separate reality itself, if the human intellect is unable to know the separate realities, this implies that the separate realities cannot know one another and cannot know themselves].

Therefore, nature would have acted in vain.

[But nature does not act in vain.]

Therefore, it is not impossible [for men] to conceive the separate realities.

The most debatable point of the above reconstruction is the implicit element IV, totally unstated by Averroes, which serves to support the outspoken element III. It is only tentatively placed in the above outline. This element IV rests on a famous tenet of Averroes' noetic, i.e. the fact that for Averroes not only the Active Intellect but also the Potential Intellect, both deputed to guarantee human intellection, are separate and immaterial entities. If therefore humans, by means of these two intellects, are unable to know separate realities, the undesired consequence that no separate reality, despite being intellectual in nature, can know any other separate realities, and henceforth not even itself. This point makes Averroes' argument perfectly consequential; that it effectively lurks in the background of T7 needs, however, further corroboration. If it were so, Averroes' teleological argument at stake would escape the famous criticism that Thomas Aquinas addresses to it in the Commentary on the *Metaphysics*, namely that Averroes' argument is a *non sequitur*, because, even though the separate realities

are not known by the human intellect, they remain knowable by other types of intellects superior to the human one.⁶⁹

Regardless of the exact underpinnings of Averroes' discourse, in T7 the Commentator is much less hesitant, and much bolder than Aristotle about the capacities of the human intellect. In fact, Averroes transforms Aristotle's analogy into a dis-analogy: whereas Aristotle says that human intellect in front of the most evident things behaves like the bats' eyes in front of daylight, Averroes contends that human intellect relates to immaterial things differently from how the bats' eyes relate to the sunlight. The adversative particle "But" (*lākin*) at the beginning of section [d] marks this distance.

In Averroes' Texts 6-7, the teleological perspective plays a pivotal function: both element III of T6 and element VI of T7 rest on the idea that, in an universe governed by finalism (be it philosophical and/or religious), nature cannot act in vain and cannot leave unaccomplished tendencies that are deeply rooted in human nature, in the first case, or that are glaringly displayed in cosmic nature, in the second case. Although the overall doctrinal setting remains, in Averroes' intentions, Aristotelian,⁷⁰ in these two texts Averroes goes far beyond what is stated in the passage of Aristotle he is commenting upon, and somehow moves against Aristotle's express contention in the bats' analogy. This attitude raises the issue of the faithfulness of Averroes towards Aristotle as an Aristotelian commentator, a topic already addressed in previous scholarship.⁷¹ Why Averroes is so creative and audacious, up to be point of parting company with the express purport of Aristotle's *littera*, despite his veneration for Aristotle, a veneration that he expresses with an utmost laud a few lines after the two texts under examination?⁷² Both a negative and a positive reply to this question can be advanced. The negative reply is that Averroes' teleological arguments, with its possible religious overtones, was probably the response to the attempt of traditionalist theologians (above all, al-Ġazālī, as we have seen) of using the Aristotelian passage in question to jeopardize the cognitive pretensions of philosophy. The positive reply is that in

⁶⁹ Thomas de Aquino, *In duodecim libros Metaphysicorum Aristotelis Expositio*, II.1, §286, p. 82 Cathala-Spiazzi; Engl. trans. Rowan (above n. 4), consulted online at <<https://isidore.co/aquinas/Metaphysics.htm>> (14 May 2024): "This argument is not satisfactory for two reasons. First, the end of separate substances does not consist in being understood by our intellect, but rather the converse. Therefore, if separate substances are not known by us, it does not follow that they exist in vain; for only that exists in vain which fails to attain the end for which it exists. Second, even though the quiddities of separate substances are not understood by us, they are understood by other intellects. The same is true of the sun; for even though it is not seen by the eye of the owl, it is seen by the eye of the eagle".

⁷⁰ See, for instance, the following passage of Averroes' *Long Commentary* on the *De Anima*, Book III, Section 36, in which the Commentator refuses to uphold the visual optimism of Plato's *Republic*: "For it does not follow that what is visible in itself is more visible for us. For instance, considering color and the light of the sun, [we see that] color has less of the intention of visibility than does the sun, since color is visible only in virtue of the sun, but we cannot look upon the sun as [we do] color. This occurs for sight owing to the mixture of matter" (Engl. trans. in Averroes (Ibn Rushd) of Cordoba, *Long Commentary on the De Anima of Aristotle*, Trans. and with Introduction and Notes by R.C. Taylor, with Th.-A. Druart, Yale U.P., New Haven CT 2009, p. 389).

⁷¹ 'A. Badawī, "Averroès face au texte qu'il commente", in J. Jolivet (ed.), *Multiple Averroès. Actes du Colloque International organisé à l'occasion du 850° anniversaire de la naissance d'Averroès, Paris 20-23 septembre 1976*, Les Belles Lettres, Paris 1978, pp. 59-90; M. Di Giovanni, "The Commentator: Averroes' Reading of the *Metaphysics*" (above, n. 61).

⁷² R.C. Taylor, "Averroes on the *Sharī'ah* of the Philosophers", in R.C. Taylor – I.A. Omar (eds.), *The Judaeo-Christian-Islamic Heritage. Philosophical and Theological Perspectives*, ed. Marquette U.P., Milwaukee (WI) 2012, pp. 305-24.

Averroes' intent of rationalizing Islam and of showing that religion and philosophy are just two ways of expressing the same single truth in two different languages, philosophy mandatorily should be as far reaching in the knowledge of God as Islam is.

Conclusion

The range of interpretations considered here proves to be interesting not only as examples of divergent explanations of a doctrinal crux in an Aristotelian work, and as indicators of the orientations of their proponents regarding the status of metaphysics and its cognitive grasp. More broadly, it documents the multifarious nature of Arabic Aristotelianism. This is evident *prima facie* in the variety of literary genres of the works involved: a specific treatise on metaphysics in the case of al-Kindī; a philosophical encyclopedia connecting metaphysics with psychology in the case of Avicenna; a lemmatic commentary on the *Metaphysics* in the case of Averroes. Moreover, each of these three authors deploys a different *modus operandi* with respect to Aristotle's text: we have observed al-Kindī to transform Aristotle's analogy, Avicenna to dissolve and replace it with another one, Averroes to subvert it after a careful exegesis of its content. In all three cases, the act of surpassing and overcoming Aristotle's text is done in the name of a strong rationalism. The aim of al-Kindī is to save Aristotelian philosophy from inner inconsistencies in order to accredit it, in front of the caliph to whom his *Al-Falsafa al-ūlā* is addressed, as the best rational tool to account for the Islamic creed. Avicenna's goal is to superadd a philosophical narrative of the human afterlife, absent in Aristotle and taken from the Platonic tradition, to Aristotle's way of explaining the cognitive functions of the human soul on earth, as a sort of other-worldly Platonism consonant in spirit with the one proposed by the Islamic religion, but alternative to this latter in content. Averroes finally aims at raising philosophy, in the present state of humankind, from the status of handmaid of theology to that of an effective sister and companion of religion, in his ambitious program of a single truth transmitted in two different ways by religion and philosophy. In this way, three different kinds of Aristotelianism stand out.

The bats' analogy performs the role of an easily traceable indicator of the powerful cultural bridge, in time and space, that connects Greek culture in the fourth century BC with its off-shots of the Muslim empire between the ninth and the twelfth centuries, in the places where al-Kindī, Avicenna, and Averroes lived and operated. The route of this bridge continued afterwards, in a process of *long durée* of the Aristotelian tradition, and, under the impulse of the Greek-Latin translations of Aristotle's *Metaphysics* and of the Arabic-Latin translations of the main metaphysical works of Avicenna and Averroes, propagated in Latin philosophy.⁷³ The interpretations of the bats' analogy in Latin philosophy and theology have a different character from the ones considered here: Latin translators from Greek made Aristotle's text less problematic by means of zoological adjustments, i.e. by identifying Aristotle's bats with other night animals (night ravens or owls); still with ornithological avails, prime Latin commentators on the *Metaphysics* of the XIII century complemented Aristotle's analogy with a higher and nobler animal absent in the original text, namely the eagle (*aquila*). For Albert the Great, the bat-like status in Aristotle's analogy

⁷³ For the reception of *Metaphysics Alpha Elatton 1* in the Hebrew tradition, see Y. Halper, "In One Sense Easy, in Another Difficult: Reverberations of the Opening of Aristotle's *Metaphysics* α ελαττον in Medieval and Renaissance Hebrew Literature", *Revue des Études Juives* 179.1-2 (2020), pp. 133-60.

only represents the starting-point of the process of evolution of the human intellect, which unfolds through knowledge and study and dynamically brings to the fulfillment of the human desire of knowledge, thus finally granting the human intellect the status of eagle.⁷⁴ Although Albert never mentions Averroes in this context, this reference to the human desire of knowledge and its accomplishment already in this life looks related to the first teleological argument by Averroes seen above.⁷⁵ Whereas for Albert the human intellect can acquire eyes of eagle already in this life, for Thomas Aquinas eagle-ness or aquilinity is an exclusive feature of the heavenly immaterial intellects, a status which the human intellect can acquire – in an Avicennian way – only in the future life, after the separation of the soul from the mortal body.⁷⁶

The core of Aristotle's analogy will remain provocative and debatable even after the decline of Aristotelianism, surviving in the form of *disiecta membra* detached from the Stagirite's aegis. A French author of the seventeenth century, François de La Rochefoucauld (1613-1680), probably unaware of its Aristotelian background, will strengthen and widen the visual aspect of the analogy, affirming in his *Maximes* that “Neither the sun nor death can be looked

⁷⁴ Albert the Great, *Commentary on the Metaphysics*, II.2, pp. 93.81-94.6 Geyer: “Human intellect, however, starts from that light which is mixed with darkness, and, through a separation made in itself, it finally arrives to the pure intelligible; for this reason, it is like the sight of the night raven (*nycticorax*) at its start. But, since the knowledge of past beings highly supports its light, through study it makes what the sight of the owl (*noctua*) does not have. In fact, from the obscure intelligible it arrives to the pure light, and from the pure light, with a condensed sight, it arrives to the very pure light and, step by step, it receives the light in the source of light, as the eagle (*aquila*) observes the light in the circle of the Sun. And this is the highest happiness. In it, the desire by means of which “all humans by nature desire to know” [Arist., *Metaph.*, A.1, 980 a 21] comes to an end. In fact, these things that [the intellect contemplate] are the most evident things of nature, since, being evident by themselves, are the cause in virtue of which all other things become evident” (see Bertolacci, “*Aquila o herodius?*” [above, n. 6], pp. 108-9).

⁷⁵ An evolutionary view similar to the one advanced by Albert can be found in Averroes' exegesis of *Metaph.* 10, 1052 a 1-5, in Averroes' *Long Commentary* on the *Metaphysics*: “With this, [Aristotle] only indicates that our lack of conceptualization of the separate realities by means of the human intellect is similar to the cecity in the eye in the first stage of our intellect, before the intellect acquires perfection. This is his [i.e. Aristotle's] demonstration of the fact that this [conceptualization] is not found as belonging to this [rational] power in its first being, but rather in its last and perfect being” (Averroès, *Tafsir ma ba'd at-Tabi'at*, pp. 1229.14-1230.2 Bouyges). Averroes' ascendancy on Albert in this context is confirmed by Albert's various references to the “bat” (*vespertilio*) of Aristotle's analogy in his works, a term that he could know only via the Latin translations of Averroes' long commentary on the *Metaphysics* and the *Translatio nova* of the *Metaphysics*: see, for instance, *Albert's Commentary on the Metaphysics*, II.2, p. 92.71 Geyer; Id., *Commentary on the De Anima*, ed. C. Stroick, Aschendorff, Münster 1968, I.1.2, p. 2.20-23; III.3.7, p. 217.64-67; Id., *Commentary on the De causis*, ed. W. Fauser, Aschendorff, Münster 1993, II.1.7, p. 69.23; II.2.44, p. 137.52; Id., *Summa theologiae*, ed. D. Siedler, W. Kübel, G. Vogels, Aschendorff, Münster 1978, Prologue, p. 3.31, 3.32, 3.35. In Bertolacci, “*Aquila o herodius?*” (above, n. 6), the evidence is examined according to which one may suppose that the eagle (*aquila*) that represents the accomplished earthly human knowledge in Albert's commentary on the *Metaphysics*, is replaced by the golden eagle (*herodius*), representing human knowledge assisted by divine grace, in the later *Summa theologiae*.

⁷⁶ Sancti Thomae Aquinatis *In duodecim libros Metaphysicorum Aristotelis Expositio*, II.1, §286, p. 82 Cathala-Spiazzi. One should notice the assertion at the end of §285, according to which the human soul cannot know the essences of the separate substances when it is “huiusmodi corpori unita”, namely as long as it is tied to the human body. For occurrences of Aristotle's analogy outside the scope of the commentaries on the *Metaphysics* in Latin philosophy of the XIII c. see, for instance, T. Suto, “Anonymous of Worcester's *Quaestiones Super Librum Ethicorum*”, *Archives d'histoire doctrinale et littéraire du Moyen Âge* 82 (2015), pp. 317-89 (part. pp. 369-70).

at with a steady eye” (“Le soleil ni la mort ne se peuvent regarder fixement”),⁷⁷ a pessimism on the subject resumed in recent years.⁷⁸ More than two millennia after Aristotle, by contrast, in a seminal article on the topic of consciousness in which Aristotle is never quoted (“What is it like to be a bat?” of 1974), Thomas Nagel will part company with the Stagirite as to the zoological component of the analogy, taking bats as “a fundamentally alien form of life” with respect to ours, so that a man will never be able, despite all the efforts of his imagination, to experience reality as a bat does.⁷⁹ Homer, who compares to a bat the “many-sided” Ulysses (*Odyssey* XII, 433; cp. I, 1), would probably disagree.

⁷⁷ François-Armand-Frédéric de La Rochefoucauld, *Réflexions ou sentences et maximes morales et réflexions diverses*, édition établie et présentée par Laurence Plazenet, Honoré Champion, Paris 2002, nr. 26.

⁷⁸ W. Mouawad, *Le soleil ni la mort ne peuvent se regarder en face*, Actes Sud, Paris 2008. La Rochefoucauld’s maxim has been recently resumed and mitigated, as far as death is concerned, in I.D. Yalom, *Staring at the Sun: Overcoming the Terror of Death*, Jossey-Bass, Hoboken (NJ) 2008.

⁷⁹ T. Nagel, “What is it Like to be a Bat?”, *The Philosophical Review* 83.4 (1974), pp. 435-50. In the same page from which the reported statement is taken (p. 438), Nagel contends that bats “present a range of activity and a sensory apparatus ... different from ours”.

