

THE 'ONTOLOGIZATION' OF LOGIC.
METAPHYSICAL THEMES IN AVICENNA'S REWORKING
OF THE *ORGANON*

Amos Bertolacci

The philosophical masterpiece of Avicenna (Ibn Sīnā, d. 1037), the *Kitāb al-Šifā'* (*Book of the Cure*), is an extensive *summa* with four main parts (logic, natural philosophy, mathematics, and metaphysics). The three first parts are further divided into distinct sections (nine sections of logic, eight of natural philosophy, and four of mathematics). The metaphysical part, despite consisting of a single section, includes at the end a succinct treatment of practical philosophy. One remarkable aspect of this massive work is the connection between the parts dealing with logic and natural philosophy, on the one hand, and the part devoted to metaphysics, on the other. Thus, some metaphysical doctrines are *announced* either in logic or in natural philosophy: Avicenna informs the reader that further developments of certain logical or physical issues will be found in metaphysics, since the scientific scope of logic and physics is limited. Conversely, many logical or physical doctrines are *quoted* in metaphysics: Avicenna summarizes these doctrines in order to use them in metaphysics, taking them as already sufficiently clarified in logic and physics.¹ A more peculiar – and, in my opinion, more interesting – type of 'interface' between logic and physics, on the one side, and metaphysics, on the other, is the case of logical or physical doctrines *repeated* in metaphysics: there are certain doctrines already developed in logic and physics which Avicenna expounds extensively in metaphysics for a second time. This third case

¹ See Bertolacci 2006, 279–284, 288–292, 572–580. The list of prospective references to metaphysics provided in this publication is not meant to be exhaustive: see Avicenna 1959 [henceforth: *Maqūlāt*] VII, 4 (265:16–18; 266:5–6; 268:13–14 where the reference to the 'discipline of philosophy' might in fact be a reference to the 'discipline of first philosophy'). Avicenna's retrospective references in metaphysics to logic and natural philosophy are either explicit ('As we said in logic', 'As we said in physics', for instance), or more veiled ('As you know'), or totally implicit (with no textual indication). The connection between mathematics and metaphysics appears, according to a preliminary investigation, less conspicuous.

is not completely distinct from the previous two, since it is occasionally accompanied by announcements (in logic or physics) of forthcoming metaphysical developments, and references (in metaphysics) to previous logical and physical treatments. What is peculiar to it is that one and the same doctrine re-occurs in two parallel passages.

The presence of these links can be explained in different, complementary, ways. First of all, the *Šifā'*, a collection of twenty-two independent but interrelated writings, is meant by its author as a single work. Thus cross-references – prospective in the case of logic and natural philosophy, retrospective in the case of metaphysics – are almost required by the extensiveness of the *summa* in which they occur. Moreover, in his reworking of the transmitted *corpus* of philosophical writings (an enlarged version of the Aristotelian *corpus*) in the *Šifā'*, Avicenna adopts a peculiar manner of exposition that allows the displacement of doctrinal material and the insertion of extensive digressions within his exegesis of the canonical texts on philosophy. Finally, Avicenna conceives of philosophy as a unified system, a sort of pyramid with metaphysics as its peak. Logic and natural philosophy are constitutively dependent on metaphysics, the queen of the sciences;² and yet the superiority of metaphysics over all the other branches of knowledge, attested by its task of laying the foundations of these latter, does not imply an absolute distinction. In Avicenna's perspective, nothing prevents metaphysics from taking certain doctrines from logic and natural philosophy, while at the same time providing the grounds of certainty for their principles.³ In other words, the boundaries between metaphysics and the other philosophical disciplines of the *Šifā'* are fluid, on both structural, stylistic and epistemological grounds.

In the present article, I would like to focus in more detail on some of the *loci paralleli* between logic and metaphysics that are found in the *Šifā'*, classifying them into four main types: I) logical doctrines

² See Bertolacci 2006, 267–279, 284–288.

³ In the reworking of the *Metaphysics* (Avicenna 1960a, 1960b [henceforth *Ilāhiyyāt*]) I, 3 (19:10–20:18) [Latin transl. in Avicenna 1977, 1980, 21:90–23:28], Avicenna argues that metaphysics is entitled to prove the principles of natural philosophy and mathematics and, at the same time, to assume some of the conclusions of these two disciplines. It can do so in so far as the conclusions it assumes do not derive, in natural philosophy and mathematics, from those principles of these two disciplines that metaphysics proves. In this passage of the *Ilāhiyyāt*, Avicenna applies this tenet only to the case of natural philosophy and mathematics. It seems, however, that this point can be extended also to logic.

repeated in metaphysics in order to be provided with an ultimate foundation there; II) doctrines dealt with *de facto* in logic, but *de iure* pertaining to metaphysics alone; III) doctrines autonomously investigated by both logic and metaphysics with minor changes; IV) doctrines autonomously investigated by both logic and metaphysics with substantial modifications. The logical texts I will discuss are taken from Avicenna's reworking of Porphyry's *Isagoge* (*Madḥal*),⁴ and of Aristotle's *Categories* (*Maqūlāt*) and *Posterior Analytics* (*Burhān*).⁵ These texts will be compared with their parallel occurrences in the reworking of the *Metaphysics* (*Ilāhiyyāt*). In the four parts of the present contribution, I will provide an example of each of these four typologies. The doctrines involved are the classification of universals, the distinction of substance from accident, the scientific status of metaphysics in comparison with dialectic and sophistic, and the predication of existence. Although the examples discussed here do not include all the parallels between logic with metaphysics in the *Šifā'*, they are representative of the main ways in which logic and metaphysics overlap in this work, and they suggest an important conclusion. On the one hand, the principles of logic, according to Avicenna, are epistemologically grounded in metaphysics (types I–II), but, on the other hand, logic is capable of dealing, independently from metaphysics, with crucial issues which metaphysics itself also treats (types III–IV). This sort of ambivalence (dependence and yet independence) of logic with regard to metaphysics in Avicenna's philosophy deserves special consideration if we wish to reach a clear view of how he conceived the relationship between the two disciplines.⁶

For Avicenna, metaphysics is, as such, an ontology, that is to say an investigation of being *qua* being, its species, properties and causes. Some of the parallel passages considered here also concern, in different ways and to different degrees, issues pertaining to ontology. Ontological considerations are, therefore, present in logic, either as a preliminary account of the more proper treatment to be found in metaphysics, or in their own right. In other words, the doctrinal overlaps between logic and metaphysics that I am going to discuss illustrate a tendency towards an 'ontologization' of logic, in which the domains of logic

⁴ Avicenna 1952 (henceforth: *Madḥal*). Latin translation in Avicenna 1508.

⁵ Avicenna 1956 (henceforth: *Burhān*).

⁶ Insightful clues on the interaction between Avicenna's modal syllogistic and metaphysics are provided by Thom 2008.

and metaphysics are apparently conflated, despite Avicenna's clear-cut distinction of the philosophical disciplines. They therefore deserve to be more closely investigated.⁷

I

Madḥal I, 5 is the first proper chapter of Avicenna's reworking of Porphyry's *Isagoge*, after the general introduction to the *Šifā'* (I, 1), the initial classification of the sciences (I, 2), and the prolegomena to logic in its entirety (utility of logic, I, 3; its subject-matter, I, 4). At the beginning of this chapter, Avicenna divides 'utterances' (*alfāz*, sg. *lafz*) into simple and composite, contending that simple utterances must be investigated before composite ones. Then, in sections [a]–[d] of the reported text, he divides simple utterances into universal ([1]) and particular ([2]), further dividing the simple universal utterances into three types ([1.1–3]). The remaining two sections of the text determine how far universals are to be investigated in logic (section [e]) and point towards the further investigation of this topic provided by metaphysics and psychology (section [f]). Whereas sections [a]–[d] are the outcome of Avicenna's original arrangement of doctrines deriving from different authors (Aristotle, Alexander of Aphrodisias, Porphyry, Simplicius),⁸ sections [e]–[f] echo Porphyry's statements in the Preface to the *Isagoge* (1, 9–15) more directly.

Text 1: *Madḥal* I, 5, (26:10–27:14) [Lat. Transl. in ed. Venice 1508, f. 3^va–b]

[a] Then, either [1] the single notion signified by the simple utterance is not prevented in the mind, with respect to its conceptualization, from being equally shared in the same degree by a multiplicity [of things], in so far as each of them is said to be [this notion].

⁷ The discussion of the relationship between logic and ontology has a long and lively history before Avicenna. For a brief overview and further bibliography, see Bertolacci 2006, 300–301.

⁸ See Libera 1999, 509–515. Although the definition of the first type of universal in Texts 1–2 below can be compared to the one provided by Aristotle in *Metaph. Z*, 13, 1038b11–12, Avicenna's general account of universals in *Madḥal* I, 5 and *Ilāhiyyāt* V, 1–2 does not seem to rely in any significant way on the *Metaphysics*, as Avicenna's choice of the Sun as example of the third type of universal – against *Metaph. Z*, 15, 1040a34–b2, where the universality of the Sun is denied – witnesses (see Bertolacci 2006, 353).

- [b] [1.1] An example is when we say: 'man'. For [this utterance] has a notion in the soul, and this notion corresponds to Zayd, 'Amr and Ḥālīd in a single way, since each of them is a man. [1.2–3] The utterance 'sphere containing [a solid] with twenty triangular faces', or better the utterance 'Sun', 'Moon', etc., all signify a notion whose conceptualization in the mind is not prevented from being shared by a multiplicity [of things], [1.2] even though, for instance, [this sharing] is not found (or: does not exist, *lam yūḡad*) in actuality, like [in the case of] the aforementioned sphere, or [1.3] this [sharing] is prevented by a cause external to the concept of the utterance itself, like [in the case of] the Sun.
- [c] Or [2] the notion of [the simple utterance] is such that the occurrence of multiplicity with regard to it is prevented, I mean with regard to [the notion] that is realized, single and intended, as when we say: 'Zayd'. For, even though the utterance 'Zayd' is shared by many [things], it is shared only with regard to what is heard. As to its single notion, on the contrary, it is impossible to posit one [utterance 'Zayd'] as shared, since [each] one of the notions [corresponding to the utterance 'Zayd'] is an ostensible essence, and the essence of this ostensible [thing] is prevented in the mind from being attributed to something else (unless one means by 'Zayd' not his essence, but one of his shared attributes). This case, even though does not prevent what is heard from being shared, prevents the single notion of the thing signified from being shared.
- [d] The first case is called 'universal', the second 'particular'.
- [e] You know that some utterances are in accordance with the [utterance of the] first case, and that some notions are in accordance with the notion of the first case, namely the notion whose concept in the soul is not prevented from being related to many things that correspond to it by means of a relation that is similar in all instances.
- [f] But it is not incumbent upon you, in so far as you are a logician, [to explain] how this relation occurs; whether this notion, in so far as it is one shared [entity], has an existence (*wuḡūd*) in those entities themselves that are regarded as sharing it, and, in general, an existence (*wuḡūd*) that is separate and external, different from that which is in your mind; or how its realization (*huṣūl*) in the mind occurs. For the investigation of such things belongs to one or two other disciplines (*li-ṣinā'a uḡrā aw li-ṣinā'atayni*).

We should notice in this text Avicenna's shift from the terminology of 'utterances' and 'predication', which he portrays elsewhere as typical of logic,⁹ to the more peculiar terminology of 'notions' (*ma'ānin*,

⁹ From *Madḡal* I, 12, we learn that an universal is 'logical' (*manṡiqī*) when it is considered in the perspective of its predication of many less common things, i.e. in the perspective of its bare universality, regardless of the concrete nature to which this

sg. *maʿnan*) and ‘sharing’ (*ištirāk*) of – or ‘correspondence’ with (*muṭābaqa*), and ‘relation’ with (*nisba*) – one and the same notion by individual things (sections [a]–[c]). Thus, in the three-fold division of universals in section [b], three different types of ‘sharing’ replace and explain three distinct cases of predication: [1.1] the case in which an universal is predicated of many actual entities; [1.2] the case in which it is predicated of no actual entity (a case of non-denoting universality); [1.3] and the case in which it is predicated of only one actual entity.¹⁰ Case [1.1] is the standard type of universal and is therefore substantially clear. Case [1.2] concerns a geometrical entity (the ‘sphere containing a solid with twenty triangular faces’) that, due to its complexity or peculiarity, is never *de facto* instantiated in reality (for example, in one or more drawings), despite being, as such, logically possible and therefore suitable for realization. The ‘cause’ (*sabab*) to which Avicenna alludes in the context of case [1.3] – where universality is assured on the logical level, but excluded by physical considerations – is probably the fact that all the matter of the species ‘Sun’ and ‘Moon’ is gathered in the two individuals Sun and Moon, thus excluding the existence of other individuals of these same species.

Sections [e]–[f] make clear that logic takes universality for granted, without investigating its cause(s), that is to say, without taking into account three fundamental issues: how the relation between the universal notions and their particular instances occurs; how the universal notions themselves exist (whether only in the mind, or also in external reality independently of the mind); how they exist – or are realized (‘realization’, *huṣūl*, being a synonym of existence) – in the mind. These issues are discussed by the two disciplines mentioned at the end, namely metaphysics and – in so far as the existence of the universal notion in the mind is concerned – psychology. Note how Avicenna takes care to avoid ‘ontological’ terminology in sections [a]–[e] (with the possible exception of the discussion of universal [1.2] in section [b]),

universality belongs: see the description of the ‘logical genus’ (*ġins mantiqī*), opposed to the ‘physical’ and ‘mental’ genus, in *Madḥal* I, 12 (66:12–13) [f. 12^b]; English annotated translation in Marmura 1979 (reprinted Marmura 2005), 41–42.

¹⁰ These three types of universals are called, respectively, ‘in actuality’ (*actu*) ([1.1]), ‘in potentiality’ (*potentia*) ([1.2]), and ‘by nature’ (*natura*), for example, by Albert the Great (see *Metaphysica, libri quinque priores*, V, 6, 5 (Albert the Great 1960, 285:16–38)).

in order to employ it in connection with the reference to metaphysics (and psychology) in section [f].

An analogous distinction of universals and particulars, and three-fold classification of universals, occurs, with some small variations, at the beginning of *Ilāhiyyāt* V, 1. The passage in question represents the starting-point of the fifth treatise of the *Ilāhiyyāt*, and precedes the considerations regarding the mode of existence of universals, that Avicenna provides immediately afterwards in chapters V, 1–2.

Text 2: *Ilāhiyyāt* V, 1 (195:5–196:3) [Lat. transl. Avicenna 1977, 1980, 227:7–228: 24]

- [a] We say that the universal ([1]) can be said in three ways. [1.1] A notion is said to be 'universal', in so far as it is said in actuality of many [individuals], like 'man'. [1.2] A notion is said to be 'universal' when it is admissible [for it] to be predicated of many [things], even though it is not required that these [things] exist (*mawğūdūna*) in actuality, like the notion of 'heptagonal house'. This [notion] is universal, in as much as it is said by nature of many [things], but these many [things] are not necessarily existent (*mawğūdīna*); rather, not even one of them [is necessarily existent]. [1.3] A notion is said to be 'universal' in the conceptualization of which there is nothing preventing [it] from being said of many [things]; only an [external] cause prevents it, if this happens, and a proof indicates it. Examples are the Sun and the Earth: for, in as much as they are intelligized as Sun and Earth, the mind is not prevented from regarding it as possible that their notion exists (*yūğadu*) in many [things]; however, [the mind] is made aware of a proof or an argument, by means of which it knows that this is impossible. But this is impossible on account of an external cause, not on account of the conceptualization itself.
- [b] All this can be summarized by [saying] that this universal is that the very conceptualization of which does not prevent [it] from being said of many [things].
- [c] The universal employed in logic and its like must be this.
- [d] The single particular ([2]), on the contrary, is that the very conceptualization of which prevents its notion from being said of many [things], like the essence of this ostensible Zayd. For [the essence of Zayd] cannot be imagined except as belonging to him alone.¹¹

The account of universals and particulars in Text 1 and in Text 2 is substantially the same, with differences only with regard to minor

¹¹ The English translation of Text 2, as well as of Texts 4, 6 and 8, is mine. For a different English translation, see Avicenna 2005.

points, such as the extent of the discussion of the single cases,¹² the dividing-up of the tripartite classification of universals,¹³ the choice of examples,¹⁴ as well as other less relevant details.¹⁵ But apart from these superficial differences, the doctrine of the two texts is basically identical, so that the texts can be regarded as parallel passages. In this light, the generic mention of logic in section [c] of Text 2 ('the universal employed in logic', *al-kullī al-musta'mal fī l-mantiq*) might be taken as a veiled reference to Text 1.

But if the differences between these two texts are not so radical as to make Text 2 a new version of the classification, why then does Avicenna repeat the content of Text 1 in Text 2? For in Text 1 [f] he announces the metaphysical treatment of a topic related to the classification of universals, *not* of the classification itself. That is to say, this allusion to a future metaphysical discussion does not, by itself, necessitate the repetition of the same classification of universals in Text 2. The terminology of 'existence' employed frequently by Avicenna in section [a] of Text 2 provides a clue towards a possible answer. The solution to the problem probably lies in Avicenna's view of metaphysics as the discipline that provides the epistemological foundation of logic, as well as of all the other philosophical sciences. In accord with this view, Avicenna's strategy is to apply the distinction between essence and existence to the two fundamental doctrines of logic: the catego-

¹² Whereas in Text 1 the account of the particular (section [c]) is of the same length as the account of the universal (sections [a]–[b]), in Text 2 the former (section [d]) is shorter than the latter (sections [a]–[c]) and represents a sort of appendix to the text.

¹³ Whereas in Text 1 the general definition of the universal comes before the classification of its different types (section [a]), in Text 2 it comes after (section [b]). Moreover, Text 2 distinguishes more precisely than Text 1 case [1.2] from case [1.3]. Although section [b] of Text 2 might be regarded as referring only to universal [1.3] in section [a], it constitutes more likely a common definition of all the three types of universals taken into account in the preceding section (see the opening sentence '*All this can be summarized...*'). This impression is corroborated by the parallelism with the following definition of the particular in section [c], and the analogous common definition of the universal in sections [a] and [e] of Text 1.

¹⁴ Whereas the examples of cases [1.1] and [1.3] are substantially the same ('man' in both Text 1 and Text 2, 'Sun' and 'Moon' in Text 1, 'Sun' and 'Earth' in Text 2), the example of case [1.2] is different: the 'sphere containing [a solid] with twenty triangular faces' in Text 1 is replaced by the 'heptagonal house' in Text 2. The mathematical, rather than artificial, nature of the example of universal [1.2] in Text 1 might have some significance for Avicenna's theory of fictional beings (on this topic see Black 1997).

¹⁵ The 'proof' (*dalīl*, lit.: 'sign') that Avicenna associates to the 'cause' within the discussion of universal [1.3] in Text 2 (absent in Text 1) possibly designates an inductive procedure or a demonstration *quia*. See Bertolacci 2007, 76 and n. 33.

ries, which Avicenna regards as the principles of the subject-matter of logic, and universals, which he takes as the very subject-matter of this discipline. In short, Avicenna takes logic as elucidating the essence of categories and universals, and metaphysics as investigating their existence, thus providing their ultimate explanation. As an instance of this strategy, in the present case he first summarizes the classification of the different types of universals from logic, and the definition of 'universal' and 'particular' (our Text 2), in order to give a preliminary idea of the essence of the universal before the properly metaphysical consideration of its existence. This possibly explains why in this text Avicenna insists on the universal rather than the particular, and places the definition of the universal after the distinction of its different types as the crucial point of the classification. The metaphysical account of universals, which starts immediately after Text 2, consists in the investigation of the existential conditions by means of which universality attaches to a certain nature. Thus, in the rest of chapter V, 1 and in chapter V, 2, Avicenna – wearing the metaphysician's hat – takes into account the 'modality of existence' (*kayfiyyat wuğūd*) of universals, and shows that universality pertains to the natures of things only when these latter exist in the mind, in accordance with the task assigned to metaphysics in Text 1 [f]. Thus, the repetition in Text 2 of the doctrine of Text 1 is a propaedeutic step towards giving the metaphysical foundation to the logical doctrine of universals that Avicenna goes on to provide in *Ilāhiyyāt V*.

II

Avicenna devotes an entire chapter of the *Maqūlāt* (I, 6) to refuting the doctrine of those who hold that a single thing can be both an accident and a substance from different points of view. At the beginning of this chapter, he reports three distinct cases of this doctrine, with regard to the substantial form (45:11–16), the *differentia* of substance (45:16–46:1) and the accident of a compound (46:4–7). The third case is formulated as follows:

Text 3: *Maqūlāt* I, 6 (46:4–7)

- [a] Also whiteness is part of the white [thing], since the white [thing] is an aggregate of substance and whiteness. Whiteness therefore exists (*mawğūd*) in the white [thing], which is a substance, as a part, and is not [found] in it in the same way as an accident exists (*wuğūd*) in something. It is therefore a substance in [the white thing]. In itself

and in its subject, on the contrary, it is an accident, since it is not [found] in it as a part, etc.

- [b] A sect [of thinkers] therefore was befuddled and believed that a single thing is [both] substance and accident.

The ‘sect’ of philosophers mentioned in section [b] can be associated with Porphyry.¹⁶ After expounding his own position on the issue (46:8–19), Avicenna provides a detailed refutation of each of the three cases. The refutation of the third case is the most extensive (48:1–49:7).

In chapter II, 1 of the *Ilāhiyyāt*, dealing with the distinction of substances and accidents, and the division of substances into three main types (matter, form, compound), Avicenna conclusively resumes the doctrine expounded in Text 3.

Text 4: *Ilāhiyyāt* II, 1 (58:10–16) [Lat. transl. Avicenna 1977, 1980, 66:30–67:39]

- [a] Then many of those who arrogate knowledge to themselves judged possible for a thing to be [both] substance and accident at the same time with respect to two [different] things. They said that heat is an accident in what is not the fire’s body, whereas in the whole fire it is not an accident, since it exists (*mawğūda*) in [fire] as part and cannot be removed from fire, if fire has to remain. Therefore its existence (*wuğūd*) in fire is not the existence of an accident. But, if its existence in [fire] is not the existence of an accident, its existence in it will be the existence of a substance.
- [b] This is a big mistake. We have discussed it exhaustively at the beginning of logic, although that was not its [proper] place, since they make this mistake only there.

Text 3 and Text 4 are obviously related (see the reference to Text 3 in Text 4 [b]) and differ only in minor points.¹⁷ Note the statement in Text 4 [b], according to which metaphysics, rather than logic, is the place where this doctrine should be discussed. This contention accounts for the repetition of Text 3 in Text 4, and is explained by two interrelated

¹⁶ The opinion that Avicenna reports is similar, both in content and in the example adduced in text 4 (heat), to the theory that Porphyry expounds in his commentary on the *Categories* (Porphyry 1887, 95:22–27) to explain how the specific difference of substance (itself a substance) can be, according to Aristotle, a quality (see Arist. *Top.* Δ, 2, 122b16–17; Δ, 6, 144a20–21). Porphyry’s opinion is mentioned by Simplicius in his commentary on the *Categories* (Simplicius 1907, 78:21–23). Simplicius is probably the direct source of Avicenna. See Bertolacci 2006, 457–458.

¹⁷ The item that is supposedly both an accident and a substance is whiteness in Text 3, heat in Text 4. Text 4 is not followed, like Text 3, by a lengthy refutation of the reported doctrine, although it includes the mention of its falsity.

facts. First, according to Avicenna, metaphysics provides the ultimate foundation not only for the doctrine of universals, as we have seen, but also for the doctrine of the categories; accordingly, he moves the traditional discussion of the basis of this doctrine from logic to metaphysics. Second, according to Avicenna, the doctrine of the categories in its entirety is, properly speaking, metaphysical rather than logical: if he deals with the doctrine of the categories in the logic of the *Šifā'*, rather than in the metaphysics (apart from examining its foundation there), he does so in order to comply with the traditional way of expounding the Aristotelian tradition.¹⁸ Text 4 is a concrete example of these two points. First, the doctrine at hand is now repeated in metaphysics as part of the metaphysical foundation of the doctrine of the categories, because arguing that it is both a substance and an accident involves the consideration of the existence of the item under discussion (see the frequent references to 'existence' in both texts). Second, it has been already dealt with in logic in accord with the exegetical tradition from which the discussion derives (Porphyry).

III

Between the paraphrase of the beginning of *Posterior Analytics* A, 7 (75a39–75b2) in *Burhān* II, 6, and the paraphrase of the rest of this chapter and of the following one (*Post. An.* A, 8) in *Burhān* II, 8, Avicenna introduces an entire chapter (II, 7), totally absent in Aristotle's work, containing a very articulate account of the similarities and differences between the sciences.¹⁹ Avicenna's insertion is similar to the one introduced by al-Fārābī in the account of the *Posterior Analytics* in the *Falsafat Aristūṭālīs* (*Philosophy of Aristotle*), and even more extensive than it.²⁰ In this chapter, Avicenna makes different remarks on the epistemological profile of metaphysics, called 'first philosophy', with regard to all its main aspects (subject-matter, structure, method, relationship with the other sciences).²¹ The following passage is his

¹⁸ See Gutas 1988, 265–267; Bertolacci 2006, 272–279.

¹⁹ For an outline of this chapter, see Jolivet 1991, 1017–1019. Dominicus Gundissalinus isolated this chapter from the rest of the *Burhān* and incorporated its Latin translation in his *De Divisione philosophiae* (Gundissalinus 1903, 124–133).

²⁰ See Bertolacci 2006, 298–300.

²¹ See Bertolacci 2006, 119 and n. 23; 165, n. 48; 233–234; 267 and n. 4.

description of the differences between metaphysics and dialectic and sophistic.

Text 5: *Burhān* II, 7 (165:17–166: 15) [Lat. transl. in Gundissalinus 1903, 130:1–131:3]

- [a] The disciplines that share the subject-matter of this science [i.e. of first philosophy] are three: first philosophy [itself], dialectic (*al-ḡadal*) and sophistic (*al-sūfistā'iyya*). First philosophy, however, distinguishes itself from dialectic and sophistic in subject-matter (*mawḏū'*), in the principle (*mabda'*) of theoretical investigation, and in the end (*ḡāya*) of theoretical investigation.
- [b] As to subject-matter, [this is so] because first philosophy investigates only the essential accidents of 'existent' and 'one' and their principles, and does not investigate the essential accidents of the subject-matters of each of the particular sciences. Dialectic and sophistic, on the contrary, investigate the accidents – essential or non-essential – of every subject-matter, and neither of them restricts [its scope] to the accidents of 'one' and 'existent'. Thus, first philosophy is more common than the particular sciences on account of the commonness of its subject-matter. These [other] two [disciplines], on the contrary, are more common than the particular sciences on account of their investigation, since they discuss every subject-matter – directly or indirectly – of every [discipline] in accordance with [the procedure of] its discipline.
- [c] [First philosophy] distinguishes itself from [dialectic and sophistic] with regard to the principle [of investigation]. For first philosophy takes its principles from premises that are apodictic and certain (*al-muqaddimāt al-burhāniyya al-yaqīniyya*). As to dialectic, its principle is from premises that are generally known (*al-dā'i'a*) and commonly accepted (*al-mašhūra*), [in so far as they are] truly [so]. As to sophistic, its principle is from premises that seem to be generally known (*al-dā'i'a*) or certain (*al-yaqīniyya*), but are not truly so.
- [d] [First philosophy] distinguishes itself from [dialectic and sophistic] with regard to the end.²² For the end of first philosophy is to attain what is true and certain, as far as it is possible for man. The end of dialectic, on the other hand, is to train [people] to assess and deny what is commonly accepted, as a way of proceeding towards demonstration and of [providing] utility to the city. Sometimes its end is to succeed in [the field of] justice. This justice sometimes is related to interaction [with someone else], sometimes to utility. That which is related to interaction consists in having a conclusion that is necessary on account of what is conceded, although the conclusion

²² Reading: *min ḡihati l-ḡāyati*, instead of *min ḡihatin* (cp. the reading *min ḡaytu l-ḡāyati* in Avicenna 1956, 109:7–8).

is neither true nor correct. That which is related to utility, sometimes is for the truth, sometimes for praised correctness. The end of sophistic is to simulate wisdom, and to prevail by means of what is false.

In this text, Avicenna looks at the issue from three perspectives (those, respectively, of the 'subject-matter', 'the principle' and the 'end') that are properly epistemological: 'subject-matter' and 'principles' are two of the fundamental elements of every science, according to Aristotle's *Posterior Analytics*, whereas the 'end' (*ḡāya*) evokes a further scientific aspect taken into account in the prolegomena to the commentaries of Aristotle's work, both in Greek and in Arabic, namely, the 'goal' (σκοπός, *ḡaraḍ*) of the investigation. From this precise epistemological vantage-point, Avicenna discusses the differences between metaphysics on the one hand, and dialectic and sophistic, on the other, in a rather systematic way: after the introduction (section [a]), each of the three aspects is taken into account in explaining how metaphysics differs first from dialectic and then from sophistic (sections [b]–[d]). Avicenna's intention is to show, as clearly as possible, the radical distinction between metaphysics and the other two disciplines.

Text 5 is restated in a passage of the *Ilāhiyyāt* in which Avicenna reworks *Metaph.* Γ, 2, 1004b17–26, where Aristotle describes the similarities and the differences between metaphysics, on the one hand, and dialectic and sophistic, on the other.²³

Text 6: *Ilāhiyyāt* I, 2 (16:13–20) [Lat. transl. Avicenna 1977, 1980, 17:21–18:32]

- [a] The present science shares something, in a way, with dialectic (*al-ḡadal*) and sophistic (*al-safsāṭa*); it is different, in another way, from both of them; and it is different, in [still] another way, from each of them.
- [b] As to the things it shares with them, this is due to the fact that a scholar of a particular science does not discuss what is investigated in the present science, whereas the dialectician and the sophist do discuss it.
- [c] As to the difference [from both of them], it is due to the fact that the first philosopher [i.e. the metaphysician], *qua* first philosopher,

²³ See the comparison of this passage with its Aristotelian source in Bertolacci 2006, 381–386. This is one of the passages attesting Avicenna's reliance on an Arabic translation of the *Metaphysics* (probably by Ishāq ibn Ḥunayn) different from the extant one (by Uṣṭāt).

does not discuss the questions of the particular sciences, whereas they [i.e. the dialectician and the sophist] do discuss [them].

- [d] As to the difference from dialectic in particular, it is due to capacity (*quwwa*), since the dialectical discussion provides opinion (*al-zann*), not what is certain (*al-yaqīn*), as you have learnt in the discipline of logic.²⁴
- [e] As to the difference from sophistic, it is due to will (*irāda*), since the former [i.e. the first philosopher] wants what is true as such, whereas the latter [i.e. the sophist] wants to be regarded as a wise man who says what is true, even though he is not.

The two texts make roughly speaking the same point, although Text 6 is shorter, differently formulated and less coherently structured than Text 5.²⁵ Avicenna's general aim in both texts is the same: to distinguish metaphysics from dialectic and sophistic.²⁶ Whereas Avicenna regards dialectic and sophistic as less reliable and effective modes of argumentation than demonstration (as attested by many other passages of the logic and the metaphysics of the *Šifā'*),²⁷ he views metaphysics, on the contrary, as a demonstrative science.²⁸ This epistemological contrast, however, emerges more clearly in Text 5 than in Text 6: in this latter, Avicenna's contention (section [d]) that dialectic is capable of producing only 'opinion' (*al-zann*), not certainty (*al-yaqīn*), simply suggests that certainty is produced by a different discipline by means of

²⁴ The reference is to *Ġadal* I, 1 (Avicenna 1965, 11:6–8, corresponding to *Top.* A, 2).

²⁵ Section [a] in Text 5 corresponds to sections [a]–[b] in Text 6, whereas sections [b]–[d] in Text 5 are analogous to sections [c]–[e] in Text 6. However, none of the three epistemological aspects taken into account in Text 5 is mentioned in Text 6: the 'subject-matter' is omitted altogether, whereas the technical terms 'principle' and 'end' are replaced by the more neutral expressions 'capacity' and 'will'. The similarity between metaphysics, dialectic and sophistic is more enhanced in Text 6 [b] than in Text 5, where it is simply alluded to at the beginning. In Text 6, whereas section [c] compares both dialectic and sophistic with metaphysics, section [d] compares only dialectic with metaphysics, and section [e] only sophistic with metaphysics. In describing the procedures of dialectic and sophistic in Text 6 [b]–[d], Avicenna constantly uses the verb 'to discuss' (*takallama*), or nominal forms related to it, like 'discussion' (*kalām*), with particular regard to dialectic (see 'the dialectical discussion', *al-kalām al-ġadālī* in [d]). These terms might refer to the arguments *ad personam* ('dialectical' in the etymological sense) used by dialectic and sophistic. Avicenna might also allude to the dialectical procedures of Islamic theology (*kalām*).

²⁶ This is why in Text 6 Avicenna emphasizes, more than Aristotle does, the differences between metaphysics, dialectic and sophistic, by adding to Aristotle's original account, for example, section [c], which contains a further element of difference between the former discipline and the latter two.

²⁷ Bertolacci 2006, 232–245, 403–408.

²⁸ See Bertolacci 2006, 215–230.

a different method. Regrettably, the identity of this discipline, namely metaphysics, and the nature of the higher method used by it – demonstration – remain implicit. The corresponding section of Text 5, on the contrary, qualifies the premises used by metaphysics not only as 'certain' (*yaqīniyya*), but also as 'apodictic' (*burhāniyya*).

Why does Avicenna propose in metaphysics a text like Text 6 that is more succinct, tortuous and obscure than its counterpart in logic? The different contexts of the two passages provide an answer to this question. Text 5 is part of a chapter (*Burhān* II, 7) that has been rightly described as 'a remarkable work of epistemology' with 'a very formal structure'.²⁹ Text 6, on the other hand, represents a sort of appendix of *Ilāhiyyāt* I, 2, in which Avicenna paraphrases a passage of the *Metaphysics* at the end of a chapter in which he has constantly used the epistemology of the *Posterior Analytics* to elucidate the subject-matter (together with principles and properties) and the goal of metaphysics. Both the fidelity to Aristotle's quoted text, and the dependence on the previous part of the chapter in which it occurs, may explain the succinctness and lack of precision of Text 6 by comparison with Text 5.

IV

The topic of the predication of existence is discussed by Avicenna, for the first time in the *Šifā'*, in his reworking of the first chapter of the *Categories* in *Maqūlāt* I, 2.³⁰ Here, after having dealt with synonymy and before taking paronymy into account, Avicenna divides homonymous terms into three groups. Existence is adduced as one of the examples in the first group.

Text 7: *Maqūlāt* I, 2 (10:4–11:7)

[Tripartition of homonymous terms]

- [a] As to what is not [predicated] by way of synonymy, in general it is said [to be predicated] by homonymy (lit.: coincidence of name, *ittifāq al-ism*). [This class] is divided into three groups. [1] Either the notion (*al-mā'nā*) in them [i.e. in the things whose name coincides]

²⁹ Jolivet 1991, 1017.

³⁰ The importance of this chapter of *Maqūlāt* is progressively emerging in the studies on Avicenna's thought: see Bertolacci 2004, 195 and n. 52; Bertolacci 2006, 389 and n. 26; Treiger 2010. In this article, Treiger provides an insightful analysis of Avicenna's chapter and a comprehensive reconstruction of its Greek and Arabic background, of which I have much profited for my own translation and interpretation of Text 7.

is one as such, although it is different in another respect [= ambiguous name]. [2] Or it is not one, but between the two things [whose name coincides] there is a certain resemblance. [3] Or it is not one, and between the two things there is no resemblance.

[1.1: The ambiguous name in its absolute sense]

- [b] The things in which the notion is one, but are different afterwards [in another respect], are like the notion of existence (*wuğūd*). [i] For [existence] is one in many things, but it is different in them, since it is not found in them according to a single form in every respect, in so far as it belongs to some of them before, to some others afterwards. [i.i] For the existence of substance [comes] before the existence of the other things that follow [substance], [i.ii] and also because the existence of some substances [comes] before the existence of other substances. [i.iii] Likewise, the existence of some accidents [comes] before the existence of others. This is the way of [predication according to] priority and posteriority (*tariq al-taqad-dum wa-l-ta'ahhur*).
- [c] [ii] Likewise, [existence] may be different according to major [and minor] worth and appropriateness (*tariq al-awlā wa-l-aḥrā*). For existence belongs to some things *per se* (*min dātihī*), to some others in virtue of something else (*min ġayrihī*). Now, what exists *per se* is worthier of existence than what exists in virtue of something else.
- [d] Every thing that is prior with regard to a [certain] notion is also worthier of it, but not vice versa. For two things may share a certain notion in such a way that this latter does not belong to one of them before [and to the other afterwards], but both [relate] to it simultaneously (*ma'an*); nonetheless, one of them is worthier of it, by being more complete or more stable with regard to it.
- [e] [iii] As to what is different by intensity and weakness (*bi-l-šadda wa-l-ḍa'f*), it only applies to notions that admit intensity and weakness, like whiteness. Thus, 'whiteness' is not predicated of the whiteness in snow and the whiteness in ivory according to absolute synonymy /A11/, nor is 'philosophy' predicated of the philosophy of the Peripatetics and the philosophy of the Stoics according to absolute synonymy. We are just providing you with famous examples, about which one must be indulgent once [their] goal is grasped.
- [f] The [name] in which the concept of the term is one when it [i.e. the concept of the name] is abstracted [from the single occurrences], although it is not one in every respect, and is similar in the things that participate in that term, is called an 'ambiguous name' (*ism mušakkik*), although sometimes it is called otherwise.

[1.2: The ambiguous name in its relative sense]

- [g] An ambiguous name may be absolute (*muṭlaq*), as we have said. But it may [also] be [predicated] on account of the relation (*bi-ḥasab al-nisba*) [i] to a single principle, as when we predicate 'medical' of the book, the dissecting knife, and the remedy, [ii] or to a single end, as when we predicate 'healthy' of the remedy, the exercise, and

the phlebotomy. [iii] Sometimes it is [predicated] on account of the relation to [both] a [single] principle and a single end, as when we say that all things [of the universe] are divine.

In section [a] homonymous terms are divided into three groups. In the first, they share the same notion in different ways; in the second, they do not share a single notion, but they nonetheless present some similarities; in the third, they neither share a single notion nor do they present similarities. The treatment of the first group – called the 'ambiguous name' (*ism mušakkik*) in section [f] – is the most carefully worked out. It is divided in two main parts (1.1, 1.2): in the first, the ambiguous name is taken absolutely, that is the occurrences of the name are related to each other but are not related to any additional factor. In the second, on the contrary, the occurrences of the ambiguous name refer to an additional factor. Both parts present a tripartite classification (see cases [i], [ii], [iii]).

Existence is given as an example of the first two cases of the first threefold classification in (1.1). The first mode is expressly named 'according to priority and posteriority', and concerns the categories. It is divided into three areas: homonymy regarding the predication of existence of substances and accidents ([i.i]), different types of substances ([i.ii]), and different types of accidents ([i.iii]). Avicenna envisages a kind of hierarchy according to which, first, accidents are related to a first type of accident according to priority and posteriority, second, all accidents are dependent on substances according to priority and posteriority, and third, substances are related to a first type of substance according to priority and posteriority.³¹

The second mode of predication of existence in (1.1) is named by means of an expression that may be translated 'according to major and minor worth and appropriateness.' My impression is that this mode concerns a case of predication of existence that Avicenna regards as sharply distinct from the previous one, namely the case in which existence is predicated of God and the created world. First of all, although the two types of predication are not rigidly distinct from one another, section [d] shows that the second type of predication of existence

³¹ In section [d], the presence of the adverb 'simultaneously' (*ma'an*) might suggest that the priority and posteriority in the first classification regards time: if this is really the case, Avicenna's point would be that some accidents are chronologically prior to others, that substances are chronologically prior to accidents, and that some substances are chronologically prior to others.

encompasses instances that the first type does not include. Second, in the context of case [iii] Avicenna speaks of the things to which existence belongs *per se*, and the things to which existence belongs in virtue of something else. Although these two expressions might refer to substances and accidents respectively, they call to mind passages of the metaphysics of the *Šifā'*, in which they are used to distinguish the Necessary Existent – God, from possible existents – created things. Thus, Avicenna contrasts God, as the only existent having existence *per se*, with all the other things, because they have existence from something else, and portrays God as the only existent properly 'deserving' existence, thus evoking the second type of predication of existence in (1.1).³² Significantly, in various passages of the following treatises of the metaphysics of the *Šifā'*, Avicenna places God's existence outside the context of the categories, saying that God is not a substance.³³

It would seem then that the first type of predication of existence described by Avicenna in (1.1) applies in particular in the context and at the level of the categories (existence as predicated of substance and accidents), whereas the second type of predication is proper to exis-

³² *Ilāhiyyāt* VIII, 3 (342:8–9, 17–18, 343:2–6 [Lat. transl. Avicenna 1977, 1980, 396:21–23, 39–41, 397:46–52]: "Therefore, everything except the One that is one *per se* (*li-dātihi*) and the Existent that is existent *per se* (*li-dātihi*) receives the existence from something else (*min ġayrihi*). Due to [this other thing] it is a 'is', whereas *per se* it is a 'not is'. [...] Everything starts to exist from this One, and this One makes it start to exist, since what is made start to exist is what is after not having been. [...] The 'after' [we are speaking of] here... is the 'after' that is by essence. For the entity that belongs to something on account of itself (*min tilqā nafsihi*) is prior to [the entity] that belongs to it from something else (*min ġayrihi*). If existence and necessity belong to it from something else (*min ġayrihi*), then non-existence and possibility will belong to it from itself (*min nafsihi*). Its non-existence will be before its existence, and its existence will be after its non-existence, according to a priority and posteriority [that are] by essence. Thus, the existence of everything except the First One is after not having been, in conformity to what it deserves [by] itself" (*bi-stihqāq nafsihi*); VIII, 6 (356:12–13) [Lat. transl. Avicenna 1977, 1980, 413:88–91]: "[This is so] because the quiddities of [the things other than the Necessary Existent], as you know, do not deserve (*lā tastahiqqu*) existence; on the contrary, in themselves and independently from their relationship to the Necessary Existent, they deserve (*tastahiqqu*) non-existence' (the reference 'as you know' appears to be to the previous text). Even though Avicenna does not state expressly in the *Ilāhiyyāt* that God's existence is homonymous with the world's existence, a statement like "[the First] does not share [anything] with what derives from it" (VIII, 5, p. 354:13 [Sat. transl. Avicenna 1980, 411:47]) can be read along these lines.

³³ See the remarks on the Necessary Existent not being a substance in II, 1, p. (60:5–8) [Sat. transl. Avicenna 1977, 1980, 68:70–75], and VIII, 4, 348:6–349:6 [Sat. transl. Avicenna 1977, 403:74–404.1].

tence as predicated of God, on the one hand, and the world, on the other, on the transcendental level.

In the second tripartite classification of ambiguous names in (1.2), cases [i] and [ii] reproduce the traditional distinction of predication ὁφ' ἐνός and πρὸς ἓν together with the celebrated examples of the predication of the terms 'medical' and 'healthy'. Case [iii] is interesting: it is a kind of combination of the previous two. It teaches that all things can be said to be 'divine' in relation to a single principle and to a single end; the possibility of this predication derives apparently from assuming that God is both the efficient and the final cause of the universe, and that all things possess divinity because they come from and go back to God.

Avicenna's Text 7, as well as his overall account of homonymy, synonymy and paronymy in *Maqūlāt* I, 2, depends in different respects, either directly or indirectly, on the Greek exegetical tradition of the *Categories*, which in its turn systematizes scattered passages of the Aristotelian *corpus*, and on its Arabic reception.³⁴

In the *Ilāhiyyāt*, the theme of the multivocity of 'existence' and 'existent' is first adumbrated and then treated *ex professo* in chapter I, 5.³⁵ In this text, Avicenna reworks the passage of *Metaph.* Γ,

³⁴ Treiger 2010 documents that cases [i] and [ii] of section (1.1) derive from al-Fārābī. As to section (1.2), the characterization of case [i] in terms of relation to a 'principle' (*mabda'*) resembles the mention of the 'principle' in the corresponding place of Philoponus' so-called 'first' commentary on the *Cat.*; cp. the mention of the 'agent' and the 'principle' in al-Ḥasan Ibn Suwār, *Ta'liqāt 'alā Kitāb al-Maqūlāt* Georr 1948, 368:2. The characterization of case [ii] in terms of relation to an 'end', and the examples ('medical', 'healthy') of cases [i]–[ii], are common to the entire Greek exegetical tradition (Porphyry, Ammonius, Philoponus, Simplicius) and its Arabic reception (Ibn Suwār *Ta'liqāt 'alā Kitāb al-Maqūlāt* Georr 1948, 368:2–6; Abū l-Farağ Ibn al-Ṭayyib, *Tafsīr Kitāb al-Maqūlāt* in Ferrari 2006, 37:31–31:7. Case [iii] follows cases [i] and [ii] also in the commentary on the *Categories* by Abū l-Farağ ibn al-Ṭayyib, a contemporary of Avicenna (see Ferrari 2006, 38: 8–10; this case is not taken into account by Ibn Suwār); the parallel presence of a similar case in Ibn al-Ṭayyib might indicate the existence of an intermediate, probably Arabic, source common to both Avicenna and Ibn al-Ṭayyib (see, on this, Treiger 2010). The doctrine of case [iii] (all things are divine since they come from a single principle and go back to a single end) occurs in a passage of Simplicius' commentary on the *Categories* (*In Cat.* 4, pp. 74, 28–75, 5; see Simplicius 2001, 65; 777–779), although in the commentary it is not part of, and comes much later than, the discussion of cases [i] and [ii]. I have dealt in detail with this topic in the communication 'Simplicius in Avicenna's reworking of Aristotle's *Categories*', Journées *Les Catégories: la tradition arabe*, Australian Research Council, CNRS (Paris), Paris 3–4 avril 2009 (A. Hasnaoui, P. Thom).

³⁵ *Ilāhiyyāt* I, 5 (31:8) [Lat. transl. Avicenna 1977, 1980, 35:59–60]: 'For also by means of the term 'existence' many notions are signified...'

2 (1003a33–b19) commonly known as Aristotle’s theory of the ‘focal meaning’ of ‘being’.³⁶

Text 8: *Ilāhiyyāt* I, 5 (34:15–35:2) [Lat. transl. Avicenna 1977, 1980, 40:46–53]

- [1a] We say now that ‘existent’, even though it is neither a genus, as you know, [1b] nor is it predicated in an equal way of what is beneath it,
 [2a] is nonetheless a notion in which [the various instances] coincide (*ma‘nan muttafaq fīhi*) by means of priority and posteriority (*‘alā l-taqdīm wa-l-ta‘hīr*). [2b] The first thing to which it belongs, is the quiddity that is substance; afterwards, it belongs to what comes after [substance].
 [3a] In so far as it is one notion, in the manner we have alluded to, [3b] some accidents that are proper to it pertain to it, as we have clarified before.
 [4a] Therefore, it has one science charged with studying it, [4b] as everything that is healthy has one science [charged with studying it].

Text 8 establishes four main points. The first two concern the way in which ‘existent’ is predicated: Avicenna contends, in negative terms, that ‘existent’ is not a genus ([1a]), and that it is not predicated univocally ([1b]).³⁷ Then, in positive terms, he maintains that ‘existent’ is predicated according to priority and posteriority ([2a]), and that substance is the first thing of which it is predicated ([2b]). Other passages of the *Ilāhiyyāt* make clear that, with respect to the status of ‘existent’, substance is prior to accident (described as ‘what follows substance’ in [2b]).³⁸ The other two points regard how, on account of the way

³⁶ This theory represents Aristotle’s solution of the major epistemological antinomy of the *Metaphysics* (‘being’, in order to be the main theme of a science, has to be a genus, but, as such, it is not): Aristotle contends that ‘being’ is a ‘quasi-genus’, since all its various meanings refer to a primary meaning (substance), and that therefore can be investigated by a science, i.e. metaphysics. Avicenna reproduces, with some significant difference, Aristotle’s main point. A detailed comparison of Avicenna’s reworking with Aristotle’s text is provided in Bertolacci 2006, 386–390.

³⁷ Avicenna makes explicit what is implicit in Aristotle’s text, namely that ‘existent’ is not a genus. He then paraphrases in negative terms what Aristotle states in positive terms about the way according to which ‘being’ is predicated: Aristotle maintains that ‘being’ is predicated *πολλοῶς*, i.e. ‘in many ways’ (1003a33 and b5), whereas Avicenna states that ‘existent’ is not predicated ‘in an equal way’, or ‘according to equality’ (*bi-l-tawāsī*). The phrase ‘as you know’ refers, beside Text 7, to places like *Madḥal* I, 11 (64:4–9); *Maqūlāt* II, 1 (62:3–9).

³⁸ In II, 1, for example, Avicenna maintains that substance is the ‘prior’ (*aqdam*) division of the existents *per se* (57:7) [Lat. transl. Avicenna 1977, 1980, 65:8]), and that it is the prior item (*al-muqaddim*) in existence (58:3–4) [Lat. transl. Avicenna 1977,

according to which it is predicated, there can be a science of 'existent': 'existent' is one notion or entity, and it has some proper accidents or properties ([3]);³⁹ thus, there is one science of 'existent', as in the similar case of the one science of what is healthy ([4]).⁴⁰

Text 8 is similar to Text 7 in the description of 'existent' as 'a notion in which the various instances coincide' (*maʿnan muttafaq fihi*), corresponding to the insertion of existence in the context of homonymy, characterized as predication 'by coincidence of name' (*bi-ttifāq al-ism*), in Text 7 [a]. Likewise, the mode of predication of 'existent' in Text 8 is qualified as 'according to priority and posteriority' (*ʿalā l-taqdīm wa-l-taʿhīr*), with a formula that is almost verbatim the same as that used in Text 7 [b] to describe the first mode of predication of existence ('the way of priority and posteriority', *ṭarīq al-taqaddum wa-l-taʿhīr*). By comparison with Text 7, however, Text 8 shows three main differences. First, in Text 8 Avicenna is selective: he mentions only one of the three cases of predication of existence 'according to priority and posteriority' envisaged in Text 7, the predication of existence regarding substances and accidents ([i.i]), omitting the predication regarding only substances ([i.ii]) and only accidents ([i.iii]); furthermore, he does not take into account at all the second mode of predication of existence mentioned in part (1.1) of Text 7, namely

1980, 66:22–23]) with respect to accident. Cp. V, 8 (243:5–6 [Lat. transl. Avicenna 1977, 1980, 272:18–19].

³⁹ Section [3a] is connected with section [2a]: 'in the manner we have alluded to' means 'according to priority and posteriority'. Section [3b], on the other hand, resumes one of the main epistemological features of metaphysics, namely the fact that this discipline – as every other science, according to the rules of Aristotle's *Posterior Analytics* – demonstrates the properties of its subject-matter. The phrase 'as we have clarified before' refers to texts like *Ilāhiyyāt* I, 2, (13:12–13) [Lat. transl. Avicenna 1977, 1980, 13:36–38]. Thus, the whole section [3] aims at elucidating: (i) that 'existent' is one notion ([3a]); (ii) that, in so far as it is one notion, it has some properties ([3b]); (iii) and that, in so far as it has some properties, it can be the subject-matter of a science.

⁴⁰ Section [4] corresponds almost *verbatim* to *Metaph.* 1003b15–16 ([4a]) and b11–12 ([4b]). In these two passages, after having compared the 'focal meaning' of 'being' with the 'focal meaning' of 'healthy' and 'medical', Aristotle focuses on 'healthy' in order to clarify that, as there is a science of what is healthy (Aristotle probably means physiology), likewise there is a science of 'being' (that is, metaphysics). Avicenna does the same, inverting, however, the order: there is one science of 'existent', according to Avicenna, as there is one science of what is healthy. In Z, 4, 1030a34–b3, on the contrary, Aristotle selects 'medical' as example of the 'focal meaning' of 'being'. The peculiar way in which metaphysics is a science is recalled also in *Ilāhiyyāt* VI, 5, (299:4–5) [Lat. transl. Avicenna 1977, 1980, 346:83–84].

the predication ‘according to major and minor worth and appropriateness’ (case [ii]). Second, he adds new material: the epistemological considerations on the science of ‘existent’ are totally absent in Text 7. Third, he modifies the content: he joins the predication of ‘existent’ with an example (‘healthy’) that in Text 7 occurs within the second classification of homonymy (case [ii]), and is not related directly to the predication of existence.

The reason for these differences are the different contexts of the two passages. Text 7 provides a general and independent treatment of homonymy, in which all the possible cases of homonymous predication are considered. Text 8, on the other hand, is meant to reproduce the content of the passage from *Metaph.* Γ, 2, and to assess the unity of the science of ‘existent *qua* existent’: from this follows the selection of the case of priority and posteriority regarding substance and accidents, the connection of ‘existent’ with ‘healthy’, and the epistemological overtones. The omission in Text 8 of the entire second type of predication of existence in Text 7 can be accounted for in two ways. First, the mention of two ways of homonymous predication of existence, instead of one, as in Text 7 might have weakened Avicenna’s claim in Text 8 that the science of ‘existent *qua* existent’ is a single and unified discipline. Second, Text 8 comes before the first extensive discussion of God’s existence in the *Ilāhiyyāt* (I, 6–7): Avicenna might have thought it appropriate to avoid mentioning the second type of predication of existence, the one involving God’s existence, at this early stage. Significantly, in various passages of the following treatises of the *Ilāhiyyāt* we find relevant hints of the features of God’s existence evoked in the second type of predication of existence in Text 7.⁴¹

The importance of Text 8 in the historical process of transformation of Aristotle’s theory of the predication πρὸς ἓν of ‘being’ into the medieval doctrine of the ‘analogy’ of ‘being’ has already been stressed.⁴²

⁴¹ See above, nn. 32–33.

⁴² See Libera 1989, 319–345, 328–337. De Libera insists in particular on the importance of Avicenna’s view of ‘existent’ as a point of convergence (*muttafaq fihī*), according to anteriority and posteriority, of the various things of which it is predicated (section [2a]). The idea of a priority and posteriority among the meanings of ‘existent’ has a background in Aristotle. In Γ, 2, 1003b5–6, b16–18, Aristotle calls substance ‘principle’ (or ‘starting-point’) and ‘what is primary’ among the things of which ‘being’ is predicated. *Metaph.* Z, 4, 1030a21–22, is strikingly similar to section [2a]: in this passage Aristotle compares the ‘focal meaning’ of the verb ‘is’ to the ‘focal meaning’ of the expression ‘what is it’, or essence, and he says that ‘is’ is predicated

However, the place to look for Avicenna's seminal endorsement of the doctrine of the analogy of being is not Text 8, in which this doctrine does not occur as such and seems intentionally omitted, but its parallel passage in logic. In Text 7, rather than in Text 8, Avicenna envisages, not only a homonymous predication of existence about the categorical realm of substances and accidents, but also a different type of homonymous predication of existence connected with the 'analogical' dimension of the relationship between God and the created world.

CONCLUSION

All the cases discussed in the present paper share a common feature: the treatment in logic of a certain theme is more comprehensive and more detailed than its treatment in metaphysics. This happens not only with doctrines, like universals and categories, traditionally associated with logic (cases I–II), but also, quite surprisingly, with doctrines concerned directly with metaphysics, like the non-dialectical and non-sophistical character of metaphysics and the focal meaning of 'existent' (cases III–IV).

There is an obvious explanation for this fact: regardless of the relative chronology of the different parts of the *Šifā'*, in the final arrangement of this work logic comes before metaphysics, and the first account of a certain topic in logic is naturally longer than its resumption later on in metaphysics.⁴³ As a matter of fact, logic is by far the most extensive part of the *Šifā'*, being much longer than the parts on natural philosophy and metaphysics taken together, a situation that the secretary and biographer of Avicenna al-Ġūzġānī tried to explain by pointing at the

either in a primary way (of substance) or in a secondary way (of accidents). Unfortunately this passage of the *Metaphysics* is not contained in Uṣṭāṭ's Arabic translation (in the form in which this is extant), nor is it attested by the additional translations that Averroes occasionally quotes in the Long Commentary on the *Metaphysics*. For the idea of a priority and posteriority among the meanings of 'being', see also *Metaph.* Δ, 11, 1019a1–11.

⁴³ The secretary and biographer of Avicenna al-Ġūzġānī, both in his Introduction to the *Šifā'* and in his biography of the master, points at a peculiar genesis of the *Šifā'*, according to which the logic of this work was written *after*, not before, natural philosophy and metaphysics. Avicenna, however, might have intentionally shortened the treatment of certain topics in metaphysics (composed earlier) in order to discuss them again more at length in logic (composed later).

significant number of books that Avicenna had at his disposal during the composition of the logical part.⁴⁴

So far as the relationship between logic and metaphysics is concerned, the cases discussed above present an ambivalent scenario. The first two examples show that the foundation of the logical doctrines of universals and categories is provided by metaphysics: case I concerns the actual metaphysical foundation of the doctrine of universals, whereas case II provides an instance of Avicenna's idea that the fundamental tenets of the doctrine of the categories should be discussed in metaphysics rather than in logic. The two latter examples, on the contrary, point to the independence of logic with regard to metaphysics, instead of the reliance of the former on the latter: the general epistemology of metaphysics, and the concrete description of how the subject-matter of metaphysics ('existent') is predicated, are dealt with in logic before metaphysics and autonomously from it. The differences between the logical and the metaphysical treatment of these cases (less marked in case III, more profound in case IV) can be explained by the different goals that Avicenna is pursuing in each case, and by his recourse to distinct sources (the tradition of the commentators of the *Categories* and al-Fārābī, on the one hand, the *Metaphysics*, on the other), thus corroborating the impression of independent perspectives on the issues dealt with. Whereas the first scenario is congruent with Avicenna's view of the hierarchical classification of the sciences, the second scenario shows that logic, albeit dependent on metaphysics for the scientific foundations of its principles, remains nonetheless, in Avicenna's opinion, an autonomous discipline.

⁴⁴ Wishing to explain why in this work logic 'grew longer' than the other parts, and why the logic of the *Šifā'* is less original with respect to the Aristotelian canonical text than natural philosophy and metaphysics, in the Introduction to the *Šifā'* al-Ġūzġānī reports that Avicenna consulted books only while writing the part on logic, thus being able to follow more closely Aristotle's order of exposition; natural philosophy and metaphysics, on the contrary, according to al-Ġūzġānī, were written without recourse to any book. Al-Ġūzġānī's report about the supposed unavailability of books during the composition of the physics and metaphysics of the *Šifā'* has already been proved to be unreliable (see Gutas 1988, 106–112). Also the analysis proposed here weakens this claim, since the account of doctrines III–IV in metaphysics is shorter than in logic *just because* in Text 6 and Text 8 Avicenna is quoting or paraphrasing Aristotle's *Metaphysics*. The hypothesis that all the quotations of the *Metaphysics* in the *Ilāhiyyāt* are the result of Avicenna's youthful memorization of this work is unlikely on account of his recourse to different Arabic versions of Aristotle's work (see Bertolacci 2006, 310–316).

The further issue discussed in the present contribution – the presence in logic of ontological doctrines – discloses a further tension between cases I–II, where ontology is the domain, external to logic, in virtue of which metaphysics provides the foundation of universals and categories, and cases III–IV, in which logic delves on its own into ontological matters. This is especially striking in case IV, in which the logical account includes fundamental doctrines that the metaphysical account does not contain and that metaphysics in general seems to presuppose. This aspect can be explained not only by material considerations such as the ones previously advanced (structure of the *Šifā'*, different sources of its distinct parts, etc.), but also by deeper theoretical reasons regarding Avicenna's conception of logic. According to Avicenna, the question of whether logic is an instrument of philosophy or a part of it (an *aut-aut* question) is wrongly formulated, since logic can be both an instrument and a part of philosophy from different perspectives: but if one takes logic simply as an instrument of philosophy (the alternative towards which Avicenna seems in fact to incline),⁴⁵ by regarding philosophy as an investigation into the existence of things, logic – despite not being part of philosophy – remains nonetheless 'useful for the examination of the existence of things.'⁴⁶ This usefulness of logic with respect to philosophy understood as ontology – a point that Avicenna does not further develop – possibly justifies the presence in the logic of the *Šifā'* of the ontological sketches we have detected. In sum: if all the examples of doctrines expounded in logic and repeated in metaphysics that the present article has taken into account are concerned, to different degrees and extents, with issues of ontology, the resulting 'ontologization' of logic is not accidental. Rather, it is compatible with a conception of logic as universal tool for knowledge, coextensive with philosophy understood as general ontology, and therefore partially overlapping with metaphysics understood as the science of being qua being.

⁴⁵ Avicenna 1964, chapter I, 2.

⁴⁶ *Madḥal* I, 2, (15:17–16:3) [Latin translation, Venice edn. f. 2^b–^va]; see Marmura 1980, 250. The subject-matter of logic is identified by Avicenna with those properties of the mental existents – like being a subject or a predicate, being universal or particular, being essential or accidental etc. – that are capable of conducting the mind from the known to the unknown (*Madḥal* I, 2, (15:1–17), see Marmura 1980, 247–250); I, 4 (22:7–12), see Sabra 1980. Thus, albeit more particular than 'existent *qua* existent' (the subject-matter of metaphysics), the subject-matter of logic is nonetheless related to this latter.