ARISTOTLE
and the
Arabic Tradition

Edited by

Ahmed Alwishah and Josh Hayes

ARISTOTLE AND THE ARABIC TRADITION

This volume of essays by scholars in ancient Greek, medieval, and Arabic philosophy examines the full range of Aristotle's influence upon the Arabic tradition. It explores central themes from Aristotle's corpus, including logic, rhetoric and poetics, physics and meteorology, psychology, metaphysics, ethics, and politics, and examines how these themes are investigated and developed by Arabic philosophers including al-Kindī, al-Fārābī, Avicenna, al-Ghazālī, Ibn Bājja, and Averroes. The volume also includes essays that explicitly focus upon the historical reception of Aristotle, from the time of the Greek and Syriac transmission of his texts into the Islamic world, to the period of their integration and assimilation into Arabic philosophy. This rich and wide-ranging collection will appeal to all those who are interested in the themes, development, and context of Aristotle's enduring legacy within the Arabic tradition.

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CAMBRIDGE
UNIVERSITY PRESS

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Acknowledgments

Introduction

Ahmed Alwishah and Josh Hayes

Aristotle is widely considered to be the most influential figure in the history of Arabic philosophy. His thought has played a fundamental role throughout the Arabic tradition, primarily in philosophy (*falsafa*) and to some extent even in other disciplines, including speculative theology (*kalām*), and jurisprudence. Aristotle is often revered in the Islamic world as the "First Teacher/Philosopher" (*al-muʿallim al-awwal*) epitomizing the paradigm of the ancient philosopher who seeks to establish a comprehensive grasp of the first principles of things. Arabic philosophers consistently relied upon the corpus of Aristotle to systematically investigate every branch of knowledge from logic, to the natural sciences, to first philosophy (metaphysics), and ethics. His own teleological worldview enabled these philosophers to identify a set of relationships that determined their own understanding of the nature of the universe and the place of the human being within it. Aristotle was not only the first teacher of philosophy, but also the first challenge to be overcome in order to successfully prove their own conclusions. As the primary source for all subsequent philosophical inquiry, the legacy of his thought was to be celebrated and organically integrated into Arabic philosophy.

In this volume, we aim to employ the pedagogical model of the classical and medieval curriculum representing the diversity of Aristotle's corpus throughout the Arabic tradition beginning with Logic, followed by Rhetoric, Natural Science, Psychology, and Metaphysics, before concluding with Ethics and Politics. Following this model, we adopt a comprehensive approach to the reception, transmission, and examination of his corpus in the Islamic world from roughly the ninth through the twelfth centuries. Insofar as the chapters remain attentive to the history of the reception of Aristotle, they highlight his influence upon respective philosophers such as al-Kindī, al-Fārābī, Avicenna, al-Ghazālī, Ibn Bājja, Averroes, and others included in their scope. Each chapter takes into account relevant historical considerations, such as the availability of his

texts and the attendant challenges presented in the process of establishing these texts as the seminal foundation for the Arabic tradition. However, it should be acknowledged that the transmission of Aristotle into Arabic philosophy does not follow a clear chain of historical continuity. In lieu of attempting to exhaustively trace this lineage in order to reduce it to some kind of unified and comprehensive history, our authors often engage those moments that most decisively contribute to the dissemination of his corpus.

The following chapters are informed by a portrayal of Aristotle which focuses upon the formative or classical period of Arabic philosophy, namely the stages of translation that made available to Arabic readers most of his works to create the historical image of the "Arabic Aristotle." At issue is an interpretation of Aristotle that is distilled through the lens of the Arabic imagination, including the image of the "pseudo-Aristotle" and a rich tradition of writings attributed to him. This is an image of Aristotle that has not been fully explored by scholars. One perspective of the pseudo-Aristotle refers to the Aristotle of the court. For instance, the so-called *Letter of the Golden House* written by an anonymous author during the early Abbasid period recasts Aristotle's *De Mundo* as an epistolary romance. Another perspective of the pseudo-Aristotle becomes apparent in one of the most widely read works disseminated throughout the early translation period, namely the *Theology of Aristotle* (*Uthūlūjiyyā Arisṭūṭālīs*). The transmission of this text conveys a certain image of Aristotelian philosophy as a systematic whole following the stages of ascent from logic to physics and metaphysics to finally arrive at rational theology. The Neoplatonic tendency to read Aristotle's philosophy in such a way is primarily responsible for inspiring a false image of the Stagirite. Beginning with al-Kindī, this image would continue to influence philosophers in the Islamic world as an enduring legacy of the greatness of Aristotle's works.

Another aim of our volume is to demonstrate how the Arabic philosophers came to critically examine a set of philosophical problems within Aristotle's corpus through the process of refining, reconstructing, and developing his views. Perhaps this is nowhere more evident than throughout the collection of his logical treatises known as the *Organon*. Aristotle's *Organon* is widely considered to be the most influential branch of his corpus. Logic was the foundation for all the other sciences as a means to explain the natural world. Its influence transcended philosophy to contribute to different aspects of the Arabic tradition. Syllogistic logic became instrumental for legal reasoning from the earliest stages of Arabic philosophy. Given the significance of the *Organon*, a number of Arabic

philosophers discuss and debate various aspects of its reception and transmission, specifically its reconstruction by commentators from late antiquity such as Ammonius, Themistius, and Olympiodorus.

The history of this early reconstruction decisively informs the interpretation of Aristotle's categories by al-Fārābī and Avicenna. While Aristotle purportedly provides an exhaustive list of the categories, there is a long-standing tradition beginning with the late ancient Greek commentators to justify such a list in order to rationally deduce the number and identity of the categories. The account of the division of the categories taken up by Avicenna is especially important given the particular emphasis upon his rejection of previous approaches. Avicenna reconstructs the arguments against such a deductive approach and occupies a unique position in the history of medieval philosophy by distinguishing himself as an independent thinker rather than as a commentator on Aristotle. In many ways, Avicenna conceives his project in his multivolume work, "Book of the Cure" (*al-Shifā'*), as a faithful defender of Aristotle against those Arabic commentators who misinterpreted the Stagirite, including al-Kindī and al-Fārābī. While Avicenna departs from al-Kindī by describing the need for a division of the categories, Avicenna also departs from al-Fārābī by offering a division of them. Avicenna's attempt to reconstruct the problems apparent in any such division provides a new standard for the division of the categories. His re-elaboration of this widely accepted division only confirms Avicenna's own intellectual virtuosity as an original thinker displaying both critical astuteness and philosophical breadth.

Another example of this innovative approach to reconstructing the *Organon* occurs with Avicenna's classification of the various forms of scientific inquiry in his "Book of Demonstration" (*Kitāb al-Burhān*). In particular, Avicenna examines the four Aristotelian interrogatives (if, that, why, and what) and their mutual relationship to develop the distinction between definition and demonstration. The latter is ultimately rooted in a more fundamental division in Arabic logic and epistemology between conception (*taṣawwur*) and assent (*taṣdīq*) which identifies irreducible domains of knowledge. A pivotal role in this division is played by the characteristics and function of the demonstrative middle terms within the structure of scientific syllogisms.

The *Rhetoric* and the *Poetics* were also studied as disciplines belonging to the *Organon* beginning with al-Fārābī and extending to Averroes. The history of the translation and reception of the *Rhetoric* and the *Poetics* begins with two distinct strands of writing devoted to these works. The first strand explains theoretical concepts, most importantly, the role and place

of the *Poetics* and *Rhetoric* in the *Organon*, while the second strand consists of full-fledged commentaries aiming to explain the work in more elaborate exegetical detail. Both strands are illustrated in the commentaries of al-Fārābī, Avicenna, and Averroes, even though the commentators themselves were unable to consult the Greek texts and were often guided by the misleading authority of second-hand sources from late antiquity. The history of Aristotle's *Rhetoric* and *Poetics* also involves making explicit a set of issues that became readily available in Arabic philosophy, including the nature of opinion (*doxa*) and persuasion (*pistis*), the distinction between rhetoric and poetics, the concept of art/craft (*technē*), and con-comitant theories of imitation (*mimesis*) and representation. The recon-struction and reception of one seminal text in this tradition, the *Didascalia* or Latin translation of al-Fārābī's *Long Commentary on Aristotle's Rhetoric*, brings to light al-Fārābī's role as a commentator by describing the influence of the earlier Alexandrian school and observing the critical role of persua-sion in the *Rhetoric*. Al-Fārābī recognizes that the Arabic translation of the *Rhetoric* as a treatise on logic has decisive political implications insofar as it functions to illuminate the relationship between citizens and their ruler. This insight is especially important given that the *Didascalia* which we possess today precedes the translation movement and thus has longstand-ing religious and political consequences for the subsequent tradition of Arabic philosophy.

While it is difficult to underestimate the degree of influence of the natural sciences upon the medieval Arabic tradition, these works are also indebted to an understanding of Aristotle's *Organon.* The natural sciences became more active and dynamic in the tenth century as a result of the demand for rational explanations of natural phenomena. There is also an extensive history of commentary devoted to the transmission of Aristotle's collected works on natural science, such as the *Physics*, *De Caelo*, and *Meteorology* through either their direct translation or through a rendering into Arabic from Greek commentators. Due to the breadth of Aristotle's physical corpus, it was not uncommon for Aristotle's texts to be received in a rather fragmentary fashion so that mistranslations and misunderstand-ings did arise for many of the Arabic commentators. A primary aim of reconstructing this history of early Arabic commentary is to highlight how these differences in translation came to influence their own observations about the natural world. In many cases, their simple observations dis-proved many of Aristotle's scientific explanations of certain natural phe-nomena. One such example is the debate regarding the motion of a body through a medium such as air or water. The divergent interpretations of

such natural phenomena by Avicenna, Ibn Bājja, and Averroes make evident the extent to which the modern science of Galileo and Newton remained indebted to the Aristotelian–Arabic worldview. While Aristotle's definition of nature as a cause and principle of motion had been widely accepted by subsequent philosophers throughout the centuries, it was not clear what kind of cause nature was or whether nature was involved in the production of motion as an active or a passive principle. For instance, John Philoponus (490–570 BCE) developed nature into an active principle. His definition as an equally successful emendation of Aristotle's original definition conceived of nature as something similar to soul and was thereby embedded in the larger framework of Neoplatonic cosmology. However, it was met with disapproval by Avicenna who intended to dispel the idea of aligning nature with soul in order to provide his own novel definition of nature as part of a universal classification of natural powers.

Psychology was also considered as a part of natural science (*al-ṭabīʿiyyāt*) in the Arabic tradition. Within this tradition, al-Fārābī indicated that in addition to natural principles, the principle of the soul is necessary in order to inquire about the motion of living things. Following al-Fārābī, Avicenna claimed that after the study of natural bodies and their motion, one needs to study bodies that have substantial form, namely those bodies that have the form of the soul. Aristotle's *De Anima* was the primary source for studying psychology. Among the central themes regarding the appropriation of *De Anima* within the Arabic tradition are the definition of the soul and its existence, the relationship between the soul and the body, the structure of the internal and external senses, the theory of perception, and theory of the intellect. The nature of self-knowledge and the role of the intellect are of particular interest to many philosophers in the Islamic world. Having adopted a form of dualism, Avicenna naturally departs from Aristotle's theory of self-knowledge by introducing an important distinction between self-cognition and self-awareness. With this distinction, Avicenna demonstrates how self-awareness is essential and continuous within an individual self. The disagreement between Aristotle and Avicenna about self-knowledge can also be seen with respect to their understanding of the cognition of the divine intellect. Both maintain that the divine intellect essentially and continuously think itself. However, Avicenna disagrees with Aristotle on what constitutes the object of thought for the divine intellect.

Although Aristotle's *De Anima* first became transmitted to individual philosophers such as Avicenna and Ibn Bājja, the *De Anima* perhaps came to be best understood by the *Short*, *Middle*, and *Long Commentaries* of

Averroes. The transformation of the *De Anima* into the Arabic commentary tradition is crucially informed by Averroes' account of intentionality distinguishing between apprehended forms, which are present in the soul of the apprehender, and forms that are actually present in the natural world. It is pertinent to trace the etymological complexity of the various uses of the term, "intention" (*maʿnā*), to consider how Averroes uniquely contributes to the history of Aristotelian psychology. Averroes first introduces "intention" in his account of apprehension (*idrāk*), a word unknown to Aristotle, to describe the conjunction between sensation and intellection.

Aristotle's thinking was also consciously utilized and implemented to resolve a set of interdisciplinary problems that are critical to the Arabic tradition. However, there is a process of selection whereby some topics of Aristotle's philosophy were regarded more importantly than others. For example, some of the central aims of the Arabic interpretation of Aristotle's *Metaphysics* were to investigate the relationship between the unicity and nature of Being and God, the creation of the world, and the character of agency and causality. Unlike the previous disciplines, these topics within metaphysics were highly contentious and precarious. After the execution of Jahm ibn Ṣafwān (746 BCE) for adopting certain views on free will and divine attributes, many philosophers within the Islamic world realized that debating these topics had a significant impact on their theological beliefs. Such topics in metaphysics were not exclusive to the *falsafa* tradition but were extensively debated in the *kalām* tradition. These two traditions were especially divided over how to demarcate the realm of divine reality from corporeal reality. It became clear for both traditions that the project of bridging these two realms of reality was contingent upon the way one defines a set of metaphysical terms such as existence, essence, substance, categories, wholes, parts, potentiality, and actuality. Thus, a great deal of attention is devoted to these terms and to their origins. In the *falsafa* tradition, al-Kindī and al-Fārābī play a critical role not only in appropriating Aristotle's terms, but ultimately translating them into Arabic. In doing so, both al-Kindī and al-Fārābī encountered a twofold challenge. First, they sought to comprehend the complexity of Aristotle's lexicon, especially central terms from his *Metaphysics*, like being, substance, and essence, in their different contexts throughout the corpus. Second, and most importantly, they aimed to reconstruct these terms to correspond to their own Arabic lexicon. Al-Fārābī, in particular, skillfully negotiates their linguistic origin, logical syntax, and metaphysical significance. This is particularly true with Arabic terms like *wujūd, anniyya, huwiyya*, and *shaʾiyya*. This

process results, in some cases, in terms that transcended the meaning of their Aristotelian origin. Both al-Kindī and al-Fārābī participated in the formative stage of the transmission of the *Metaphysics* into Arabic. However, they diverge in their approaches to interpretation. For instance, the Neo-Platonic emphasis upon the One as identical to the Unmoved Mover enables al-Kindī to establish a First Cause or absolute beginning to the cosmos. While al-Kindī attempts to harmonize metaphysics with theology, al-Fārābī is careful to clarify the relationship between metaphysics as rational theology, on the one hand, and theodicy and *kalām*, on the other. However, Avicenna has less concern with the establishment of these metaphysical terms or the apparent harmonization of metaphysics with other disciplines and instead systematically develops his own set of ontological principles that logically justified the existence of a necessary existent, its nature, its universal knowledge, and its relation to the cosmos. In the process of doing so, Avicenna departs from some aspects of Aristotle's teachings on metaphysics, especially the issue concerning the relationship between existence and essence. However, al-Ghazālī takes an entirely different approach by rejecting the basic principles of Aristotle's metaphysics and questioning the validity and the meaning of its concepts, such as necessary existence and possible existence. Finally, Averroes views al-Ghazālī's critique as unjustified since it arises from his own reading of Avicenna, which in Averroes' view represented a clear misinterpretation of Aristotle's metaphysics. This complicated picture of studying metaphysics was taken up in a more substantial way by tracing the origin of these aspects in the *kalām* tradition and identifying their line of continuation in the *falsafa* tradition.

Debates concerning being and necessity also occupy a special place in the Arabic tradition. Since al-Kindī, philosophers in the Islamic world, notably al-Fārābī and Avicenna, investigated different senses of being and established criteria in order to distinguish "being" from the concepts of "thing," "nothing," and "non-existence." The distinction between existence and possible existence enables us to understand the difference between existence and the cause of existence and to account for the different senses of substances and accidents. Another longstanding discussion regarding divine essence and attributes is also extensively investigated by the *kalām* tradition. This discussion has an important influence upon subsequent debates in the *falsafa* tradition. On the one hand, al-Muʿtazila's view of the identity relation between divine essence and attributes is well defended by Avicenna. On the other hand, al-Ashāʿira's theory of attribution is upheld and further developed by al-Ghazālī.

In the past, many scholars have treated the subject matter of agency, free will, and determinism outside the domain of metaphysics. However, in the orbit of Islamic metaphysics, it is organically integrated with central metaphysical concepts such as causation and divine knowledge. The early debate between al-Muʿtazila and al-Ashāʿira on this issue is filtered through the lens of Aristotle's doctrine of the four causes. For example, al-Ghazālī solidifies the position of al-Ashāʿira by questioning Aristotle's doctrine of causality. Furthermore, the topics of agency and causation are indigenous to the discourse of Islamic theology and are later integrated into the *falsafa* tradition. While the *kalām* tradition affirms that only intelligent beings can be agents and that being an agent (*fāʿil*) is a necessary condition for being a cause (*sabab*), the *falsafa* tradition affirms that non-intelligent beings and even inanimate beings can be causes and agents.

The concept of agency is contingent upon the conception that substances can act and be acted upon. This distinctive feature of Aristotle's account of causality is taken up by al-Fārābī and developed by Avicenna after him in two unique ways. First, there is an internal connection between the efficient cause and its effect represented by Aristotle's example of the builder as an efficient cause of the house in virtue of the fact that the builder has the building craft in his soul. The building craft as an activity is itself a principle or form in the agent that is enacted in building and its effect, the house. For al-Fārābī and Avicenna, the paradigm of this internal connection between the efficient cause and its effect is illustrated by their respective accounts of the First Cause as an Unmoved Mover. Second, their accounts of efficient causality are also unique insofar as they claim that per se causes are always simultaneous with their effects. For example, al-Ghazālī attributes to the *falsafa* tradition before him the physical example of a hand stirring water in a bowl. Assuming no void, the water moves simultaneously with the hand. Once the cause ceases to operate, the thing that was affected persists not as an effect, but as a thing in its own right. The *falsafa* tradition ultimately applies both features of Aristotle's account of efficient causality to reconcile the apparent tension between his commitment to the eternity of the world and his proof for the existence of a First Cause of motion.

The domain of metaphysics also shares a common ground with ethics insofar as agency extends to those agents who possess an intellect. The longstanding unity between metaphysics and ethics is a unique attribute of the Arabic tradition. The rationale for this unity between Aristotle's *Metaphysics* and ethical treatises, particularly the *Nicomachean Ethics*, first came to be appropriated by such philosophers as al-Fārābī and Averroes.

The *Nicomachean Ethics* has undergone a long and fascinating history of transmission throughout the Arabic tradition beginning with al-Kindī. However, al-Fārābī is the first Arabic philosopher to consider Aristotle's investigation of the virtues, specifically the intellectual virtues, as applying to the metaphysical domain. Al-Fārābī's reception and interpretation of the *Nicomachean Ethics* indicates the possibility that Aristotle's model of the virtuous citizen be understood on a global and even on a cosmic scale. Indeed, the intellectual virtues so decisively orient the investigation into first principles that ethical inquiry might be said to exceed metaphysics as the most crowning achievement of human intellectual investigation. This view is most widely espoused by al-Fārābī in his treatises, *Attainment of Happiness* (*Taḥṣīl al-saʿāda*) and *The Harmonization of the Two Opinions of the Two Sages: Plato, the Divine and Aristotle* (*Kitāb al-Jamʿ bayn raʾyay al-ḥakīmayn, Aflāṭūn al-ilāhī wa Arisṭūṭālīs*). While al-Fārābī's interpretation of the *Nicomachean Ethics* integrates both Plato and Aristotle into a harmonious whole to inform his own understanding of political philosophy, the Platonic role of the philosopher as both ruler of the city (philosopher-king) and an exile banished from the city as Socratic gadfly should not be overlooked. Al-Fārābī is instrumental in addressing the paradox of the philosopher who at once bears his own exclusivity as the paradigm of political authority yet also becomes displaced by the laws of the city.

Such paradoxes and problems presented by Aristotle and the rich tradition of Arabic interpretation are equally as important as his treatments and discussions. With this caveat in mind, students and scholars in the history of philosophy will be in a better position to explore the set of difficulties that philosophers in the Islamic world had to endure in order to make sense of Aristotle's works and to appropriate them into their own tradition. For example, one might turn to the "first Arabic philosopher," al-Kindī and his invocation to Muslims to "not be ashamed of appreciating the truth and acquiring it wherever it comes from even if it comes from races distant and nations different from us."[1] Al-Kindī not only invites Muslims to appreciate the truth of Aristotle's philosophy which predominated at that time, but to confront the challenge of acquiring this truth by making it one's own. Ultimately, one will not have a sufficient understanding of the development of Western philosophy and its different schools of thought without first considering the pervasive influence of Aristotle upon the Arabic tradition. While our volume cannot possibly capture the historical

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[1] Al-Kindī 1974: 58, trans. Ivry.

transmission and appropriation of Aristotle into the Arabic tradition in its entirety, it can strive to suggest a process of reading and interpreting Aristotle that retains the enduring legacy of his thinking. The contributions included in this volume aim to illuminate this legacy through their own scholarly engagement with the Stagirite. Since Aristotle's thought has been remarkably successful in its transmission through so many distinct channels of interpretation, we seek to encourage both students and scholars of ancient, medieval, and Islamic philosophy to contribute to this legacy for the sake of enriching the tradition of Aristotelian interpretation as a whole.

"Arisṭū ʿinda l-ʿArab," and beyond

Christina D'Ancona

Account of Aristotle. The meaning [of his name] is "lover of wisdom" or, it is said, "the excelling, the complete," there also being given "the perfect, the excelling". . . He was the master of eloquent style among the Greeks and among their excellent writers. After Plato, he was the most honored of their scholars, holding the highest rank in philosophy among the Ancients.[1]

The fourth philosopher is Aristotle. He is the first teacher (al-muʿallim al-awwal),[2] the seal of the ancient philosophers,[3] and the model of the learned men who followed their path. He organized philosophy and established it; he improved it and set it down accurately. He put logic at the beginning and prepared a foundation for all the other sciences. He thus became the medium through which the ancient philosophers were to benefit the future ones, and the means by which later philosophers were to procure the benefits of the earlier ones. Not only did he not restrict himself to pouring out upon later generations what the earlier ones had captured, but he even added to every kind [of knowledge] many times what they had produced, thereby rendering it more complete and more perfect. If it were not for him, subsequent philosophers would not have been guided toward the established practice of their predecessors – no, philosophy would not have been even outlined, nor would the knowledge of the essential natures [of things] among mankind have been even given a name. Because of this magnificent benefaction, then, he deserves the gratitude of those who came after him.[4]

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[1] Al-Nadīm 1871–1872: 246.26–247.3; 1970: 594–95; 1971–1973: 307.10–16.
[2] Endress 1991a and 1997b; Daiber 1997.
[3] The expression khātim al-ḥukamāʾ al-qudamāʾ is clearly reminiscent of Muḥammad's definition in the Qurʾān as the "seal of prophecy, khātim al-nubuwwa" (33:40).
[4] This passage comes from an anonymous gnomology labeled by its editor "The Philosophical Quartet" and containing four collections of sayings attributed to Pythagoras, Socrates, Plato, and Aristotle; Gutas 1975: 159.

These two accounts expand upon the image of the First Teacher, promi-
nent both in the Arabic and Latin Middle Ages[5] and best exemplified in
Dante's verses *"vidi 'l maestro di color che sanno / seder tra filosofica
famiglia. / Tutti lo miran, tutti onor gli fanno."*[6] In what follows, I shall
first outline the stages of the translations that put at the disposal of the
Arab readers most of Aristotle's works, as well as the prominent features
of the "Arabic Aristotle" created in this process. Then, I shall try to
narrow the focus to the Latin Middle Ages and its "Arabic Aristotle."

I   The translations of Aristotle's works (and related items) and the shaping of the "Arabic Aristotle"

The knowledge of Aristotle's thought and its influence on the rise and
development of Arabic-Islamic philosophy obviously depend upon the
"translation movement"[7] from Greek into Arabic.[8] The Arabic readership
had access to the works of Aristotle that either were housed in the libraries
and cultivated milieus of the conquered countries, or were made available in
Baghdād through the double channel of the search for manuscripts[9] and of
the arrival in the capital of the empire of translators who brought Greek
works with them.[10] These materials, whatever their origin, were translated,
thus fueling the rise of Arabic-Islamic philosophy. Predictably, they did not
become available all at once; indeed, there is wide evidence that Aristotle's
works were translated in various stages. Most of these translations have
already been studied in depth[11] and the overall picture of the reception of
Aristotle in the Arabic-speaking world has been presented more than once;[12]

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[5]   Both labels are obviously conventional.

[6]   *Commedia, Inf.* IV 131–133: "The Master I beheld of those who know/Sit with his philosophic family./
All gaze upon him, and all do him honour." For a complete list of Dante's citations, see De Matteis
2005.

[7]   This expression is widespread in scholarship, see Peters 1968a: 57–67; Goodman 1990 and Gutas
1998.

[8]   For an in-depth study of the translations from Greek into Arabic, see Endress 1987; and D'Ancona at
http://plato.stanford.edu/entries/arabic-islamic-greek

[9]   Al-Nadīm 1871–1872: 243.9–17; 1970: 584; 1971–1973: 304.2–9; Strohmaier 1983 and van Koningsveld
1998.

[10]   Al-Nadīm 1871–1872: 243.18; 1970: 584–85; 1971–1973: 304.9–10, mentions Qusṭā ibn Lūqā (the
"Constabulinus" known in the Latin Middle Ages as the author of the *De differentia spiritus et
animae*): "Qusṭā ibn Lūqā al-Baʿalbakkī also brought some material with him, which he translated, it
also being translated for him."

[11]   The outstanding entries on the various parts of the Aristotelian corpus available in the *Dictionnaire
des philosophes antiques* (ed. Goulet 1989– and 2003–) provide also an up-to-date analysis of the Syriac
and Arabic transmission of them.

[12]   See Peters 1968a and 1968b; Daiber 2001; D'Ancona 2008 and Geoffroy 2011.

therefore, an overview of the translations would be supernumerary, were it not intended to highlight the process of the reception of Aristotle's doctrines whose outcome is the "Arabic Aristotle" at stake here.

Early in the modern scholarship the fact imposed itself that already a century before the rise of Islam part of the Aristotelian corpus – more precisely, part of the *Organon* – had been translated into Syriac, both a language cognate of Arabic and the mother tongue of many scholars involved in the translations that took place in the formative period of Arabic-Islamic thought.[13]

That the Graeco-Syriac translations of Aristotle's logical writings were closely related to the scholastic tradition of late Antiquity is made evident by the works by Sergius of Reshʿaynā (d. 536) that have come down to us. The doctor-in-chief of Reshʿaynā (Theodosiopolis), a town on the east bank of the Euphrates,[14] Sergius had been educated in Alexandria both in philosophy and medicine. In addition to some thirty treatises by Galen,[15] he translated several philosophical and theological works. Both his translations (which include the pseudo-Aristotelian *De Mundo*[16] and a treatise by Alexander of Aphrodisias, *On the Principles of the Universe*,[17] lost in Greek) and his original writings (which include a treatise on the *Categories*[18] and another on the scope of Aristotle's works)[19] have been convincingly traced back to the tradition of the Neoplatonic commentaries on Aristotle's logical corpus, flourishing in the school of Ammonius, son of Hermias.[20]

After Sergius, whose approach to Aristotle paralleled that of his Latin contemporary Boethius,[21] the interest in Greek philosophy grew in the Syriac Christian communities. The first item of the so-called "enlarged *Organon*" of late Antiquity,[22] i.e. Porphyry's *Isagoge*, was repeatedly translated into Syriac before and after the Islamic conquest.[23] Besides the logical Aristotle, texts of "popular philosophy" were also translated, meaning by this expression, as Sebastian Brock has it, "philosophical discourses with an ethical content, treatises of a general scientific nature, narrative texts, and collections of sayings of an ethical character."[24] As strange as it may seem to us, "Aristotle" and the Aristotelian tradition feature in the Graeco-Syriac popular philosophy. We have already seen that in the sixth century Sergius had translated the pseudo-Aristotelian *De mundo*,[25] cast in the form of a

[13] See Baumstark 1900; Georr 1948; Brock 1982; Hugonnard-Roche 1989, 1997a, and 2004.
[14] Fiori 2011.   [15] Degen 1981.   [16] Raven 2003.   [17] Furlani 1923; Miller 1994.
[18] Hugonnard-Roche 1997b.   [19] Hugonnard-Roche 1997a and 1997b.
[20] Brock 1993; Hugonnard-Roche 1997b.   [21] Pines 1987; Hugonnard-Roche 1994.
[22] Hugonnard-Roche 2007.   [23] Hugonnard-Roche 1994.   [24] Brock 2003.
[25] See above, n. 16.

letter from Aristotle to Alexander. Coupled with Sergius' translation of Alexander's treatise, *On the Principles of the Universe*,[26] this suggests that already before the advent of the Islamic rule on Graeco-Roman Syria, which was to happen a century later, the Syriac Aristotle was both the creator of logic and the preceptor of the king, instructing him about ethics and cosmology. Later on, the Syriac version of the pseudo-Aristotelian *De virtutibus et vitiis*[27] and mostly the rise of the Syriac tradition of the Alexander Romance[28] greatly contributed to the shaping of the image of Aristotle as the learned man who had laid down the foundations of science and, at one and the same time, as the wise man imparting to the ruler his teaching about man and the cosmos – an image which famously belongs to the iconography of the Arabic Aristotle even in later ages.[29]

   The conquest of Damascus in 635 and of the whole of Syria in 636 paved the way for the beginning of the translations from Greek and Syriac into Arabic. The Umayyads (r. 661–750) settled in Damascus, transforming it into the first capital of the Islamic empire; a chancellery (*dīwān*) was established, whose documents were written initially in Greek – the language of the officials who served the new rulers – and were translated into Arabic only later on.[30] A court civilization developed in Damascus,[31] providing the breeding ground out of which grew the interest in the Greek learning of the Muslim upper class. Even though the full-fledged "translation movement" belongs to a later stage of Islamic history, namely, the early ʿAbbāsid caliphate that we shall meet in a moment, the sources credit the first Umayyad caliph Muʿāwiya (r. 661–680) with having initiated the translations: interestingly enough, alchemy was the science he asked for,[32] and indeed alchemy features among the topics of the letters exchanged between "Aristotle" and "Alexander" in the style of the *specula principis*.[33] The details of the origins and transmission of the most famous *speculum*, namely, the *Sirr al-asrār* (*Secretum secretorum*)[34] are matters of

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[26] See above, n. 17.   [27] Cacouros 2003.
[28] On the *specula principis*, see O'Meara and Shamp 2006; on the Syriac version, see Ciancaglini 1998 and van Bladel 2007.
[29] As for instance in the well-known illuminated MS of Ibn Bukhtīshūʿs *K. al-ḥayawān*, London, British Library or. 2784, f. 96 r.
[30] Al-Nadīm 1871–1872: 242.25–30; 1971–1973: 303.19–22; Fowden 2004: 265–272.
[31] von Grunebaum 1970: 1–54 points to the fascination of the new environment the Arab conquerors were exposed to once they entered Syria.
[32] Al-Nadīm 1871–1872: 242.8–11; 1971–1973: 303.4–6. Ibn al-Nadīm, remarks that "This was the first translation in Islam from one language into another" (al-Nadīm 1970: 581; trans. Dodge).
[33] Badawī 1954: 67–177; Zonta 2003b; van Bladel 2004; Fowden 2008; Di Branco 2009.
[34] For concurrent views on the origins of the *Secretum secretorum*, see Grignaschi 1965–1966 and Manzalaoui 1970–1971.

debate among scholars, but their roots are acknowledged to lie in the Arabic translation of the epistolar Romance of Alexander, made under the Umayyad caliph Hishām ibn ʿAbd al-Mālik (r. 724–743).[35]

Under the Umayyads, the Christians of Syria continued to translate Aristotle's logical works.[36] For what such generalizations are worth, one may venture to say that two distinct traditions of learning under the aegis of Aristotle, both rooted in late Antiquity, developed in Umayyad times. On the one hand, there is the logical Aristotle heir to the school of Alexandria: this tradition was carried on by the Christian doctors and clerics (often bishops) who continued, even under the ʿAbbāsids, to translate parts of the *Organon* and to comment upon them. This tradition is best exemplified by the exaltation of Aristotle written by a monk, David bar Paulos, to whom Sebastian Brock has drawn attention in his seminal article, "From Antagonism to Assimilation":

> David, who was born near Mosul in the mid-eighth century, may thus provide an important link between his fellow Syrian Orthodox predecessors, working mainly in north Syria, and the East Syrian scholars under the Abbasids . . . David's letters show him to be a scholar versed in several fields of secular learning, and, although it is difficult to ascertain the extent of his knowledge of the Greek language, there can be no doubt about his enthusiasm for Greek learning:
>
> Above all the Greeks is the wise Porphyry held in honor,
> the master of all sciences, after the likeness of the godhead.
> In all fields of knowledge did the great Plato too shine out,
> and likewise subtle Democritus and the glorious Socrates,
> the astute Epicurus and Pythagoras the wise;
> so too Hippocrates the great, and the wise Galen,
> but exalted above all these is Aristotle,
> surpassing all in his knowledge, both predecessors and successors:
> entire wisdom did he contain in his books and writings,
> making philosophy a single body, perfect and complete
> What was written concerning the wise Solomon found its fulfilment in him:
> "none in any age was like he."[37]

On the other hand, there is the Aristotle of the court, the wise instructing the prince on the secrets of nature, heir to the tradition of the Alexander

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[35] The Arabic epistolary romance has been edited by Maróth 2006 and criticized by Gutas 2009. For a comprehensive and balanced account, see Di Branco 2009.

[36] See Boojamra 1997 and Conrad 1999. On the continuity of the Aristotelian studies, see Hugonnard-Roche 2004; On Paul the Persian, see Gutas 1983 and Hugonnard-Roche 2000.

[37] Brock 1982: 25; the source is *Egrateh d-Dawid bar Pauolos* (ed. Dolapönü 1953: 21–23).

romance. In the so-called *Letter of the Golden House*, which is nothing else
than the Arabic version of the pseudo-Aristotelian *De Mundo* cast in the
form of an epistolary romance,[38] "Aristotle" features as writing back to
Alexander, who had described in a letter to his mentor the marvels he saw
in upper India. The comments are added by a later historian, al-Masʿūdī
(d. 956), but the *Letter of the Golden House* was available already in early
ʿAbbāsid times, as we shall see below:

> "I write to you, O King, to warn you . . . lest you admire a thing made by
> weak hands, though skill, in short days and a negligible duration of time. I
> would rather, O King, that you turn your eyes to what is above and beneath
> you, at your right and at your left: the sky, the rocks and mountains, the
> seas, the marvels and phenomena which they contain, the lofty edifice which
> was wrought by no iron tools and which cannot be breached by machines of
> siege, and which was not put up by weak and frail bodies in finite time." He
> then goes on describing, in the rest of the letter, the countries, seas, spheres,
> stars, meteorological phenomena and other things which occur in the
> atmosphere. All this, together with letters by Aristotle to Alexander con-
> cerning the behaviour which he should adopt in matters of religion and
> kingship, and other subjects, was mentioned by us in our book on the
> Branches of Knowledge and Events of Past Ages; this letter is easily
> available.[39]

Both traditions of learning – that of the school and that of the court, one
might say – contributed also to the knowledge of Aristotle's biography in
the Muslim world. It has been shown by Dimitri Gutas that the Arabic
accounts (which include not only his life, but also his testament), are drawn
from Ptolemy's *Life of Aristotle* (a writing tracing back to the fourth
century, lost in Greek but preserved in Arabic), from materials related to
the Alexandrian school of Ammonius, son of Hermias, and from the
epistolary romance mentioned above.[40]

   These two Aristotelian traditions, that of the late antique schools and that
of the *specula principis* – different from one another even though not
incompatible with one another – are especially prominent in the formative
period of Arabic-Islamic philosophy, namely, under the first ʿAbbāsid
caliphs. The movement and events labeled as the "ʿAbbāsid revolution"[41]
put an end to the Umayyad dynasty in 750, and the ruling ʿAbbāsids settled
soon in the new capital of the Empire, Baghdād, founded in 762–763 by
al-Manṣūr (r. 754–775). The ancient sources mention al-Manṣūr's secretary

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[38] This text has been discovered by Walzer 1934a and Stern 1964.   [39] Stern 1964: 198.
[40] Gutas 1986: 15–36.
[41] Kennedy 1981, esp. ch. 2, "The Origins of the Abbasid Revolution"; Crone and Hinds 1986.

Ibn al-Muqaffaʿ, a convert from a Zoroastrian family and a translator from Persian, in loose relationship with "abridgments and compilations (*mukhtaṣarāt wa-jawāmī*ʾ)" of the *Categories* and *De Interpretatione*,[42] but this work is extant and edited,[43] thus allowing scholars to realize that it also includes a compendium of the *Prior Analytics*. The late antique legacy in this collection of logical works is made evident by the very fact that it begins with an abridgment of Porphyry's *Isagoge*.[44] The successor of al-Manṣūr, al-Mahdī (r. 775–785) had the *Topics* translated for him,[45] and the most ancient Arabic translation of the *Rhetoric*[46] has also been convincingly traced back to the eighth century,[47] a fact which comes as a confirmation of the close relationship between the earliest Arabic translations of Aristotle's logical works and the school tradition of late Antiquity, because in Alexandria the *Rhetoric* and *Poetics* were dealt with as parts of the *Organon*.[48] Finally, the ancient sources mention a translation of the *Physics* made under the reign of Hārūn al-Rashīd (r. 786–809), which however is lost to us.[49] This means that at the eve of the most intense effort of assimilation of the Greek heritage, which began in the ninth century, the interest in Aristotle's doctrine was not confined to logic, but also included the knowledge of the cosmos and its principles – "the lofty edifice which was wrought by no iron tools," as the *Letter of the Golden House* says.

The caliph whose name is most often cited in relationship with the translations is the successor of Hārūn al-Rashīd, al-Maʾmūn (r. 813–833):[50]

> Mention of the reasons why books on philosophy and other ancient sciences became plentiful in the country. One of the reasons for this was that al-Maʾmūn saw in a dream the likeness of a man white in color, with a ruddy complexion, broad forehead, joined eyebrows, bald head, bloodshot eyes, and good qualities sitting on his bed. Al-Maʾmūn related, "It was as though I was in front of him, filled with fear of him. Then I said, 'Who are you?' he replied, 'I am Aristotle.' Then I was delighted with him and said, 'Oh sage, may I ask you a question?' He said, 'Ask it.' Then I asked, 'What is good?' He replied, 'What is good in the mind.' I said again, 'Then what is next?' He answered, 'What is good in the law.' I said, 'Then what more?' He answered, 'More? There is no more.'" According to another quotation:

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[42] Al-Nadīm 1871–1872: 248.27 and 249.4; 1971–193: 309.9 and 309.14.

[43] Al-Muqaffaʿ 1978 (ed. Dānish Pazhūh).

[44] Gabrieli 1932 and Kraus 1934 challenged the authorship of Ibn al-Muqaffaʿ and attributed the compendium to his son, Muḥammad ibn ʿAbdallāh al-Muqaffaʿ, whose *floruit* was under the reign of al-Maʾmūn; however Dānish Pazhūh (al-Muqaffaʿ 1978) attributes the work to the father.

[45] Brock 1999; al-Nadīm 1871–1872: 249.18; 1971–1973: 309.28; Hugonnard-Roche and Elamrani-Jamal 1989: 525; Berti 2009: 41.

[46] Aristotle 1959b; Lyons 1982.   [47] Aouad 1989b: 456–457.   [48] See above, n. 22.

[49] Al-Nadīm 1871–1872, 244.5–6; 1971–1973: 304.27.   [50] See Sourdel 1962 and Cooperson 2005.

"I [al-Maʾmūn] said, 'Give me something more!' He [Aristotle] replied, 'Whosoever gives you advice about gold, let him be for you like gold; and for you is oneness [of Allāh]." This dream was one of the most definite reasons for the output of books.[51]

This story is clearly reminiscent of the epistolary romance with its "Aristotle" imparting admonitions to the king.[52] It is generally agreed that the "dream of al-Ma'mūn" should not be taken at face value as a record of the caliph's interest in the Greek legacy, even though there is no scholarly consensus on the origin and purposes of the forgery.[53] What is sure is that the *Letter of the Golden House* was read to al-Maʾmūn,[54] and it is noteworthy that the list of Aristotle's works translated in his times and even in close relationship with his court[55] matches that of the topics dealt with in the *Letter*. I mentioned al-Maʾmūn's court, and an explanation is in order here. A turning point in the scholarship on the Graeco-Arabic translations is the discovery made by Gerhard Endress[56] that some of these translations share linguistic features pointing to a common origin. Endress has convincingly shown that they sprang from a circle of scientists and translators interested in the "sciences of the Ancients,"[57] a circle named by Endress after its leader: al-Kindī (d. *c*.870), the first philosopher to write in Arabic,[58] the philosopher of al-Ma'mūn's court.[59] Let us now recall that the *Letter* contained, after the admonition to admire the cosmos more than the marvels made by men's hands, an account of "the countries, seas, spheres, stars, meteorological phenomena and other things which occur in the atmosphere,"[60] and indeed among the translations made within the circle

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[51] See al-Nadīm 1970: 583 (trans. Dodge); 1871–1872: 243.1–9; 1971–1973: 303.23–304.2. The story is recorded with slight differences also in other sources that have been compared with one another by van Koningsveld 1998 and Gutas 1999.

[52] According to al-Masʿūdī in the text quoted above, n. 39, "Aristotle" gave to Alexander instructions about "the behaviour which he should adopt in matters of religion and kingship," and so does in the dream "Aristotle" to his new pupil, the caliph of the Islamic empire.

[53] The different interpretations by van Koningsveld and Gutas (see n. 9 and n. 51) cannot be summarized here.

[54] Stern 1964: 197.

[55] The princely library, known as the "Bayt al-ḥikma" (House of Wisdom) has been connected in various ways to the translation movement: see Endress 1987: 423–429; Balty-Guesdon 1992; Micheau 1997; and van Bladel and Gutas 2009.

[56] Endress 1973.

[57] On the distinction between the Qur'anic sciences and the philosophical and scientific fields of knowledge, also named the "sciences of the Ancients" (*al-ʿulūm al-qadīma*), see Endress 1987: 400.

[58] Endress 1997b and 2007.

[59] Some of al-Kindī's works are dedicated to al-Maʾmūn, and he was appointed tutor to a son of his successor al-Muʿtaṣim. On al-Kindī's place in the court, see Rosenthal 1942; for an overview, see Atiyeh 1966 and Adamson 2007a.

[60] See above, n. 39.

of al-Kindī we find the *De Caelo*,[61] a compendium of the *Meteorologica*,[62] the *De generatione animalium* and *De partibus animalium*, merged together into the *Book of Animals*.[63] Also, a translation of the first four books of the *Physics* is attributed by the ancient sources to a scholar who held scientific relationships with al-Kindī, Qusṭā ibn Lūqā,[64] while one of the translators of the circle of al-Kindī, the Syriac Christian Ibn Nāʿima al-Ḥimṣī, is credited with the translation of the last four.[65] This does not mean that the scholars of this milieu paid no attention to Aristotle's logical works; indeed, a translation of the *Sophistici Elenchi* made by the same Ibn Nāʿima al-Ḥimṣī is recorded in the sources,[66] and there is also a tiny trace of a translation of the *Prior Analytics*.[67] However, a prominent feature of this group is the interest in Aristotle's cosmology (*Physics*, *De Caelo*, and *Meteorologica*) as well as in his account of the laws of nature within the world of coming-to-be and passing away (*Book of the Animals*).

Even more decisive for the entire history of Arabic-Islamic philosophy was the translation of the *Metaphysics* made on the demand of al-Kindī.[68] This work was so important for him that he wrote a treatise of his own, following in the footsteps of the *Metaphysics* as for the subject matter and title – *On First Philosophy*[69] – even though the flow of the argument reflects the eclectic sources that al-Kindī tried to combine in one and the same account.[70] Another focus of the circle of al-Kindī was Aristotle's doctrine of the soul: not only the *Parva Naturalia* were translated,[71] but also the

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[61] Aristotle 1961a. According to the *K. al-Fihrist*, the translation was made by Ibn al-Biṭrīq (see al-Nadīm 1871–1872: 250.28 and 1971–1973: 311.12), one of the scholars of the Kindī's circle (see Dunlop 1959). However, what has come down to us is not this translation, but a reworking of it: Endress 1966 and 1995; and Hugonnard-Roche 1989.

[62] Schoonheim 2000. See the review of C. Petraitis' edition of the *Meteorologica* (Ibn al-Biṭrīq 1967) by Endress 1974 and Schoonheim 2003.

[63] The Arabic translation of the *K. al-Ḥayawān*, "Book of Animals" (i.e. a selection from *De gen. an.* and *De part. an.*) is attributed to Ibn al-Biṭrīq (see al-Nadīm 1871–1872: 251.26 and 1971–1973: 312.8; see Brugman and Drossaart Lulofs 1971; and Kruk 1979 and 2003.

[64] Both this translation and Books v–viii of the *Physics* attributed to Ibn Nāʿima al-Ḥimṣī were accompanied by Philoponus' commentary: see al-Nadīm 1871–1872: 251.18 and 1971–1973: 311.1.

[65] Lettinck 1994 and 2002.

[66] Al-Nadīm 1871–1872: 249.26–28; 1971–1973: 310.9–10; the dossier of the Arabic *Soph. El.* is complicated; see Hugonnard-Roche and Elamrani-Jamal 1989: 526–528.

[67] Endress 1997b.

[68] Al-Nadīm 1871–1872: 251.27–28; 1971–1973: 312.14. This translation is available through the lemmata of Averroes' *Great Commentary on the Metaphysics* for most books in Averroes 1938–1952; see also Martin 1989 and Bonadeo 1989.

[69] See above, n. 4.

[70] Chiefly Philoponus' *De Aeternitate mundi contra Proclum* and Proclus' *Elements of Theology*, both translated into Arabic in this span of time.

[71] Daiber 1997: 36–41 and Hansberger 2007.

De Anima was known to some extent, namely, through a compendium of clear Neoplatonic bent.[72]

An interesting feature of some of the translations produced within this milieu is the reworking that takes the form of a selection and at times transposition of parts. The creation of the *K. al-Ḥayawān* out of the *De Generatione animalium* and *De Partibus animalium*, as well as that of the *K. al-ḥiss wa-l-maḥsūs* out of the *Parva naturalia* plus other sources bear witness to this,[73] as does the transposition of parts within the *Meteorologica*.[74] In the same vein, it has been advanced that the puzzling "inversion" of the first two books of Aristotle's *Metaphysics* in the Arabic version might reflect the fact that this circle privileged those parts of the *Metaphysics* that suited better the image of an Aristotle who, instead of harshly criticizing Plato, was his faithful pupil and exegete.[75] However, no better example of such reworkings can be given than the so-called *Theology of Aristotle*, the most famous pseudo-Aristotelian text of the entire Arabic-Islamic philosophy,[76] which was produced within the circle of al-Kindī out of Plotinus' *Enneads* IV–VI.[77] The translation of selected Plotinian treatises was made by Ibn Nāʿima al-Ḥimṣī and the Arabic text was "corrected" by al-Kindī himself.[78] The order of Plotinus' treatises as they appear in the *Enneads*, and at times even the order of the parts within each treatise, is changed with respect to the Greek original; the adaptations to the mono-theistic creed either of the translator (the Christian Ibn Nāʿima al-Ḥimṣī), or of the intended audience (the Muslim Aḥmad, son of the caliph al-Muʿtaṣim), or both, are countless; the new text resulting from these adaptations is presented as being the "Book by Aristotle the Philosopher, called in Greek *Uthūlūjiyyā*, i.e. the discourse about God's sovereignty."[79] Endorsing a passage where Plotinus speaks in the first person, "Aristotle" presents the following account of his separation from sense–perception and his ascent to the intelligible realm until he reached the direct vision of the divine light:

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[72] Arnzen 1998; see also Arnzen 2003 and Sebti 2007.   [73] See above, n. 63 and n. 71.

[74] Endress' review of Petraitis' edition of the Arabic translation of the *Meteorologica* (see above, n. 62) calls attention to the transposition of parts, as well as to the monotheistic adaptations of Aristotle's wording and thought.

[75] See Bonadeo 2002 and D'Ancona 2006.

[76] Aristotle is credited with a *Theology* in the *K. al-Fihrist* (see al-Nadīm 1871–1872: 252.4; 1971–1973: 312.20) and one of the most famous passages of the *pseudo-Theology* (see below, n. 78) is quoted as being Aristotelian in al-Fārābī 2008: 74.5–15; and 2001: 116–167, esp. 164–165.

[77] Endress 1973; Aouad 1989c; D'Ancona 2001 and 2010.   [78] Pseudo-Aristotle 1966: 3.7–9.

[79] Ibid. 3.4–5.

Often have I been alone with my soul and have doffed my body and laid it aside and become as if I were naked substance without body, so as to be inside myself, outside all other things. Then do I see within myself such beauty and splendour as I do remain marvelling at and astonished, so that I know that I am one of the parts of the sublime, surpassing, lofty, divine world, and possess active life. When I am certain of that, I lift my intellect up from that world into the divine world and become as if I were placed in it and cleaving to it, so as to be above the entire intelligible world, and seem to be standing in that sublime and divine place. And there I see such light and splendour as tongues cannot describe nor ears comprehend.[80]

This speaker, who describes in a purely Neoplatonic vein his concentration on interiority and ascent to the intelligible realm, also affirms he has written the *Theology* in order to complete the exposition of the four causes he had previously done in the *Metaphysics*. He will do that through another account, this time on the suprasensible principles: the First Cause, Intellect, and the Soul.[81]

Not only did the "Aristotle" of al-Kindī's circle write a *Theology*, he also authored a *Book on Pure Goodness* in axiomatic form.[82] The *Book on Pure Goodness* which was to become the *Liber de Causis* of the Latin Middle Ages consists of propositions taken from Proclus' *Elements of Theology* in Arabic translation,[83] rearranged in a new order, adapted in the same vein and with the same terminology as in the *Theology*, and attributed to Aristotle, as the *Theology* was. In the *Liber de Causis*, Proclus' One becomes the First Cause, God Almighty, the true and perfect Agent, the pure Being. A hierarchy of degrees of reality – the Intellect and the separate substances, the universal Soul, and the celestial ensouled spheres – proceed from the First Cause making its power emanate everywhere, even within the sublunar world. The translation and adaptation of some writings by Alexander of Aphrodisias[84] adds to this picture the framework of a cosmos where the perfect regularity of the celestial movements and the teleology immanent in the laws of nature conveys the divine providence to the lower levels of being, without any need for the First Cause to impart its rule through a motion or instruments, as a craftsman does when building an artifact. One of the prominent features of both the *Theology* and the *Liber de Causis* lies in that the first principle, insofar as it is pure Being, acts through its being alone (*bi-anniyyatihi faqaṭ*). This means that the true and perfect Agent of the Arabic pseudo-Aristotelica acts according to the Plotinian model of the

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[80] Ibid. 22.1–9B, reflecting (with adaptations) Plotinus (trans. Lewis) 1959: 225.
[81] Pseudo-Aristotle 1966: 4.10–6.6.   [82] Bardenhewer 1882; Aristotle 1955.   [83] Endress 1973.
[84] D'Ancona 2010.

intelligible causality, a model that Plotinus had applied not only to the Forms but also to the One, whose effects derive from it because it is what it is, with no change whatsoever.[85] This tenet flies in the face of any anthropomorphic account of divine causality, but in the whole of the Arabic pseudo-Aristotelica there is no trace of hesitation in the use of the term "creation out of nothing (*ibdāʿ*)"[86] to convey this idea. One may think that this demands much of the reader, but the fact remains that both in the *Theology* and in the *Liber de Causis* "Aristotle" frames his account of divine causality against the backdrop of the view that "creation" means production of being out of nothing which falls within the province of the First Cause alone. An explicit effort is made in the *pseudo-Theology* to disentangle the term "creation" from any anthropomorphic implication.[87]

The adoption in the writings issued from the circle of al-Kindī of the Neoplatonic doctrine of causality as the philosophical content of "creation out of nothing" was a decisive move, and even more decisive was the attribution to Aristotle of this philosophically oriented idea of creation. In the set of texts that forms the core of this early "Arabic Aristotle" the true Agent, which is the One, creates through its being alone; its first and highest effect is the intelligible being; through the mediation of this first creature, the lower levels of being are created. The separateness of the First Cause does not hamper its providence; indeed, it counts as the ratio of its primacy. All this is "Aristotle's" doctrine:

> The first cause rules all created things without being mixed with them. This is because rule does not weaken its unity, exalted over everything, and does not destroy it, nor does the essence of its unity, separated from other things, prevent it from ruling things. This is because the first cause is fixed, ever abiding steadfastly with its pure unity. And it rules all created things and infuses them with the power of life and [with] goodnesses according to the mode of their powers to receive and their possibility. For the first goodness infuses all things with goodnesses in one infusion. But each thing receives that infusion according to the mode of its power and its being ... Therefore, let us return and say that every agent that acts through its being alone is neither a connecting link nor another mediating thing. The connecting link between an agent and its effect is nothing but an addition to being, as when an agent and its effect are through an instrument and [the agent] does not act through its being ... As for the agent that is such that between it and its act there is no connecting link at all, this agent is a true agent and a true

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[85] *Enn.* V 1[10], 6.25–40.

[86] "*ibdāʿ* " is defined as "making things appear out of nothing (*iẓhāru shay'in ʿan lays*)" (al-Kindī 1950–1953: 165.11).

[87] Pseudo-Aristotle 1966: 27.7–28.3; Plotinus 1959: 231.

dispenser of providence which effects things with the utmost and ultimate of thoroughness and which directs its act with the utmost of providence. This is because it rules things through the mode in which it acts, and it acts only through its being.[88]

This Neoplatonic account in which creation and providence stem from the very nature of the principle includes also the explanation of the hierarchy of reality in terms of the different capacity each degree has to participate in the unique and changeless emanation from the principle. One may think that such an account should have cast serious doubts on the Aristotelian authorship of the *Theology*. However, in the Prologue of this work, "Aristotle" puts on equal footing the causality of the Immobile Mover of the *Metaphysics* and the changeless emanation from the principle, "This action arises from it without motion (*bi-ghayr ḥaraka*); the motion of all things comes from it and is caused by it, and things move towards it by a kind of longing and desire."[89] This elicits the conclusion that in the formative period of Arabic-Islamic philosophy the theology of Book *Lambda* and Plotinus' metaphysics of the One were compared to one another, and interpreted as fully compatible with one another.

Nothing prevents some of the effects of the First Cause from being eternal while being created. It is worth noting that in the *Letter of the Golden House* "Aristotle" makes no effort to conceal his conviction that the duration of the cosmos is infinite in time,[90] and in the *Liber de Causis*, the First Cause which is above eternity creates three levels of being: the intelligible realm, which is the eternal, properly speaking,[91] the "sempiternal substances," which are in motion for an infinite stretch of time, and the substances of the sublunar world, whose existence is limited to a given span of time. Only the First Cause is the uncreated Creator of being; whatever else is created, no matter if truly eternal, or endowed with an infinite temporal duration, or submitted to time.[92] Once "Aristotle" has stated this, his fellow *falāsifa* will see no contradiction at all in stating that there are three kinds of substance – eternal, sempiternal, and temporal – *and* that all of them are created. "Aristotelian" philosophers of a later age, like al-Fārābī (d. 950), will

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[88] Aquinas 1996: §19, 120–121 (trans. Taylor); Bardenhewer 1882: 95.1–97.7; Aristotle 1955: 20.10–21.15.
[89] Aristotle 1955: 6.11–12; Plotinus 1959: 487, obviously alluding to *Metaph.* XII.7, 1072b 3, κινεῖ δὴ ὡς ἐρώμενον.
[90] See above, n. 39.
[91] Aquinas 1996: §2; Bardenhewer 1882: 61.11–63.3; Aristotle 1955: 4.17–5.8.
[92] Aquinas 1996: §30; Bardenhewer 1882: 113.10–115.6; Aristotle 1955: 30.9–31.9.

endorse precisely the meaning of "creation" as an act accomplished in no time[93] which is implied in the topic of the Intellect as the first creature of the First Principle prominent in the *pseudo-Theology* and in the *Liber de Causis*. From this point of view, the position of al-Fārābī is rooted in the doctrines of "Aristotle" shaped within the circle of al-Kindī: al-Fārābī suggests that according to Aristotle the highest part of the cosmos is eternal,[94] and at one and the same time boldly proclaims that only Aristotle has provided the foundations for the idea of creation out of nothing, whereas the accounts given in the Qur'ān do not go beyond the anthropomorphic image of a craftsman operating on pre-existing matter.[95]

A quasi-contemporary of al-Kindī, the Christian doctor Ḥunayn ibn Isḥāq (d. 873), and a group of translators associated with him in various ways – first and foremost, his son Isḥāq ibn Ḥunayn (d. 911) – produced many other translations of medical, astronomical, mathematical, and philosophical works.[96] Among these translations, the Aristotelian corpus stands out: the logical works (*Categories*,[97] *De Interpretatione*,[98] *Prior Analytics*,[99] *Posterior Analytics*,[100] *Topics*,[101] *Rhetoric*),[102] the *Physics*,[103] *De Caelo*,[104] *De Generatione et*

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[93] Al-Fārābī 1985b: 92.8–10, 93: "Nor is it [i.e. the First] in need, in order for the existence of something else to emanate from its existence, of anything other than its very essence, neither of a quality which would be in it nor of a motion (*wa-lā ḥaraka*) through which it would acquire a state which it did not have before, nor of a tool apart from its essence."

[94] Mahdī 1967: esp. 256; 1972: 268–284, esp. 275–276. That the highest part of the cosmos is incorruptible is stated in as many words also by al-Kindī 1950–1953: 257.7 and 1999: 195.4.

[95] Al-Fārābī 2008: 66.2–67.3, 157–158.

[96] On Ḥunayn and his "school" see Bergsträsser 1913; Gabrieli 1924; Meyerhof 1926; the 1974 issue of the journal *Arabica* is entirely devoted to Ḥunayn; Strohmaier 1990; Brock 1991; Watt 2004.

[97] Al-Nadīm 1871–1872: 248.20; 1971–1973: 309.4 attributes this translation to Ḥunayn, but in the MS it is attributed to Isḥāq, see Aristotle 1980; Hugonnard-Roche 1993.

[98] Al-Nadīm 1871–1872: 249.1; 1971–1973: 309.12 claims that Ḥunayn made the Syriac translation and Isḥāq the Arabic one; Aristotle 1980.

[99] Al-Nadīm 1871–1872: 249.6; 1971–1973: 309. 17; Aristotle 1980; Hugonnard-Roche and Elamrani-Jamal 1989: 516–520.

[100] Al-Nadīm 1871–1872: 249.11–12; 1971–1973: 309.23; Hugonnard-Roche and Elamrani-Jamal 1989: 520–521 and 521–524. This translation, lost to us, provided the basis for the Arabic version that has come down to us.

[101] Al-Nadīm 1871–1872: 249.15–16; 1971–1973: 309.27–28; Aristotle 1980; Hugonnard-Roche and Elamrani-Jamal 1989: 524–525.

[102] Al-Nadīm 1871–1872: 250.1; 1971–1973: 310.13; Lyons 1982; Watt and Aouad 2003.

[103] Isḥāq was the author of the Arabic translation of the *Physics* that has come down to us in the MS Leiden, Bibl. der Rijksuniversiteit, *or.* 583 (see Aristotle 1984a); a translation of Books IV–V is attributed to another translator of this circle, Abū 'Uthmān al-Dimashqī in al-Nadīm 1871–1872: 250.14; 1971–1973: 310.25; see Lettinck 1994.

[104] Al-Nadīm 1871–1872: 250.28–29; 1971–1973: 311.12 mentions Ḥunayn's revision of the old version made by Ibn al-Biṭrīq.

corruptione,[105] *De Anima*,[106] *Metaphysics*,[107] and the *Nicomachean Ethics*.[108] To this impressive series of Aristotelian works, a number of pseudepigraphical writings should be added.[109]

A prominent feature of this group of translations lies in that they have been done with philological care,[110] often in two steps, from Greek into Syriac and from Syriac into Arabic, and in a style that privileges the rendering of the sentence as a whole over the word-for-word style of some of the translations of the circle of al-Kindī.[111] Even more important for the purposes of the present survey is the fact that this gigantic effort put at the disposal of the Arab learned audience the Aristotelian corpus almost in its entirety.

In al-Fārābī's eyes, the Aristotelian corpus is a systematic whole. Aristotle shares with Plato the idea that philosophy is the means to reach the perfection of man: the knowledge of truth in which consists man's ultimate happiness. However, Aristotle's way to this is more comprehensive than Plato's, starting as it does from the most elementary conditions of knowledge and ascending step by step toward the peak of the human capacity to understand. To this broader approach a much more systematic structuring corresponds in Aristotle's work with respect to Plato's. Aristotle's bottom-up path begins with logic and proceeds upwards through physics to eventually reach the metaphysics. According to al-Fārābī, Aristotle had conceived of each of his writings as part and parcel of a systematic account with a unitary aim and a propaedeutic approach: he decided to write down the parts of this whole one after another according to a carefully planned structure. The latter follows the path laid in late Antiquity: from logic to the natural sciences, and from nature to the suprasensible realm:

> Aristotle sees the perfection of man as Plato sees it and more. However, because man's perfection is not self-evident or easy to explain by a demonstration leading to certainty, he saw fit to start from a position anterior to that from which Plato had started . . . Therefore Aristotle saw fit to make known at the outset what the certain science is, how many classes it has, in which subjects it exists . . . According to him, therefore, there emerge three sciences: the science

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[105] Al-Nadīm 1871–1872: 251.3; 1971–1973: 311.1; this translation is lost, but Kraus 1942–1943 has discovered some chapters of the Arabic *De Gen. corr.* in the alchemic corpus attributed to Jābir ibn Ḥayyān; see Rashed 2003.

[106] Al-Nadīm 1871–1872: 251.11–18; 1971–1973: 311.24–312.3; Aristotle 1954; Elamrani-Jamal 2003.

[107] Al-Nadīm 1871–1872: 251.26; 1971–1973: 312.12 mentions Isḥāq's translation of book *alpha elatton* and alludes to his translation of other books; see Martin 1989 and Bonadeo 2003.

[108] Al-Nadīm 1871–1872: 252.2; 1971–1973: 312.19; Duniop 2005 (Akasoy and Fidora 2005); Zonta 2003a.

[109] The most important are the *Problemata physica*, the so-called *De Lapidibus*, the De Plantis, the *Physiognomica*, and *De Virtutibus et vitiis*.

[110] Bergsträsser 1925: 20–21; Rosenthal 1975: 20–21; Degen 1981.   [111] Rosenthal 1975: 17–18.

of logic, natural science, and voluntary science ... Therefore he began first to investigate and enumerate the instances of being from which the first premises are compounded, that contain the questions to be investigated, and that are the primary significations of the expressions generally accepted by all ... He confined all of them to the ten genera, called them categories, and set them down in a book called in Greek *Kategorias* and in Arabic *al-Maqūlāt* ... Then afterwards he proceeded to make known what actions the art of logic takes with regard to them and how it employs them ... This is to be found in a book by him which in Arabic is called *al-ʿIbāra* and in Greek *Peri Hermeneias* ... Then, after that, he made known how premises are compounded and paired together ... He made known the mode of using these rules in every rational art that uses reasoning and investigation ... He placed these rules in a book he called *Analytika* ... Then, after that, when he had completed these matters, he set out upon natural science. He turned once again to the instances of being he enumerated in the *Categories* ... This is the sum of the axioms of natural science that he presented in a book of his called *Lectures on Physics* ... When this had become evident to him, he proceeded to discourse about these primary bodies and to speak of others posterior to them ... All this is to be found in a book of his that he called *On the Heaven and the World*. Then he began, in another book, from the final point reached in *On the Heaven and the World* ... When he had exhausted all of this, he investigated afterwards in what manner the four bodies are elements ... All these things are to be found in a book of his known as *On Generation and Corruption* ... Then afterwards he set out to conduct a general inquiry into the bodies that originate in the combination of these four elements with each other ... All these things are to be found in a book he called *Meteorology* ... When he had exhausted all of this, he suddenly saw that nature and natural principles are not sufficient in most matters relating to animals; no, in addition to nature and to natural principles, one requires another principle ... This other principle is the soul ... Then he investigated whether the Active Intellect is also the cause of the existence of nature and natural things and of the soul and animate things ... Therefore Aristotle proceeded in a book that he called *Metaphysics* to inquire into, and to investigate, the beings in a manner different than natural inquiry.[112]

Al-Fārābī had neither Greek nor Syriac, but his teachers of philosophy in Baghdād were both Christians from Syria.[113] The last set of translations into Arabic has been produced within the circle of the so-called "Aristotelians of Baghdād,"[114] this time out of the earlier Syriac versions and with no recourse to the Greek originals. The leader of this group was one

[112] Al-Fārābī 1961a: 59–132 and 1962: 71–130 (trans. Mahdī).
[113] One of these teachers is mentioned by al-Fārābī himself in his *On Philosophy and the Causes of Its Rise*, lost but quoted by Ibn Abī Uṣaybiʿa; Gutas 1999; Habby 1997. The other teacher was Abū Bishr Mattā ibn Yūnus.
[114] On the relationship between al-Fārābī and his Christian teachers and pupils, see Kraemer 1992: 77 and Ferrari 2005.

of the two teachers of al-Fārābī, Abū Bishr Mattā ibn Yūnus (d. 940).[115] His successor in the leadership of the circle was another Christian, who had been Fārābī's condisciple in the circle of Abū Bishr Mattā: Yaḥyā ibn ʿAdī (d. 974), a scholar who did not limit himself to translate philosophical works,[116] but was also a prolific writer in both secular and religious fields,[117] and often the source of information on Greek texts for Ibn al-Nadīm, whose *K. al-Fihrist* has been quoted so many times in this survey. The focus of this circle was the interpretation of Aristotle: to the commentaries translated in earlier stages (chiefly by Ḥunayn and Isḥāq) other commentaries were added, this time authored by these Arab Aristotelians themselves. Since then, Greek will be flanked not only by Latin, but also by Arabic in the task of expounding Aristotle's doctrines, even though the full-fledged Arabic commentary on Aristotle belongs to a later age and a different scenario: that of the Muslim West, al-Andalus, with the towering work of Averroes. In the East of the Muslim world, Avicenna had harshly criticized the Baghdād Aristotelians and their erudition,[118] but he himself, as Averroes will do much later, did rely on the Arabic Aristotle created in the process of translation and assimilation that I have tried to outline so far.[119]

II   The Arabic Aristotle and beyond

A general survey on the translations of philosophical works from the end of Antiquity to the Middle Ages would easily show that Aristotle's corpus counts as the red herring of this passionating history of continuity and adaptations.[120] From the Graeco-Latin translations of the end of Antiquity to the Graeco-Syriac and Graeco-Arabic translations of the sixth to the tenth centuries, from the Graeco-Latin translations of the first half of the twelfth century to the Arabo-Latin versions of the second half of the same

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[115] Abū Bishr Mattā translated into Arabic the Syriac version of the *Posterior Analytics* made by Isḥāq (al-Nadīm 1871–1872: 249.12; 1971–1973: 309.23), the *Poetics* (al-Nadīm 1871–1872: 250.4; 1971–1973: 310.16), the *De Caelo* (al-Nadīm 1871–1872: 250.29; 1971–1973: 311.12); the lemmata of the *De Gen. et corr.* (al-Nadīm 1871–1872: 251.4; 1971–1973: 311.18); the *De Sensu et sensato* (al-Nadīm 1871–1872: 251.20; 1971–1973: 312.2). According to Ibn al-Nadīm 1871–1872: 251.28; 1971–1973: 312.14–15, Abū Bishr Mattā re-translated also *Metaphysics* XII together with Alexander's commentary. Even though this translation is lost, several long quotations from it are preserved in Averroes 1938–1952: cxxx.

[116] Among his translations, there are two Aristotelian works: the *Topics* (al-Nadīm 1871–1872: 251.15–16; 1971–1973: 309.27); and the *Soph. el.* (al-Nadīm: 1871–1872: 249.27; 1971–1973: 310.9); see Hugonnard-Roche and Elamrani-Jamal 1989.

[117] Endress 1977; Platti 1983.   [118] Pines 1952.

[119] Discussing this point would exceed the limits of this chapter, but a comparison between the Farabian account of Aristotle's system and the plan of Avicenna's *Kitāb al-Shifāʾ* might be telling.

[120] D'Ancona 2007.

century and the first decades of the thirteenth century, from these to the Graeco-Latin translations of William of Moerbeke in the second half of the century, an uninterrupted chain of transmission has fostered the reading of Aristotle's works in the various languages of culture: Latin, Syriac, Arabic, and Latin again, not to mention the translations from Arabic into Hebrew which will appear a bit later.

Any attempt to single out in a short and comprehensive formula the aspects of continuity and the repeated adaptations that compose this multifarious history would be preposterous. Having insisted above on the formative period of Arabic-Islamic philosophy, I shall focus on only one point: the image of the Aristotelian philosophy as a systematic whole, in which the topic of the ascent from logic to physics and from physics to metaphysics goes hand in hand with the idea that metaphysics is, in turn, crowned by rational theology. This image, whose relationship with the late Neoplatonic model of Aristotle's system as an introduction to Plato's "Great Mysteries"[121] has not yet been explored in depth, was created within the circle of al-Kindī. Its reappearance in the Latin universities of the thirteenth century was, once again, due to a translation.

The last arcade of the bridge from Late Antiquity to the Middle Ages is located in the West. We are in Toledo, in the second half of the twelfth century. A *clericus vagans*, Gerard, from the Italian town, Cremona, travels to this Andalusian town which is from some sixty years ago Christian again, after about four centuries of Muslim rule. What he is looking for is a copy of the *Almagest*, and he is lucky enough to find it and to translate it into Latin, together with an impressive amount of scientific and philosophical works – both Graeco-Arabic translations, and original writings by Arab authors. Gerard's activity as a translator lasted for some forty years: arriving in Toledo in 1144, he died there in 1187. During this time, several pupils and *socii* collaborated with him in the translation activity, and immediately after his death they dressed a list of Gerard's translations.[122] Among them, the *Liber Aristotelis de expositione bonitatis purae*, our *Liber de Causis*.

It is well known that the first circulation of the so-called *libri naturales* by Aristotle produced an enthusiastic impact on the late twelfth and early thirteenth century scholarship. They were mixed with such a prominent charge of heterodoxy – due to the fact that they also traveled together with a large amount of magic and astrological works[123] – that in 1210 and 1215 the staff of the Paris University prohibited to give public lectures on them. But in fewer than forty years the situation was totally reversed. In the Statutes

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[121] Marinus 2001: §§13.1–10, 15–16 and 108–110.   [122] Burnett 2001.   [123] Burnett 2005.

of 1255, the same university imposed the reading of the entire Aristotelian corpus in order to get the degree of *magister artium*. A document discovered by Martin Grabmann toward the end of the nineteenth century shows that even before the Statutes of 1255 the list of the works to be read to get the degree included the entire corpus.[124] This document, the *Compendium examinatorium parisiense*, can be traced back to the 1230s or 1240s; we are told that Aristotle's metaphysics is contained in three books:

> et haec scientia habet tres libros. Unus appellatur Vetus Metaphysica . . . alius liber est qui dicitur Metaphysica Nova . . . et continet x libros partiales. Et sic in tota metaphysica sunt xɪ libri.

The anonymous *magister artium* who is drawing up the list of the texts to be read for the exams records two of the various translations of Aristotle's *Metaphysics* then available: one is from Greek, the other from Arabic. The *Metaphysica vetus* designates the first Graeco-Latin translation by Jacob of Venice,[125] and the *nova* is the Arabic–Latin version, probably by Michael Scotus.[126] According to this scholar, there is another item among Aristotle's books on metaphysics, the *Liber de Causis*:

> et ibi agitur de substantiis divinis in quantum sunt principia essendi et influendi unam in alteram, secundum quod ibidem habetur quod omnis substantia superior influit in suum causatum.

The Statutes of 1255 will endorse the structure of Aristotle's metaphysics mirrored in this account, and prescribe that courses must be taught on Aristotle's *Metaphysics* and the *Liber de Causis*. The latter was to be read during seven weeks.[127] The late ancient model of crowning Aristotle's metaphysics with the account of the supra-sensible realm of the principles One, Intellect, and Soul would hardly have had so clear an echo in the universities of the Latin Middle Ages without the activity of the circle of al-Kindī in ninth-century Baghdād and without the dissemination of the Aristotelian and pseudo-Aristotelian works into the Arabic language in the West of the Muslim world.

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[124] Grabmann 1941; Lafleur 1988, 1995, and 1998; and Lafleur and Carrier 1997.

[125] Aristotle 1970a; Minio-Paluello 1952: 265–304.

[126] The so-called *Metaphysica nova*, preserved in some fifty MSS, consists of the lemmata extracted from Averroes' *Great Commentary* in Latin translation (probably by Michael Scotus). Incomplete, it has not yet been edited.

[127] Saffrey 1954: xix and n. 3 (referring to the *Chartularium Universitatis Parisiensis*); De Libera 1997.

The division of the categories according to Avicenna

Paul Thom

Aristotle gives what looks like exhaustive lists of the categories – different ones in different places.[1] He nowhere gives any reason for thinking that any of the lists is exhaustive. His silence on that question might be taken as an invitation for constructive interpretation; and it was so taken by several of the ancient Greek commentators, who devised arguments which, by dividing being (or some other very general class) successively into sub-classes, arrived at a conclusion about the number and identity of the categories.[2]

The project of constructing a division from which one could deduce the ten Aristotelian categories was taken up by some of the Arabic philosophers, including al-Kindī. In his work, *On the Quantity of Aristotle's Books and on What Is Required for Attaining Philosophy*, al-Kindī divides beings into Substances and the predicates of Substance, the latter being subdivided into those that are 'primary and simple' and those that are compound. The simple predicates are of two kinds, depending on whether they vary according to equality and inequality (these are the Quantities), or according to likeness and unlikeness (these are the Qualities). The compound predicates are subdivided into those that exist "without matter" and those that exist "with matter." The former class are the Relatives. The latter consist of a combination of Quantity with Substance (and this is the category of Where if the Quantity is a place, or the category of When if the Quantity is a time), or a combination of Quality with Substance (and, because powers are a kind of Quality, and powers are exercised in Acting and Being-acted-upon, this is either the category of Acting or the category of Being-acted-upon), or a combination of Substance with Substance

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[1] Aristotle, *Categories* 4 (10 categories) see *Physics* v.1, 225b5 and *Metaphysics* iv.7, 1017a25 (8 categories, omitting Position and Having).

[2] Simplicius 2003: 62.20ff. summarizes many of these arguments. Al-Fārābī gives a detailed discussion of some of the arguments favoring a list of fewer than 10 in his *Book of Letters* 1.11: §§53–4. trans. Butterworth, forthcoming.

(because this involves a spatial relationship between Substances, this is either the category of Having or the category of Position).[3] His division is shown in Figure 2.1.
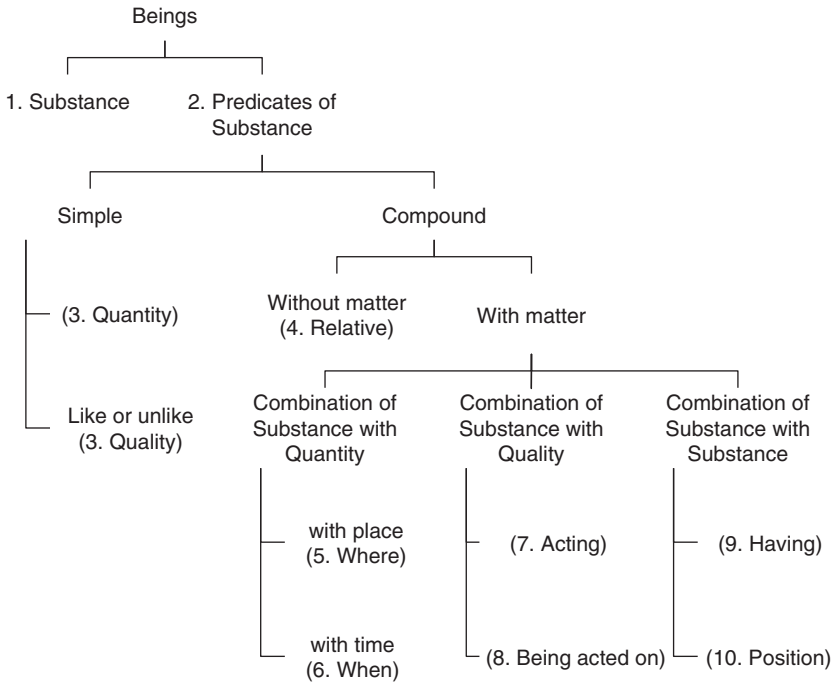
Beings

1. Substance   2. Predicates of
                          Substance

Simple   Compound

(3. Quantity)   Without matter   With matter
                       (4. Relative)

Like or unlike   Combination of   Combination of   Combination of
(3. Quality)   Substance with   Substance with   Substance with
                     Quantity   Quality   Substance

                   with place   (7. Acting)   (9. Having)
                   (5. Where)

                   with time   (8. Being acted on)   (10. Position)
                   (6. When)

Figure 2.1 The categories according to al-Kindī

[3] "The primary and simple predicates of substance are two, quality and quantity, because everything that is a predicate that follows a substance varies either in regard to equal and unequal – which is the special property of quantity – or in regard to like and unlike – which is the special property of quality. As for the compound predicates of substance, they are also two: either what exists without matter or what exists with matter. As for what exists without matter, it is relation, because fatherhood and sonhood consist of the relation of each one of the two to the other, of what exists through the existence of the other, and of the part and the whole, for neither one of the two is associated with matter in its description. As for what exists with matter, it consists of the combination of quantity with substance, or quality with substance, or substance with substance. As for the combination of quantity with substance, it is like 'where,' because it contains the power of substance with place, and place is a quantity; or like 'when,' because it contains the power of time with substance, and time is a quantity. As for the combination of substance with quality, it is like 'acting,' because it contains the power of substance with acting, and acting is a quality; or like 'being acted upon,' because it also contains the power of substance with acting, and acting is a quality, as mentioned. As for the combination of substance with substance, it is possession, for it contains the power of a substance which the possessor and of substance which is the possession; and like position, for it contains the power of one substance on top of another, i.e. of a posited thing on top of another, and so it contains the power of two substances that are on top of each other by position" (trans. Gutas 2006. See al-Kindī 1950–53: 363–384).

Al-Kindī's division relies heavily on Greek sources. The overall division of Accidents (Quantity and Quality on one side, the remaining seven on the other, with Relatives counterposed to a group comprising three pairs) is found in Olympiodorus.[4] Olympiodorus' division is shown in Figure 2.2.
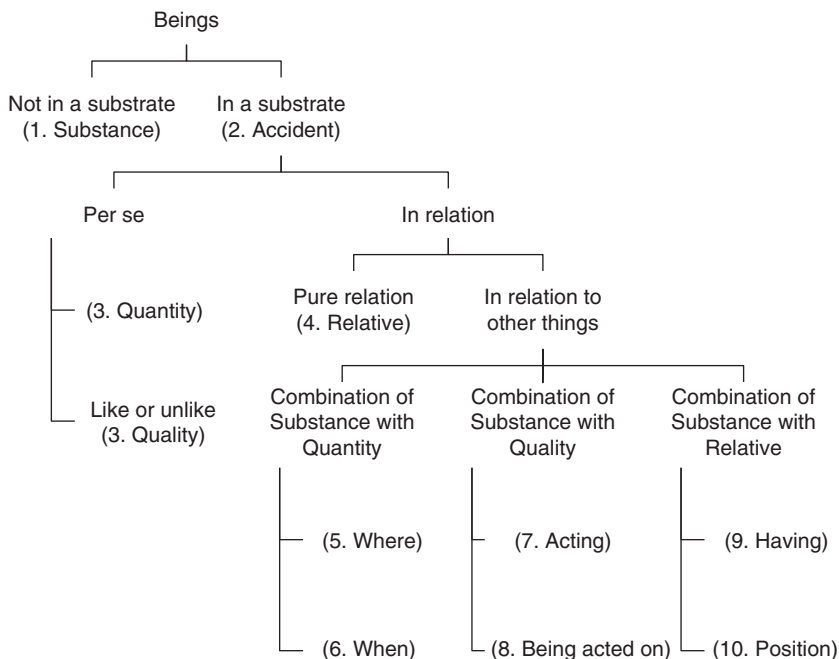

Figure 2.2 The categories according to Olympiodorus and Elias

Al-Kindī's overall structure is the same, but the conceptual base of his division differs in some details from that of Olympiodorus. He conceives of the primary cut as contrasting Substance with predicates of Substance, whereas Olympiodorus first divides beings into things in a substrate and things not in a substrate. Al-Kindī next divides the accidents into simple and compound, whereas Olympiodorus divides them into those that are

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[4] Olympiodorus 1902: 54, 3–24. The same division is in Elias 1900: 159, 14–33: "Being divides into 'In a subject' and 'Not in a subject.' 'Not in a subject' makes for Substance. If in a subject, then either *per se* or not *per se*. If *per se*, then either divisible [*meriston*] or indivisible [*ameriston*]. If divisible, it makes for Quantity. If indivisible, it makes for Quality. If not *per se*, if a *pure* relationship [*schesis monē*] it makes Relative. If *according to* a relationship [*kata schesin*] then Substance is mixed with the other three. From Substance and Quantity the When and Where. From Substance and Quality the Action and Passion. From Substance and Relative, Having and Position."

per se and those that are *in relation* (*en skhesei*). The last seven accidents, in al-Kindī's treatment, are either without matter or with matter, whereas in Olympiodorus they are divided into those that are in pure relation (Relatives) and those that are in relation to other things (the remaining six categories). Both thinkers conceptualize the last six categories by various combinations of the first four,[5] but where the conceptual basis of the last two categories in Olympiodorus is the combination of Substance with Relative, in al-Kindī it is the combination of Substance with Substance. Olympiodorus' base concepts are ontological (in a substrate, *kath' hauto*) whereas those of al-Kindī are logical (predicates of substance, simple). At the same time, al-Kindī has an ontological conception of the difference between relatives and the last six categories (as determined by the absence or presence of a reference to matter), whereas in Olympiodorus this difference is based on the difference between pure relation and relating to something else.

One may conjecture then that al-Kindī's division derives historically by an unknown route from Olympiodorus' division, and that along the way the conceptual transformations occurred as depicted in Table 2.1.

Table 2.1 *Conceptual differences between Olympiodorus and al-Kindī*

Olympiodorus	Al-Kindī
Per se / in relation	Simple / compound
Pure relation / in relation to other things	Without matter / with matter
The combination of Substance with Relative	The combination of Substance with Substance

Notwithstanding these differences, al-Kindī shares the Greek commentators' aim of constructing a deduction of the categories, and in many details his approach matches those of his Greek predecessors. Not so with al-Fārābī. He does not comment directly on al-Kindī's division – neither in his *Paraphrase of the Categories* nor in his *Book of Letters*. However, in the *Paraphrase of the Categories* he does reject the combinatorial approach to the last six categories, which al-Kindī took from the Greeks. Al-Fārābī voices his opposition to such an approach, in his discussion of the categories of Where and When, "The meaning of When is not time as such nor anything composed of substance and time, as some think . . . Where is the relation of the body to its place, but it is not the place, nor the combination

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[5] Olympiodorus 1902: 54, 3–24; Simplicius 2003: 149–150.

of body and place."[6] This rejection is consistent with what F. W. Zimmermann sees as al-Fārābī's low opinion of al-Kindī:

> Justly, al-Fārābī did not regard himself as a successor of al-Kindī. To us as to him, logic in Islam begins with al-Fārābī. Translations and a rudimentary terminology was all the desultory production of the ninth century contributed to the logic of the Aristotelian movement of the tenth. Early logical treatises tended to reproduce, usually with less than total understanding, derivative material from less than adequate manuals.[7]

More broadly, al-Fārābī did not regard himself as an inheritor of the Greek tradition – at least in respect of the project of deducing the number and identity of the categories.

Like al-Fārābī, Avicenna objects to any attempt to construct a deduction of the categories. In the first place, he observes, Aristotle himself made no such attempt.[8] And, second, in his judgment any such attempt must be vain.[9] The ten categories have to be irreducibly different from one another. So none of them has a genus.[10] Therefore no specific division can arrive at them. They can be arrived at, if at all, only by a process of non-specific partition. Like al-Fārābī, Avicenna rejects the idea that the last six categories are generated by the combination of Substance with other categories.[11]

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[6] Al-Fārābī 1958; 1959: §29.   [7] See Zimmermann in al-Fārābī 1981: cxxv, n. 1.

[8] Avicenna 1973: 7, 8: "What is significative of [the fact] that I have told you the truth is that these investigations have been omitted in the book that is the source [of these commentaries: sc., the *Categories* itself]" (trans. Bäck).

[9] Ibid. 6, 12: "You need to know that all their attempts to establish a number for these ten [categories] fail, and that he [Aristotle] did not take pains about it, and that each (category) has the property [of being] such [and such], and that nine of them are different from the first one in that it is substance and they are accidents, and so forth. Now they [these attempts] are explanations procured from other arts and there is every [sort of] inadequacy in them, since there is no way to knowledge of that except by a thorough examination, and there is no way to a thorough examination except after the attainment of the level of knowledge that is called first philosophy" (trans. Bäck).

[10] Ibid. 55, 8: "There do not exist constitutive *differentiae* for the highest genera. Rather, they are differentiated through their essences [per se]. Yet they would have had constitutive *differentiae* if they had genera above them" (trans. Bäck).

[11] Ibid. 232, 15: "Know that, just as the relationship is not a compound sense whose compounding makes necessary its being repeated between two things, since there are not two parts of it, but rather two objects external to it when it is attached to them both, likewise it is not necessary to suppose a compounding about the Where and When, for the reason that each of them has a relationship to something. So the relationship is not the thing having the relationship, nor is the thing having the relationship part of it, so that the totality is the relationship. The relationship here is a part due to its essence [per se], since the whole is an acquisition of a whole from things and from the combining itself. So the combining is like the form, and both are like the matter, and what is combined is like the compound, while the combining is a part of the compound, like the form. Since this is absurd, then neither the Where nor the When is a compound" (trans. Bäck).

But when, in the *Categories* section of *al-Shifāʾ*, he enters this dialectical field, he does so in a way that seems to be intermediate between the approaches of al-Kindī and al-Fārābī. Like al-Fārābī he offers a division of the categories, but unlike al-Kindī he describes the division he offers as merely an approximation, and offers what looks like a half-hearted defense of it.

Avicenna opens his discussion of the question of the completeness and correctness of the list of categories by canvassing a division of the categories which he says is 'widely accepted.' It seems that his reason for starting with this division is that he takes it as representative of such divisions. If so, then when he announces that it is only an approximation, we can assume he means that there is no fully satisfactory alternative to it. All the same, he seems to think that this division is not wholly lacking in merit, because he goes on to offer a partial defense of it. However (to complicate matters), this partial defense turns out to support not the stated division but a somewhat different one which more closely resembles his own way of conceptualizing the categories, as it is expressed in his other writings. All of this is rather puzzling, and I will offer a conjectural explanation of Avicenna's seemingly strange attitude toward the whole question of the division of the categories.

According to the 'widely accepted' way of conceptualizing the categories, Substance is opposed to the Accidents, and the accidental categories are divided into three triads. In the first triad (**A**) Quantity and Quality are grouped together with Position. The second triad (**B**) comprises When, Where, and Having. The third triad (**C**) contains Relative, Action, and Passion.[12] The division into Substance and accidents, and the subsequent division of accidents into the three triads, are shown in Figure 2.3.

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[12] Ibid. 83, 11: "As for the widely accepted division, what some of them say is: substance is one of the categories, no doubt about it. When we divide the nine [other categories], which are the accidents, into their ninths, the categories are completed (as) ten. Then they say: the accident is *either* [1] firmly set in its subject (as) not being found in it by reason of some other external thing, nor (as) needing a relationship to that external (thing) – and it is a threefold division: quantity and quality and position. *Or* [2] it is found in it externally, insofar as it does not have a need for an object emanating from itself. Rather, through a quality of existence an object is based externally upon it – and it is a threefold division: 'when' [time] and 'where' [place] and 'having.' *Or* [3] there is here an object coming about between it and something external, while it is not external only – and it is a threefold division: *relatum* and action and passion" (trans. Bäck).
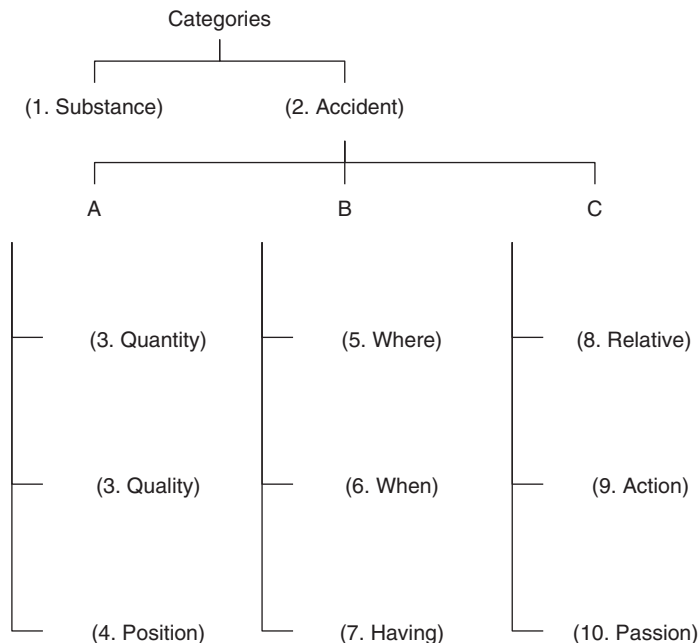
Figure 2.3 The categories according to the 'widely accepted' division
(Avicenna, *al-Shifā'*)

The origins of this division are not completely mysterious. A division that distributes the accidents into precisely these three triads is known in a fourth-century Latin Paraphrase of the *Categories*, which the Latin Medievals wrongly attributed to Saint Augustine, but which was composed or translated by a follower of Themistius.[13] The Themistian Paraphrase has a Greek source, and it would appear to share this source with the 'widely accepted' division of the categories to which Avicenna refers. I do not know who the people were who according to Avicenna accepted this 'widely accepted' division. It is possible that Avicenna found it among marginalia to a copy of an Arabic translation of the *Categories*.[14]

The conceptual basis of the Themistian Paraphrase has some interesting features. The basis for the division of accidents into the three triads is that the members of triad **A** are internal to the subject, the members of triad **B**

[13] Aristotle 1961b: 1.5, LXXVIII.
[14] Peters 1968a: 94: "The Baghdād glosses on the *Organon* are cumulative, written by succeeding scholars on the margins of the school texts in use there."

external, and the members of triad **C** both internal and external.[15] While the primary division into the **A, B**, and **C** classes is in this way a principled one, the secondary division of each of those classes into its three categories is not.

Avicenna's presentation of the 'widely accepted' division appears to be based on a version of these same notions. The members of triad **A** are characterized as being "firmly set in [their] subject (as) not being found in it by reason of some other external thing, nor (as) needing a relationship to that external (thing)."[16] This looks like an amplification of the notion of being internal to the subject into two elements: not inhering by reason of something external, and not requiring a relationship to something external. The members of triad **B** are "found in it externally, insofar as it does not have a need for an object emanating from itself. Rather, through a quality of existence an object is based externally upon it."[17] Again, this seems like an amplification of the simple idea of being external: the sense of externality is analyzed into two components. The members of triad **C** are described as "coming about between it and something external, while it is not external only."[18] Here, perhaps, we see an articulation of the idea of being both internal and external.

However, the cogency of this conceptual base is dubious. A division based on whether something is internal or external or both internal and external is a problematic one. If the internal and the external are supposed to be mutually exclusive classes then there is no possibility of a class in which they are combined. If they are not mutually exclusive, then the first two triads should be characterized as "internal and not external," and as "external and not internal" respectively. These observations do not figure explicitly in Avicenna's discussion, but they could hardly have escaped his notice.

The question therefore arises, Is there a better way of grounding the division? This, I suggest, is the question Avicenna is answering when, having condemned the division as "an approximation and not a close

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[15] Aristotle 1961b: 1.5, 144.19–145.6: "These ten categories, of which the first is *ousia*, and which supports the other nine *sumbebēkota* (i.e. accidents), of which nine some are internal to *ousia*, some external to *ousia*, and some both internal and external. Quality, Quantity and Position are internal to *ousia* (for … being biped or triped, or white or black, or standing or lying down, are in <*ousia*> and cannot be without it). Others (Where, When, Having) are external to *ousia* – for place does not pertain to *ousia*, and time and clothing or armor are separate from *ousia*. Others (Relative, Doing and Suffering) are common – that is, both internal and external. The Relative (like the greater and the lesser, neither of which can be said without that other than which it is greater or lesser, and thus they have one <thing> in themselves and another external). Again, Doing (e.g. cutting) is both internal and external, because it cannot be said unless something is cut, nor reading unless something other than the reader is read, so that it is both internal and external to *ousia*. Suffering is similar: for to be cut or to be burnt cannot be anything unless it is from another, and on this account it is both internal and external to *ousia*."
[16] See, n. 9.   [17] Ibid.   [18] Ibid.

one,"[19] he adds that "it is possible to shore up this approach and confirm it a little"[20] and he proceeds to offer a re-elaboration of it. At the end of that re-elaboration he says, "This is a sort of contrived approximation whose correctness I do not vouchsafe."[21]

Avicenna's diffidence about proposing any argument for the completeness of the list of ten categories is reminiscent of Simplicius' attitude when he prefaces his own argument with the words, "If, however, anyone desires to hear an inclusive division, which includes these ten genera, perhaps it would run like this."[22] Similar apparently contradictory passages can be elsewhere in Avicenna's writings. In the section of *al-Shifāʾ* dealing with Porphyry's *Isagoge*, Avicenna first criticizes Porphyry for having spent too long drawing comparisons between the different predicables, and then proceeds to follow the very procedure he had criticized.[23] Again, Avicenna argues that a study of the *Categories* does not belong to logic[24] but to metaphysics insofar as it is about being, to psychology insofar as it concerns ideas in the mind, and to linguistics insofar as it relates to words; and he proceeds to say that, like it or not, he will follow the customary practice of discussing the *Categories* in the logic section of his book, even though it will not be of much use to the reader.[25]

He begins by dismissing the idea adopted by some people that the mere fact of there being *three* classes is a sufficient basis for both primary and secondary divisions. He then embarks on a methodical process of dividing the categories into their three classes and of subdividing the **A** and **B** classes into their triads of categories.

In his re-elaboration of the widely accepted division, the primary cut into substances and accidents is a dichotomous one,[26] as are almost all of the subsequent cuts (with one exception). Among the accidents, he contrasts those that are not found in their subject by reason of a relationship to some external thing, with those that are found in their subject by reason of a relationship to some external thing. The first of these classes will prove to comprise the members of group **A**. If there is no need of a relationship to an external thing, there may still be a need for a relationship of things within

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[19] Avicenna 1973: 84, 4.   [20] Ibid.   [21] Ibid. 86, 13.   [22] Simplicius 2003: 67, 25.
[23] Madkour 1969: 73.
[24] Street 2004: 541: "Avicenna echoed al-Fārābī in questioning the propriety of placing the *Categories* within the *Organon*, and decided that it should only be treated with the other logical texts due to immemorial custom."
[25] Madkour 1969: 80–81.
[26] Avicenna 1973: 46, 14: "Since things are in two divisions: [1] the thing whose essence and reality has no need of being *in* something, like the existence of a thing *in* its subject, and [2] a thing about which there is no doubt that it is *in* something through this characteristic, then everything is either a substance or an accident ... no thing is an accident and a substance" (trans. Bäck).

the subject (and if so then we are dealing with the category of Position); or there may be no such need (and then if numeration is possible we are dealing with the category of Quantity, and if it is not then we have the category of Quality).[27]

The **B** class divides into the categories of Where, When, and Having, starting from the class of accidents that are found in their subject by reason of a relationship to some external thing. This class he divides into those cases where the relationship is reciprocal and those where it is not. The latter he divides according to whether the relationship is to a Substance or to an Accident. He argues that there can be no cases where the relationship is to a Substance. The cases where the relationship is to an Accident he divides according to whether the Accident is or is not relational. He argues that there can be no cases where the Accident is relational. The remaining cases, where the relationship is to a non-relational Accident, he divides on the basis (arrived at earlier) that there are three kinds of non-relational Accident – Quantity, Quality, and Position. Where the non-relational Accident is a Quantity we either have the category of When, or the Quantity in question is a container. In the latter case, the container is either such that it is not moved by the motion of the subject (and this is the category of Where), or on the contrary it is such that it is moved by the subject's motion (and this is the category of Having/Wearing).[28]

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[27] Ibid. 84, 4–17: "This is what they have said, but you have learned that this is something that is a loose approximation. It is however possible to lend support to this approach and to confirm it a little, by saying: Every accident must be either [such that] its Conception stands in need of Conceiving something extrinsic to the subject it has, or [such that] it does not need this. That which doesn't need [the Conception of something extrinsic to its subject] forms three divisions: either [such Conception] exists even though [the accident] does not stand in need of it, though it may need the occurrence of a relation to things which are in it and not extrinsic to it; or it does not need [the Conception of something extrinsic to its subject] at all. If it is in need [of this Conception], then this need makes the subject divisible in a certain respect such that it has parts some of which have a variable state in relation to others; this is the category of Posture (*al-waḍʿ*). For the relation of some parts of the body to other parts is such that every one of them has a where relative to the whole; these are the differences that occur to them per se, in so far as they are divisible parts" (trans. Street). Ibid. 84, 18: "As for when the thought of that is not needed for the relationship in which they occur, *either* there is an impression due to its essence [per se] making the substance, insofar as, in respect of (that), it comes to make its number possible for it through one (thing) in which there is determined a continuous or a discrete number – and this is the quantity. *Or* it is not like that, and then there is a shape arising in the body whose thought does not need for a relationship to something in potency or actuality to be made for the body at all for its thought to be sound – and this is called quality" (trans. Bäck).

[28] Ibid. 85, 9: "As for what requires a relationship to (something) external, *either* [1] it requires a relationship making the quiddity be said in comparison to what has a relationship to it, and there is

   Moving on to the case where the non-relational Accident is a Quality we have either the category of Action or that of Passion. And as for the case where the non-relational Accident is a Position, he argues that there are no such Accidents. With regard to group **C**, Avicenna has already located the category of Relatives as comprising the accidents that involve a reciprocal relationship to something external to the subject. Thus the categories of Action and Passion, on his reconstruction of the widely accepted division, turn out to have a different location from the category of Relatives.[29] So his defense of the commonly accepted division transforms it into a somewhat different division. He has provided a speculative basis for classes **A** and **B**, while showing that class **C** is not a unified group at all. The structure is shown in Figure 2.4.

here an identical conversion in the sense of the relationship – and this is the relation. *Or* [2] the relationship does not require that. Then here *either* it is relative to substances or to accidents. As for substances, they do not demand due to themselves [per se] that a relationship be made for them or relative to them. Rather, they demand [that] for the objects and states in them that are specific to them. So, since the (thing) being considered [is] what is relative to accidents, those accidents are either accidents of the relationship or are different from the accidents of the relationship. As for a relationship to accidents, it is a relationship. So it is of objects that concatenate *ad infinitum*. Nevertheless, the relationship to the relationship in another one [relationship] leads to the relation-ship to the last thing relative to which there is the relationship. It [the relationship] is firmly fixed in view of the first [thing] that does not have a relationship; and, if not, it would go on *ad infinitum*. The last real relationship is relative to the accidents in which there is no relationship. So it is relative *either* to a quantity *or* to a quality *or* to a position. Things do not have a relationship to quantities however chance may have it. Rather, if they have a relationship to them, it is necessary that they have a relationship to the quantity making a substance have a *quantum* that is the measure of another substance. It measures it through the measure of its essence or through the measure of its state. Some states of a body do not have a measure fixed in the measure of a body different from the measure of the (first) body. Rather, it is necessary that its instance be a measure that is not fixed. The state is not fixed. Every state (that is) not fixed is called a motion. Therefore, this relationship is *either* through a measure due to whose existence one body comes to be in another body through a state, namely that it 'contains it' or 'is contained in it,' and this is the container, *or* through a measure of the state according to what we have explained, and this is time. Therefore, the relationship to the *quantum* has no need either of there being a relationship to the container or to time. The relationship to the container always is either such that a relationship is relative to a container by whose transference [locomotion] it is not transferred nor from which it is inseparable – and it is the 'where' [place], and it is a relationship either to a first place or to a second place. *Or* it is a relationship to a container (that is) inseparable in view of (its) transfer [locomotion], and this is like what some of those obtaining a category of 'wearing' [having] believe. (This) is like the explanation that the species of categories emanating from the relationship to the *quantum* are either a 'where' or a 'when' or a 'wearing'" (trans. Bäck).

29 Ibid. 86, 14: "As for the relationship to quality, it is appropriate to know that not every quality makes [one] substance have a relationship to (another) substance, but rather (that) the quality that is in this one from that one or from that one in this one [does]. When the quality is of one of the two substances in the other, then the state in which the quality comes to be from these (two), is the category of 'is acted upon' [passion], while the state from which the quality comes to be is the category of 'acts' [action]" (trans. Bäck).
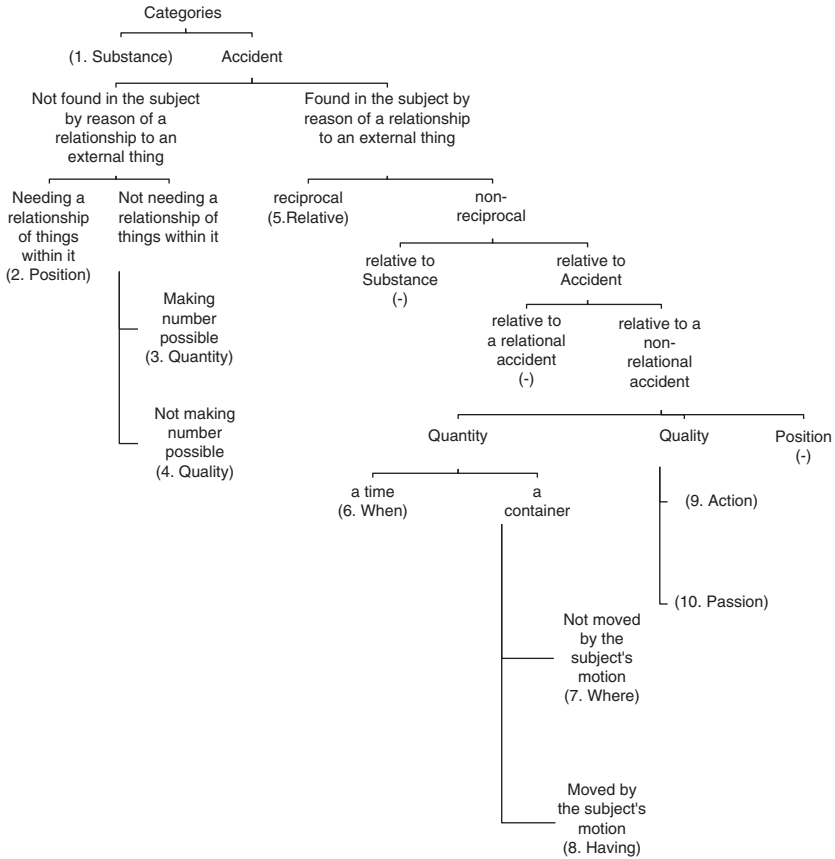
Categories

(1. Substance)   Accident

Not found in the subject by reason of a relationship to an external thing

Found in the subject by reason of a relationship to an external thing

Needing a relationship of things within it (2. Position)

Not needing a relationship of things within it

reciprocal (5.Relative)

non-reciprocal

Making number possible (3. Quantity)

Not making number possible (4. Quality)

relative to Substance (-)

relative to Accident

relative to a relational accident (-)

relative to a non-relational accident

Quantity

Quality

Position (-)

a time (6. When)

a container

(9. Action)

(10. Passion)

Not moved by the subject's motion (7. Where)

Moved by the subject's motion (8. Having)

Figure 2.4 Avicenna's elaboration of the 'widely accepted' division

Avicenna has clarified the basis for the initial division into three triads. He does not use the idea of what both internal and external, but instead uses the basic idea of holding by reason a relationship to an external thing. The methodology used by Avicenna in his division displays a satisfying rigor. He uses dichotomous division except for his threefold division of non-reciprocal relational accidents that are relative to a non-relational accident; and this division is itself a by-product of two dichotomous divisions – (1) that of non-relational accidents into those that involve and those that do not involve an internal relationship of the subject's parts, and (2) that of non-relational accidents not involving an internal relationship of the subject's parts into those that involve and those that do not involve number. By this means

Avicenna ensures that his division will be exhaustive and that its members will be mutually exclusive, and in so doing makes a considerable advance on the widely accepted division's scheme, in which the internal is opposed to the external as well as to what is both internal and external.

Avicenna's methodology is also careful to make the *differentiae* of lower divisions implicit in those of higher divisions, in accordance with Aristotle's advice that if animals are divided into the footed and the footless, the footed animals should be subdivided on the basis of differences in their feet.[30] Thus Avicenna subdivides the accidents (which by definition inhere in a subject) according to the manner of their inherence, which either is or is not due to a relationship with something external. Accidents of the former type – which do not inhere by reason of a relationship to something external – are subdivided according to whether or not they involve an internal relationship of the subject's parts. Accidents of the latter type – which do inhere by reason of a relationship to something external – are subdivided according to whether that relationship is or is not reciprocal. The latter are subdivided on the basis of that to which the accident in question is relative (a substance or accident). And in this last case, the cases are subdivided according to whether the related accident is itself relational or non-relational.

Avicenna himself enunciates three principles concerning the process of logical division. First, division is capable of producing knowledge. Second, a good division does not leap over intermediate classes, as non-dichotomous division are wont to do. Third, a division terminating in the categories cannot be ruled out as impossible on the ground that division always proceeds through genus and species.[31] All of these principles have a bearing on the project of a division leading to the categories. (1) His elaboration of the widely accepted division produces knowledge that is not produced by that division in its unelaborated form. (2) His elaboration shows that, while groups **A** and **B** are preserved in the elaboration, they are not coordinate with each other; they can only appear to be coordinate if we skip some of the steps in the division. (3) And *no* division resulting in the categories can be by species and genus, because by definition the categories do not have genera above them.

While the methodology used in elaborating the division is Avicenna's, some of the substantive assumptions deployed conflict with his known views. These conflicts are evident in the conceptualization of the categories

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[30] *Metaphysics* VII.12, 1038a10ff.
[31] Avicenna 1973: 4, 7: "Division also is one of the methods conducive for acquiring knowledge through the unknown. Genera have a differentiating division relative to [their] species through their *differentiae* with the order in them preserved, so that there does not occur a leap of degree to what does not come after them. [Division] may also be through *propria* and accidents" (trans. Bäck).

of Position, Action and Passion, and Having. The word 'position' is ambiguous according to Avicenna. In one sense it is used to mean a thing's being in its place; and he comments that in this sense it picks out the category, Where. In a second sense it is used to mean the position of one thing relative to neighboring things; and in this sense it belongs in the category of Relatives. In a third sense, the category of Position identifies a feature of a whole substance, and is not to be confused with the relationships that hold among the substance's parts. The category of Position does indeed involve relationships among the substance's parts, but it would only be by confusing the second and third senses that someone could think that these relationships constitute what Position *is*.[32] Avicenna mounts a general attack on attempts to demonstrate that the last six categories are all essentially relational. He says that to predicate "Relative" of things in one of these categories is not to predicate a genus of its species; rather "it is accidental to it that its quiddity . . . is said in comparison to something else."[33] Avicenna views the inclusion of the category of Position along with the non-relational categories of Quantity and Quality as mistaken, favoring its inclusion with the five relational categories that are opposed to the category of Relatives. He agrees with those who would group it with Quantity and Quality that Position involves relationships internal to the subject, and thus that it has two features – relationality and internality to the subject. But the question is which of these features is the primary one. Those favoring the widely held division think that Position is characterized primarily by the fact that it is internal to the subject, and secondarily by the fact that the internality in question involves relationships among the subject's parts. Avicenna thinks that Position is primarily characterized by the fact that it consists in the holding of certain relationships, and secondarily by the fact that those relationships hold among the subject's internal parts. The dispute concerns the ordering of *differentiae* – a question which Aristotle says in the *Posterior Analytics* must be resolved correctly in a good division.[34] Avicenna endorses the Aristotelian rule, saying that "Genera

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[32] Ibid. 211, 1: "Position is said about the shapes arising for body by reason of the relationship of some of its parts to others on [their] sides by reason of the incidence of position in the second sense to its parts, and in general about the existence of some relation in its parts that exists in actuality or in the imagination, so that, when the parts exist in accordance with some known relation, or (when) the body is by virtue of its being possible in it to be imagined parts having some known relation, the shape that is the position will have arisen for the whole by reason of that – and this is the category [of position]. So sitting is a characteristic for the whole sitter, not for some parts of it" (trans. Bäck).

[33] Ibid. 67, 6.   [34] *An. Post.* II.13: 87a24–35.

have a differentiating division relative to [their] species through their *differentiae* with the order in them preserved, so that there does not occur a leap of degree to what does not come after them."[35]

With regard to Action and Passion, Avicenna does not agree with the idea that these categories constitute two sub-classes of accidents relative to a Quality. Al-Fārābī had already dismissed this idea. His argument was that action and passion relate not just to Quality but to all kinds of change including change of Quantity, change of place and substantial change.[36] Avicenna is in agreement with al-Fārābī on this.[37] And with regard to Having, Avicenna expresses serious doubts about whether it should be included among the categories at all,[38] thereby parting company with al-Fārābī who took the category seriously.[39] Such an exclusion, of course, is consistent with some of the Aristotelian passages in which the categories are listed.

When Avicenna in his own voice presents a conceptualization of the categories, the category of Substance is set against the nine accidental categories, and the latter are divided into two groups: on one side the categories of Quantity and Quality, on the other side the remaining seven

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[35] Avicenna 1973: 4, 7.   [36] Al-Fārābī 1959: 41.

[37] Avicenna 1973: 235, 17: "As for the category of 'acting [upon]' [action] and 'being acted upon' [passion]." 236, 5: "People have disagreed: some of them specify this category through its being necessary that it be changed in quality only. As for what is common to it and to something else, it is of objects occurring in many categories." 236, 17: "As for the firmly set form of standing (up) and the form of sitting, they are both from [the category of] position, just as the form of burning is from *quale*, and the form of the completion of youth is from *quantum,* and the form of being firmly fixed in place is from the 'where.'" 37, 3: "This category admits of [mutual] contrariety. The direction of (one) contrary towards (another) contrary differs from the direction of the latter towards (the former) in definition, while their subjects are one, and (where) between them there is something more remote (in) difference. That is like the whitening of the black and the blackening of the white, and like the rising of the low and the sinking of the high" (trans. Bäck).

[38] Ibid. 235, 7: "As for the category of having, understanding it is not for me compatible with this project – nor any of the objects that are made like species for it. Rather, they are said of it by participation in the name [homonymy] or ambiguity, just as one thing is said from another, and (as) one thing in another, and (as) one thing of another, and (as) one thing with another. Nor do I know anything making it necessary for the category of having to be a genus for those particulars, nor is an instance of it made necessary in those [examples that have been] mentioned. It is uncertain whether [someone] other than me knows that. So let there here be scrutiny of their books. Then, if some of them make the spurious claim that there are species and make the agreement [synonymy?] of this category in comparison to some of them [the proposed species?] without others, and makes their participation in their name [homonymy] in comparison to the totality or to the others, and [if] by it there is meant that it is a relationship to (something) contiguous (in) some transfer having a relationship to it, then let it be like wearing arms and wearing shoes and being adorned and being clothed (in) a shirt. From it [that] let there be some particular and some universal and some essential, like the state of the cat *vis à vis* its hide, and some accidental, like the state of man *vis à vis* his shirt. Let us divide this important task about the ten categories into what is more comfortable for us to divide it into. In it there (will be) room" (trans. Bäck).

[39] Al-Fārābī 1958–1959: 24, 7–15, trans. Dunlop, 40, §36.

categories (or six if we take Avicenna's doubts about the category of Having to imply that he excludes this as a genuine category).[40] All seven of these are seen as conceptually involving a comparison with something other than the subject, but within the group the category of Relatives is seen as depending on the subject's intrinsic nature whereas the remaining six are seen as depending on something extrinsic. He places Position along with the non-reciprocal relational categories, he does not conceive of Action and Passion as being specially related to Quality, and he expresses doubt about Having. His division is shown in Figure 2.5.
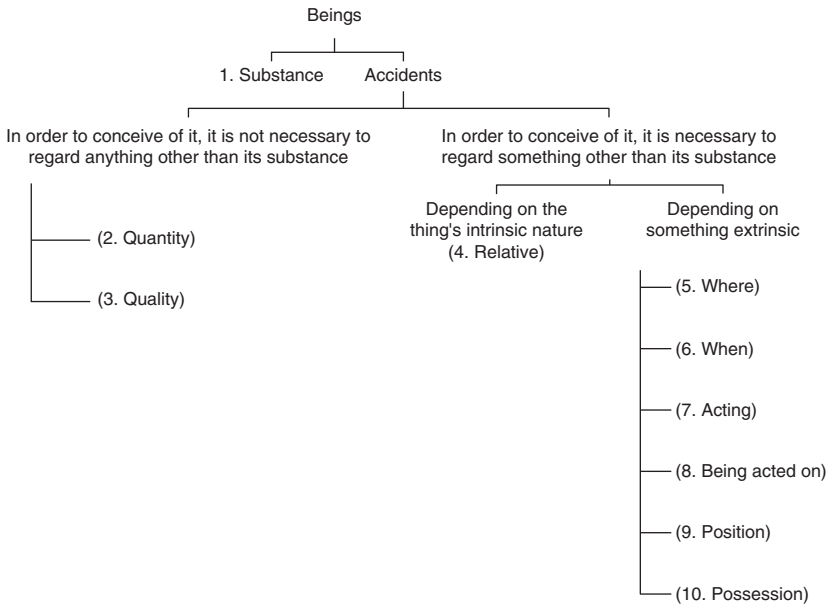
Figure 2.5 The categories according to Avicenna (*Dānish nāmeh*)

Extensionally, this division is the same as those of Olympiodorus and al-Kindī up to the point where Relatives are contrasted with the remaining six categories. But Avicenna stops there, making no subdivision of those six groups of Accidents. Thus his division cannot be seen as a contribution to the project of deducing the ten categories by a process of division.

Intensionally, however, Avicenna's scheme exhibits points of difference from those of Olympiodorus and al-Kindī. His primary division of

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[40] Avicenna 1973: §9, 27: "The state of possession (*mulk*), described in terms of something belonging to something else, is a topic that is not yet well enough known to me" (trans. Morewedge).

Accidents, according to whether or not one has to regard something other than the subject, owes more to Olympiodorus' contrast between the per se and the relational than to al-Kindī's simple–compound opposition. But his dichotomy between Relatives and other relational accidents, on the basis that only the former depend on the subject's intrinsic nature, seems equally removed from Olympiodorus' distinction between pure relations and relations to other things, and al-Kindī's distinction between relationships that are 'without matter' and those that are 'with matter.'

The relationship between master and slave is one in which the very being of either term refers to the other. It is because of this feature that the master qua master is a Relative, and likewise for the slave qua slave. Compare this with the category of Where. A man is in a house. But it is not part of the very being of the man to refer to a house, nor of a house to refer to a man.[41] Of course, we can describe the man as an inhabitant and the house as a habitation; then we have a pair of Relatives, since the very being of an inhabitant, as such, makes reference to a habitation, and vice versa. But when we consider the man as a man, and the house as a house, and say the man is in the house, we are (according to Aristotle) attributing a Where to the substance that is the man. So the category Where does concern a relationship, and there is a way of locating the terms of that relationship in the category of Relatives. But there is another way in which one term of the relationship is identified as the Where of the other.

The opposition between Relatives and the other relational Accidents, according to Avicenna, rests on the double nature of Relatives: their conception requires that we have regard to something other than the subject, but at the same time they depend on the subject's intrinsic nature, not on something extrinsic. The relationship is within the subject but points to something outside. In this subtle analysis he appears to go beyond

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[41] Ibid. 144, 5: "As for those in some other manner of relationship, they are those to which the relationship is attached and so because of that they come to be *relata* – like power, insofar as it [belongs] to what possesses the power, and knowledge, insofar as it [belongs] to the knower. Each of [these] is in its essence [per se] a quality, and, if it is a *relatum*, it is relative to something different from what its relation qualifies, like knowledge: through some letter it comes to be a *relatum* for the knower and through something other than that letter it is a *relatum* relative to what is known. So it is uncertain whether a relation to the (thing) known is inseparable from the knowledge in itself. Knowledge and ability and power and the like – even if each of these is a *relatum*, still in itself is not a *relatum* relative to that to which it is related in our examples. Rather, there is attached to them some manner of relationship and then through (that) it comes to be a *relatum*. That is by reason of the letter that is included and then joined, just as there is included between man and house an expression of some relationship, and then through it [that relationship] there comes to be a relation between the house and the one possessing the house" (trans. Bäck).

his Greek and Arabic sources. All this is cause for puzzlement, and provokes a number of questions:

(1) Since he is such an independent thinker, why is he writing a commentary on the *Categories* at all? And, given that he thinks the *Categories* does not properly belong to logic, why does he include his commentary in the logic section of *al-Shifāʾ*?

(2) In *al-Shifāʾ* Avicenna presents two conceptualizations of the categories – the widely accepted division and his own re-elaboration of it – while clearly indicating that neither is satisfactory. Why does he present material which he finds unsatisfactory? And, given that neither of these conceptualizations is the same as his own way of conceiving the categories, why does he present them rather than his own view?

In reflecting on the first question, we need to remember Avicenna's unique position in the tradition of Arabic Aristotelianism. The geographical circumstances of his origins, away from the main centers of culture, as well as his personal cast of mind, made it possible for him to be a remarkably independent thinker.[42] The cast of mind, as it is expressed in Avicenna's Autobiography, is captured well by Dimitri Gutas:

> The real purpose of [the Autobiography] is philosophical: While purporting to give details about his early life … Avicenna is providing a concrete illustration of his epistemological theory. This centers on the ability of some individuals with powerful souls to acquire intelligible knowledge all by themselves and without the help of a teacher through their propensity to hit spontaneously upon the middle term of syllogisms … The autobiography is written from the perspective of a philosopher who does not belong by training to any school of thought and is therefore not beholden to defending it blindly, who established truth through his independent verification (*ḥads*) and found that for the most part this truth is contained in the philosophical sciences as classified and transmitted in the Aristotelian tradition.[43]

He saw himself as belonging to that tradition and this is why he presents some of his philosophical works as belonging to the genre of Aristotelian commentary. An encyclopedic coverage of what is valuable in Aristotelian philosophy – such as *al-Shifāʾ* is meant to be – must cover the *Categories* and must include it in logic on pain of misrepresenting the Aristotelian corpus as he received it. He is thoroughly entrenched in the doctrines of the Philosopher, and his very rejection of some of the commentators'

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[42] Marenbon 2007: 103–105.   [43] Gutas 1989: 68.

accretions bespeaks a deep fidelity to the philosophy of Aristotle.[44] But even when he is at his most respectful of the traditional ways of doing things, Avicenna always feels free to discard those parts of the tradition which he considers to be confused or otherwise unsatisfactory.

The second question requires a complex answer. Given that he is generally opposed to attempts to 'deduce' the categories, it is not surprising that he should wish to examine one such attempt in detail, in order to illustrate the problems involved in any such deduction. It is, however, surprising that his examination of the widely accepted division should be so lengthy, and that he should bother to re-work the division in the way he does. I think that this re-elaboration serves a double purpose.

On the one hand, I think that Avicenna was aiming not merely to express his personal dissatisfaction with certain elements in the accumulated Aristotelian tradition. He was also exposing the weaknesses in those parts of the tradition that he wanted to reject, in such a way as to convince his readers to join him in breaking with those parts of the tradition. Even though Avicenna did not think that the project of deducing the categories was a worthwhile one, he did think it was worthwhile to show the standard that such a deduction would have to meet. The methodology would at least have to include dichotomous division, in order to meet his own requirements for a satisfactory division. His intention was to show that a serious attempt to arrive at the widely accepted division will fail to arrive at precisely that division, and in any case will involve false assumptions. On the other hand, his re-elaboration of the widely accepted division is a display of intellectual virtuosity – a brilliant intellectual experiment which exposes the weaknesses in the widely accepted division, at the same time as displaying his own critical astuteness and philosophical depth.

Regarding the absence of Avicenna's own conceptualization of the categories from *al-Shifā'*, I think it is helpful to attend to the fact, as Madkour reminds us, that Avicenna's aim in *al-Shifā'* is not primarily to express his own views – as it is in his other works.[45] In describing his aims in *al-Shifā'*, Avicenna says that he will base his comments on philosophical

[44] Street 2004: 535–536.
[45] Madkour 1969: 24: "Pour en avoir une idée exacte, il suffit de songer à un commentaire de Thémistius ou de Simplicius, où les théories aristotéliques se trouvent rapprochées des doctrines néoplatoniciennes. Dans *al Chifâ*, Ibn Sīnā commente donc Aristote à la manière d'un Alexandrin et cherche à élaborer une synthèse nouvelle embrassant les divers systèmes philosophiques antérieurs. Au contraire, dans ses autres écrits, il est plus original, plus personnel et ne donne que le fond de sa pensée."

principles he has arrived at by himself, principles which have also been admitted by most previous thinkers. He says he will avoid lengthy discussions of doctrines that are obviously false, but he will cover all that is worthy of preserving from the ancients – either in its usual context or moved to a more appropriate one. And he says that he will include some of his own ideas and personal research – even in logic.[46] Besides, his own 'division' is in large parts merely an enumeration and does not pretend to be a deduction by division, and so it would not have been to the point to mention it in a context that is primarily focused on attempts to 'deduce' the number and identity of the categories.

Avicenna was the initiator of a line of development in which the focus of interpretative attention shifts from the works of Aristotle to those of Avicenna himself.[47] This kind of shift is not unknown in the history of interpretation; but it does signal a figure of the very greatest importance; and we see the symptoms of this shift in his treatment of the division of the categories.

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[46] Ibid. 22.   [47] Street 2005.

3

What if that (is) why? Avicenna's taxonomy of scientific inquiries

Riccardo Strobino

In this chapter I shall look at how a few key Aristotelian ideas about demonstration and definition are received and re-elaborated by Avicenna (d. 1037)[1] in his logical writings. The problem I have chosen to discuss has to do chiefly with issues that come up in the second book of Aristotle's *Posterior Analytics*, especially in chapters B1–10, which represent in themselves a self-contained treatise on the relationship between definition and demonstration.[2] The textual basis of this study is Avicenna's *Book of Demonstration* (*Kitāb al-Burhān*), which is the fifth section of the logic from the *Book of the Cure* (*Kitāb al-Shifā*).[3] I shall not be concerned with the general problem of the reception of the Aristotelian theory of demonstration in the Arabic-Islamic philosophical tradition: suffice to say that its trajectory starts as early as al-Kindī and through the decisive mediation of al-Fārābī reaches its culmination with Avicenna.[4]

[1] Avicenna deals with demonstration and definition in all of his main logical works: *Kitāb al-Burhān* (Avicenna 1956) from the *Kitāb al-Shifā*; in the logical section of *Danesh-name Alai* (Avicenna 1971); in the logic of *Kitāb al-Najāt* (Avicenna 1985); and in paths two and nine of the logic of *Ishārāt wa-l-tanbīhāt* (Avicenna 1957–1960). The section on demonstration from *Manṭiq al-Mashriqiyyin* (Avicenna 1910) is not extant. A discussion of these topics is also found in the *Mukhtaṣar al-awsaṭ fī al-manṭiq*, Istanbul, Nuruosmaniye 2763 and Turhan Valide 213, which seems to connect to the logic of the *Najāt.* I should thank Alexander Kalbarczyk for the reference.

[2] See Aristotle 1949 and 1993.   [3] See Avicenna 1956: esp. 1, 1–2.

[4] See esp. Marmura 1965 and 1990 and Strobino 2010. For a recent study of the history of demonstration in the Arabic-Islamic tradition, see Hasnawi 2012. Awareness of the privileged status of demonstration within philosophy and logic is found as early as al-Kindī 1950–1953: 112; and later with al-Fārābī 1949: 71. With Avicenna, the process reaches its zenith, see *Burhān* 1, 2 in Avicenna 1956. In post-Avicennan logic, the situation becomes more complex, because parallel to a decrease in the amount of space devoted to explicit discussions of demonstration (which might suggest that demonstration had lost its aura), there seems to be an attempt to shape logic itself as a discipline according to the standards of an Aristotelian science. In this connection, see Street 2004, 2005, and 2008. A paradigm of this later tradition is the *Shamsiyya*, see al-Kātibī 1948.

In what follows, I shall first discuss Avicenna's taxonomy of scientific inquiries (first section). Next, I shall look at how two fundamental types of scientific inquiries – ifs and whats – are connected with each other through demonstrative middle terms – whys – (second section). Then, I will show how the distinction between definition and demonstration turns out to be rooted in the more fundamental characterization of scientific knowledge as conception and assent (third section). Lastly, I shall present Avicenna's attempt to reconcile the irreducibility of the two domains of definition and demonstration within the integrated framework of scientific syllogisms (fourth section).

I   Taxonomy of scientific inquiries

Science, on the Avicennan model following the *Posterior Analytics*, is a structured body of connected necessary truths. Some are unmediated, some are not. The latter are obtained as conclusions of proofs. Proofs are deductive structures, typically chains of syllogisms, whose premises are either primitive truths, previously (in a logical, not necessarily chronological order) proved truths or combinations thereof. A definitional feature of scientific knowledge is certainty. Certainty is not related to the necessity of the connection between premises and conclusions, which is guaranteed in and of itself by the logical form of syllogistic arguments by means of which the latter are derived from the former, but rather with the content or matter of both. Certainty of primitive truths is assumed and ultimately relies on the architecture of the world and our representation of it.[5] Certainty of derived truths is guaranteed by the fact that whatever the character of the premises of a valid argument, this character is preserved and transmitted to the conclusions. Certain knowledge is knowledge of something which cannot be correctly believed to be otherwise. Thus, the model of the *Posterior Analytics* offers us two fundamental items to deal with in scientific knowledge: (1) primitives and (2) derived conclusions. The theory of scientific knowledge, therefore, is polarized around two notions which determine two subordinated fields of study: a theory of principles, which mainly focuses on the paradigmatic type embodied by definitions, and a theory of demonstration.

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[5] Strictly speaking, certainty has to do with judgments (acts of granting assent), while what lies on the side of primitives, i.e. definitions, is connected to conceptions. However, the connection between defined terms and their definitions, which is at the basis of demonstrative proofs whereby accidents per se are proved to belong to their subjects with certainty, is what ultimately demonstrations are based upon. And the connections between defined terms and definitions ultimately rely on the structure of the world and the relations between quiddities that are expressed in porphyrian trees.

In the internal articulation of a science, three elements can be singled out, which also define the hierarchical organization according to which sciences are subordinated to one another and determine the boundaries between them. The internal structure of a science reflects the logical structure of premises and conclusions that are connected by means of syllogistic arguments. Premises have a subject–predicate form. Syllogisms are two-premise arguments whose premises share a middle term (ḥadd awsaṭ). The conclusion contains the subject (mawḍūʿ) of the so-called minor premise (muqaddama ṣughrā) and the predicate (maḥmūl) of the so-called major premise (muqaddama kubrā). This tripartite model is reflected in the general structure of scientific discourse. In a given science, what we do is prove that certain predicates belong to the elements of a domain by appealing to certain preliminary assumptions. Among these assumptions, besides general logical principles, the ones that have a specific content and are peculiar to a science are definitions. Only certain predicates are suited to enter scientific demonstrations. It is not the concern of a scientist to establish whether a subject has a contingent feature F, but rather the question is about essential features of things. 'Essential' in Avicenna has two senses that are relevant to this context: (1) constitutive (i.e. part of the definition), or (2) per se. It is the latter type which is the primary focus of a demonstrator. Proving that per se attributes belong to the objects of the domain of a given science is his task. This is done, ideally, by looking at the definitions of those predicates. The set of constitutives of P is expressed in the definition of P. If we use, in a way to be further illustrated below, the set of constitutives in a particular kind of syllogism, then we can prove that P belongs to a certain item S in the domain of a science, as an attribute per se of S. This is all there seems to be to scientific demonstration: proving that P belongs to S by looking at the definition of P. That the situation might be more complex than that is one of Avicenna's own concerns, but this is the conceptual environment in which he operates.

In Burhān IV, 1 Avicenna sets out to discuss the classification of scientific inquiries (maṭālib) that opens the second book of Posterior Analytics (An. Post. B1, 89b23–25). The list covers the paradigmatic types of questions and knowledge that are involved in scientific discourse. The classification follows Aristotle's own list, but there is a shift in the terminology and a much more detailed discussion of the mutual relations between different types of inquiries and their logical ordering. We have, as in Aristotle, four fundamental types of inquiries: (1) absolute existence, (2) predication,

(3) cause, and (4) definition. In Avicenna's own terminology these are formulated as follows:

1.	simple if-question	(*hal muṭlaq* or *hal basīṭ*)	εἰ ἔστι	if
2.	compound if-question	(*hal murakkab*)	ὅτι ἔστι	that
3.	why-question	(*limā*)	διότι/διὰ τί ἐστι	why
4.	what-question	(*mā*)	τί ἐστι	what

In the following, I shall always refer to S as the minor term, M as the middle term, and P as the major term of a syllogistic argument. The simple if-question typically covers the existence of S (and, as we shall see, also that of P, and in a peculiar sense that of M). The compound if-question is the paradigmatic logical formulation of the bits of knowledge we seek to establish demonstratively, i.e. predications of the form 'S is P' that feature as the conclusion in a particular kind of syllogism. Why-questions represent the distinctive feature of scientific knowledge according to the characterization given in *An. Post.* A2 (necessary knowledge providing the cause) and are supposed to provide the justification of predicative claims. What-questions are connected to why-questions because, ultimately, the reason for the fact established in the conclusion of a demonstrative syllogism will have to be somehow related to the definition of the major term.

   The first two questions fall within the more general heading of if-questions: in one case, what is at stake is absolute existence (of the subject or of the predicate), whereas in the other, what is sought is whether a subject exists in a certain state, i.e. whether a certain predicate belongs to it. The latter corresponds to Aristotle's that-question.[6] Each of the two if-questions is followed by a why-question, so that one can ask, once the existence of S or the fact that S is P is established, why is it the case that S exists or why is it the case that S is P. What-questions are connected, in a way to be specified, both to if-questions and to why-questions.[7]

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[6] The shift in terminology is crucial for the reconstruction of the textual sources of Avicenna's *Burhān*. On this terminological classification, see Strobino 2012: 367–371; Eichner 2010. A parallel discussion of questions (ifs, whats, and whys) is to be found in *Burhān* I, 5; see Avicenna 1956.

[7] Avicenna mentions (and discards) a few other types of inquiries that one might include in the model, such as which-questions, how-questions, and how-much-questions. Which-questions are in fact reducible to what-questions, whereas the other two are to be understood as compound if-questions. The list is not uncommon in the earlier Arabic tradition and probably derives from an extended list to be found in the ancient commentators Elias and David, see Menn 2008: 93. A preliminary discussion of this set of issues with an attempt to connect the analysis with the theory of the categories is found in Rescher 1967.

1.1   If-questions and why-questions

Avicenna first discusses the relation of why-questions to if-questions. Why-questions are further internally articulated in such a way that what one seeks can be one of the following:

3.1.1	cause of the existence of S absolutely	(judgment only)
3.1.2	cause of the existence of S absolutely	(judgment and fact)
3.2.1	cause of S's being P	(judgment only)
3.2.2	cause of S's being P	(judgment and fact)[8]

The first division reflects the distinction between (3.1) simple and (3.2) compound if-questions. The second division, internal to each pair, concerns whether what is sought is merely a justification of the conclusion that S exists (3.1.1) or that S is P (3.2.1) or whether one is seeking not only a justification of the claim but also the real cause of the fact that S exists (3.1.2) or that S is P (3.2.2). This classification is also intimately connected with the well-known distinction between demonstration of the fact (*burhān al-an*) and demonstration of the reason why (*burhān al-limā*) which Avicenna discusses at length in *Burhān* I, 7, and obviously reflects Aristotle's own distinction between knowledge of that (*hoti*) and knowledge of why (*dioti*) (*An. Post.* A13). In Avicenna, the model is extended so as to cover not only the predicative case (S is P) but also existential claims (S exists).

An interesting feature of his discussion is that the two main types of why-questions should be addressed by appealing to arguments with a fundamentally different logical form. Why-questions concerned with merely existential claims should be formulated as a particular kind of conditional syllogism (*qiyās sharṭī istithnāʾī*), i.e. as an argument of the form 'if A, then B; but A, therefore B,' where the fact to be established is expressed by the consequent B, and the cause, i.e. the target of the why-question itself, is expressed by the antecedent A. On the other hand, why-questions covering the predicative case are formulated with respect to a standard syllogistic structure, where the cause being sought is expressed by the middle term. In both cases, the antecedent/middle term provides either a merely logical justification for the consequent/conclusion or it also picks out the real cause of the fact expressed in the consequent/conclusion.

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[8] In the summaries below I shall use 'J' for judgment only, 'J+F' for judgment and fact.

I.2 If-questions and what-questions

After discussing the relation between why-questions and if-questions and the logical structures by means of which the former are articulated, Avicenna identifies the relations between what-questions and if-questions. Again, what-questions follow both simple and compound if-questions but the picture is more complex in this case.

First, the what-question naturally comes after the simple if-question with respect to the existence of S, a point that Aristotle makes in *An. Post.* B1 89b32–4. Once it is known that something exists, one is entitled to ask what it is. There is a sense, though, *in which* what-questions are prior even to simple if-questions, because before asking if S exists, it is necessary to know what 'S' means. Thus, a natural ordering seems to be the following:

4.1.1	what-question^{name}	meaning of 'S'
1	simple if-question	existence of S
4.1.2	what-question^{essence}	essence of S

It is plausible, however, that one might ask what-questions not only with respect to simple if-questions, but also with respect to compound if-questions, i.e. with respect to claims of the form 'S is P.' In this connection, according to Avicenna, there is a sense in which what-questions are posterior to compound if-questions too. In that case, what one asks is either what the major term P is (essence/definition) or what the middle term M is (identification of the middle term that provides the essence/definition of P).

In his re-elaboration of the Aristotelian model of scientific knowledge, Avicenna maintains that the existence of the subject (*haliyya*) must be established first and then that its quiddity (*māhiyya*) must be sought. Once this is accomplished, the purpose of scientific investigation is to prove *of* the subject its per se attributes (*ʿawāriḍ dhātiyya*). Interestingly, asking *whether* S is P – when P is a per se attribute of S – is parallel, according to Avicenna, to asking the simple if-question with respect to P itself.[9] In other words, to ask

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[9] In *An. Post.* A4, Aristotle discusses four distinct senses in which something can be said per se of something else. The first two senses are relevant from a logical–epistemological point of view.

Per se 1   Y is said to belong per se to X in the first sense iff Y is involved in the definition of X.
Per se 2   Y is said to belong per se to X in the second sense iff X is involved in the definition of Y.

So 'rational' will be said to be true of 'human being' per se in the first sense, while 'odd' will be said to be true of 'number' per se in the second sense. The *locus* for the distinction in Avicenna's *Burhān* is II, 2 where he distinguishes the senses of *dhātī*, see Avicenna 1956.

whether P belongs to S is also to ask whether P, as an attribute, exists in the sense of being instantiated by something. Demonstrations are about per se attributes of the items falling within the domain (the genus) of a science. Such attributes exist only within those subjects or in hierarchically super-ordinated nodes of the branch of the porphyrian tree to which those subjects belong. Hypothetically, if the attributes were not to be found there, i.e. if an accident per se of S did not belong to S or to something that is entailed by S (its genus, the genus of its genus, and so on), then there would be no space for them in the realm of existence. If they exist, they exist only *as attributes* of that of which they are per se attributes or of a 'superior' of the latter. Therefore, proving that P, a given per se attribute of S, belongs to S, is in fact equivalent to proving that P exists absolutely. Avicenna illustrates the case with the example of a geometrical figure. In asking a compound if-question where the terms involved are a 'triangle constructed on a segment whose extremes are the centers of two intersecting circles' (= S) and an 'equilateral triangle' (= P), one is also establishing the possibility of the existence of an equilateral triangle in itself.[10] Thus, in the compound if-question concerning whether S is P, a simple if-question concerning whether P exists absolutely is involved. The next natural step will be to ask the what-question with respect to the essence of P. The relation between the what-question and the compound if-question can therefore be represented as follows:

4.2.1	what-question^{name}	meaning of 'P'
2	compound if-question	S is P
4.2.2	what-question^{essence}	essence of P

Therefore, the two what-questions with respect to the predicate term P, i.e. what P means and what P really is, stand to the compound if-question whether S is P (existence of S in a state, *bi-ḥāl*, i.e. P's belonging to S) in the same way in which the two what-questions with respect to the subject-term S, i.e. what S means and what S really is, stand to the simple if-question whether S exists absolutely or not.

A way to look at the problem is therefore to proceed by noting that Avicenna seems to be interested in covering systematically two sets of issues (ifs and whats) with respect to the extremes – S and P – of a demonstrative

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[10] The example is based on the construction of equilateral triangles in Euclid's *Elements*, Book 1, proposition 1, see Euclid 1908: 241–243. The discussion of this problem in the context of an analysis of scientific inquiries comes down to Avicenna from the commentary tradition, see esp. Philoponus 1909: 343.

syllogistic structure, and in explaining (1) how the questions of absolute existence and predication should be addressed, (2) what they presuppose (knowledge of the meaning of the names of the terms involved), and (3) what they prepare the way for (knowledge of the essences/definitions of the terms involved).

I.3 Connection

Once all these questions are answered, it still remains to be determined in which way they are connected to one another. The connection is provided by the peculiar nature of the middle term which in the context of demonstrations expresses the cause that grounds the conclusion. This can be either merely from a logical standpoint, as in any syllogism seeking to establish a conclusion (demonstration of the fact), or both from a logical standpoint *and* with respect to the real connection of facts (demonstration of the reason why). Avicenna seems to be concerned primarily with the role of the middle term in the situation picked out by 3.2.2 above, i.e. when what is sought is the cause of S's being P both with respect to judgment and with respect to the facts, although in principle nothing seems to prevent the model from applying in the other cases. Consequently, Avicenna is interested in identifying the correct relations holding between if-questions and what-questions with respect to the middle term. In this case, too, the what-question follows the if-question. This is clear if one keeps in mind the relations outlined in the previous sections, as the analysis of middle terms runs parallel to them.

Consider an argument of the form 'S is M, M is P; therefore S is P.'[11] The conclusion is the answer to a compound if-question. In order to prove that S is P, what is needed is *a* middle term. Thus, answering affirmatively the question 'is S P?' is equivalent to answering affirmatively the question 'is there a middle term M, such that S is M and M is P?' The first step in the proof that S is P is equivalent to establishing the existence of a middle term. The argument as it stands, however, is not a proper demonstration (of the reason why S is P) until we are in a position to answer the why-question with respect to the claim that S is P by providing *the* right middle term that expresses the cause of S's being P. The

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[11] Shortcuts of the form 'S is P' are meant to cover, more broadly, all cases in which Avicenna (or Aristotle) actually mean that P belongs to S. Thus, if S is 'moon' and P 'eclipse,' 'S is P' does not stand here for 'the moon is an eclipse,' but rather for 'eclipse belongs to the moon' or 'the moon suffers eclipse(s).'

second step, therefore, consists in asking the what-question with respect to the middle term.[12]

2	compound if-question	S is P	1	simple if-question	existence of M
3.2.2	why-question	why S is P	4.3	what-question[term]	*what* M is

As regards the what-question, however, the terminology is used ambiguously here. In fact, two questions overlap. Ideally, in the Aristotelian model, the middle term that answers the why-question with respect to the claim that S is P is the definition of P. In one sense, therefore, a what-question comes up in this connection because when we ask why S is P, we need to determine what P is. This is a proper what-question concerning the essence of the predicate term. Now it turns out that the answer to this question is obtained when one identifies *what* the middle term is (not its definition, but the term itself). And this is also referred to in this context as a what-question, but it is not such in the sense of being a question concerning the definition of the middle term.

In the case of the middle term, the what-question applies to it in a different sense. At stake is not what the middle term is in the sense of providing a definition of M, but rather in the sense of identifying the correct term that yields the conclusion of the syllogism and provides the cause of the fact expressed in the conclusion. With this caveat in mind, the relative order holding between the compound if-question, whereby one asks whether S is P, and the corresponding why-question, whereby one asks why S is P, is reflected by the relative order between the simple if-question, concerning the existence of *a* middle term (which warrants the conclusion that S is P), and the what-question relative to *the* middle term (which not only warrants the conclusion that S is P, but also provides the reason of S's being P). This line of argument is implicit in Avicenna's claim that what-questions with respect to the middle term follow if-questions either in potency or in act. When one answers affirmatively to a compound if-question of the form 'S is P,' one is merely committed to the existence of a middle term, whatever that may turn out to be, whereas when one asks why S is P, one is committed to providing the middle term that expresses the

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[12] Numbers do not refer to the relative ordering of questions, but rather are used here to indicate their type according to the above classification. Thus, a compound if-question (type 2) corresponds in fact to a simple if-question (type 1) relative to the middle term, and a why-question seeking the cause of judgment and fact (type 3.2.2) corresponds to a what-question[term] concerning the middle term (type 4.3).

cause, whose existence has been granted in potency at the previous step (because S's being P entails the existence of an M such that S is M and M is P). Thus, the relation between compound if-questions (is S P?) and why-questions (why is S P?) is parallel to the relation between simple if-questions (is there an M?) and what-questions (what^{term} is M?) with respect to the middle term. The latter is in fact an improper what-question intended to provide the answer to the proper what-question relative to P (what^{essence} is P?) which counts on this model as the reason of P's belonging to S, namely of the scientific conclusion to be established. The simple if-question relative to the middle term is entailed by – i.e. potentially contained in – the compound if-question 'is S P?,' whereas the what-question relative to the middle term is entailed by – i.e. potentially contained in – the why-question 'why is S P?' Both if- and what-questions concerning the middle term are potentially related to if- and why-questions relative to the conclusion. This is why Avicenna claims that the why-question, on the one hand, is *in potency* a what-question asking what the middle term is, while, on the other hand, it is a why-question *in act* with respect to what is stated in the conclusion.

To sum up, given a statement of the form 'S is P' as a conclusion of a demonstrative syllogism:

2	the compound if-question	*actually* asks	whether S is P
1	i.e. it	*potentially* asks	whether M exists

and having established that S is P (i.e. that there is a middle term)

3.2.2	the why-question	*actually* asks	why S is P
4.3.1	i.e. it	*potentially* asks	what^{term} M is
4.3.2	the what-question^{term}	*actually* asks	what^{term} M is

In the end, therefore, demonstrative knowledge of the conclusion providing the cause requires the middle term to be known *in act*. When the latter is known, demonstrative knowledge that S is P and why S is P is attained. Thus, the types of scientific questions concerning the middle term are analogous to those described above. For the subject term and the predicate term of demonstrative syllogisms the only difference is that what-questions in the case of the middle do not aim at the definition of the middle but at the term itself.[13]

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[13] In the present context, the ambivalence of the Greek *τι* is matched by the ambivalence of the Arabic *mā*.

I.4   Summary

The relations between the four types of scientific inquiries can be summarized as follows (in bold are the four Aristotelian inquiries):

Order	Type of question		What is sought	Group
(i)	what-question^{name}	(S)	meaning of 'S'	4.1.1
(ii)	**simple if-question**	(S)	existence of S	1.1
(iii)	why-question	(S)	cause of the existence of S absolutely (J)	3.1.1
(iv)	why question	(S)	cause of the existence of S absolutely (J+F)	3.1.2
(v)	**what-question^{essence}**	(S)	essence of S	4.1.2
(vi)	what-question^{name}	(P)	meaning of 'P'	4.2.1
(vii)	**compound if-question**		S is P	2
(viii)	simple if-question	(P)	existence of P	1.2
(ix)	simple if-question	(M)	existence of M	1.3
(x)	why-question		cause of S's being P(J)	3.2.1
(xi)	**why-question**		cause of S's being P(J+F)	3.2.2
(xii)	what-question^{essence}	(P)	essence of P	4.2.2
(xiii)	what-question^{term}	(M)	M (in potency)	4.3.1
(xiv)	what-question^{term}	(M)	M (in act)	4.3.2

The latter ultimately gives the answer to (xi).

This list covers the spectrum of things that can be sought and known. Those can be further grouped in clusters of questions that correspond to the three fundamental types introduced by Avicenna in his analysis of *An. Post.* B1-2. (I will list if-questions under the same heading even if in fact compound if-questions are taken to be a class in themselves.)

If-questions

(ii)	**simple if-question** (S)	existence of S	1.1
(viii)	simple if-question (P)	existence of P	1.2
(ix)	simple if-question (M)	existence of M (in potency)	1.3
(vii)	**compound if-question**	S is P	2

Why-questions

(iii)	why-question (S)	cause of the existence of S absolutely	(J)	3.1.1
(iv)	why question (S)	cause of the existence of S absolutely		3.1.2
(x)	why-question	cause of S's being P	(J)(J+F)	3.2.1
(xi)	**why-question**	cause of S's being P	(J+F)	3.2.2

What-questions

(i)	what-question^name (S)	meaning of 'S'	4.1.1
(v)	**what-question^essence (S)**	essence of S	4.1.2
(vi)	what-question^name (P)	meaning of 'P'	4.2.1
(xii)	what-question^essence (P)	essence of P	4.2.2
(xiii)	what-question^term (M)	M (in potency)	4.3.1
(xiv)	what-question^term (M)	M (in act)	4.3.2

Following the model of *An. Post.* B2, where Aristotle associates if-questions and that-questions with the search for a middle term and why-questions and what-questions with the search for *the* appropriate middle term, Avicenna's revised taxonomy, too, is polarized around two fundamental types of questions: ifs and whats. On the one hand, there are things we need to establish and prove, paradigmatically as the conclusions of syllogisms (ifs). In order to do so, there are other things that we need to know and assume, typically definitions (whats). Furthermore, in order to attain proper knowledge of facts, we need to be able to provide causal explanations (whys). The ideal answer to a why-question is (derivatively) the answer to a what-question concerning the middle term, and properly speaking a what-question concerning the predicate term whose definition is sought and given through the middle.

Thus, why-questions are explained away when we answer to the appropriate what-questions. The latter gives us the justification for our if-claims which eventually express the genuine facts that a scientific theory has to establish. Thus, the two types of fundamental questions – ifs and whats – should ultimately be traced back to two distinct domains of scientific knowledge: demonstration (ifs) and definition (whats).[14]

II The middle term

On this model, a pivotal role is played by the middle term. This is especially true of the paradigmatic types of questions that are the object

[14] The answer to certain fundamental if-questions must be available from the very beginning and should presumably count as part of the tool-box of principles rather than to the class of *theorems* of a scientific theory. Existential presupposition of a very fundamental kind, for example, can hardly be seen as the outcome of demonstration. As noted above, according to Avicenna, existential claims are not demonstrated through the standard tripartite syllogistic structure, but rather by means of hypothetical syllogisms where the cause (of the existence) of something is given in the antecedent. Some antecedents, therefore, will have to be part of the set of assumptions, i.e. they will have to be principles along with definitions.

of scientific discourse, i.e. compound if-questions corresponding to the conclusions of demonstrative syllogisms. What one wants to know is whether certain attributes per se belong to their subjects, within a given scientific domain (a genus). In this connection, an issue that seems to haunt Avicenna in his discussion of this part of the *Posterior Analytics* is the claim, which some might want to put forward, that the kind of causal explanation provided by demonstrative middle terms should always be given by means of definitions, and conversely that definitions always provide the right causal explanation of the fact expressed by the conclusion.[15] The question, in other words, is whether seeking the cause of S being P and seeking the definition (typically of P) coincide, or – which is the same – whether giving the cause always entails giving the definition and giving the definition always entails giving the cause.

   Avicenna devotes a remarkable amount of space to criticizing the claim in both directions. On the one hand, he provides counterexamples of demonstrative middle terms that express the cause without being definitions. On the other hand, he challenges the contention that appealing to definitions is a sufficient condition for facts to be established demonstratively. I believe the project is to show that the model outlined at the beginning of this chapter is to some extent only an *idealization*, and that in fact, what is needed to establish scientific claims, on Avicenna's reinterpretation of the Aristotelian framework, is much more complex a process, involving different types of middle terms and a variegated set of epistemological inputs.

   The conjunctive claim that Avicenna wants to reject is that in a demonstrative proof (1) all why-questions necessarily involve genuine what-questions and (2) all genuine what-questions (not just concerning the meaning of names, but aiming at the essence) are sufficient to answer why-questions, i.e. as soon as one knows the definition of the predicate, one already has the cause of its belonging to the subject. On his view, this would be equivalent to the claim that, in demonstrations, middle terms are definitions and vice versa. Some of the arguments put forward in the discussion of this issue, albeit structurally clear, are not supported by examples that illustrate in an obvious way what Avicenna is referring to. Nonetheless, I shall attempt a reconstruction.

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[15] It is unclear whether Avicenna ascribes this view to Aristotle (a *locus* might be *An. Post.* B2 90a14–15) as it sometimes seems to be suggested by the terminology and the examples discussed, or to a later commentator, most likely Philoponus, who in the opening section of the commentary (attributed to him) on *Posterior Analytics* II in fact says that in demonstrations middle terms are definitions, and for this reason, Aristotle had to devote an entire book to definitions, see Philoponus 1909.

In order to refute the first claim, namely that middle terms expressing the cause in demonstrative proofs must always be definitions, Avicenna puts forward a number of typological counterexamples by presenting cases in which the logical properties of the middle terms involved in a demonstration are such that it cannot count as a definition although it provides the cause needed to explain why the predicate belongs to the subject. Four such types are discussed. The arguments suggest also that the very notion of definition at stake in this context might be understood according to two different senses, namely as a definition through genus and differentia or as a definition through matter and form.[16]

First, in demonstrations, middle terms are to be found that are neither a definition of the predicate nor constitutives of its definition while still being causes in virtue of which the predicate belongs to the subject of the conclusion. To illustrate this case, Avicenna suggests that in the hierarchical structure of a porphyrian tree, an intermediate genus can play the role of middle term in a demonstration. If M is an intermediate genus, P is a higher genus, and S is something of which M is predicated, then P is also predicated of S. In such a case, M would not be a definition of P, but would still provide not only a logical, but also a factual justification of P belonging to S. In other words, if there is a M between P and S (where S is not necessarily a species of P or M), then since M entails whatever is superior to it, as a result, if M is predicated of S, P will also be predicated of S. In a case like that, however, the way in which the connection between P and S is proved is not by way of predicating of S the definition of P, but rather only something that entails P.

Second, the same line of reasoning applies to propria. If P is a proprium of S, in order to prove P of S, the middle term in the corresponding demonstrative syllogism need not be a definition of P. A middle term M which is a proprium would suffice. This case, according to Avicenna, is exemplified paradigmatically by the relation between the terms 'triangle' (= S), 'having such-and-such a perimeter,' i.e. 'being a geometrical figure with a certain specified shape' (= M), and 'having the sum of the internal angles equal to two right angles' (= P). The triangle has such-and-such a shape; whatever has such-and-such a shape has the sum of the internal angles equal to two right angles; therefore the triangle has the sum of the internal angles equal to two right angles. Whatever M

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[16] Where matter stands to genus as form stands to differentia.

might be like in this context (possibly 'three-sided plane figure'), it is neither genus nor differentia, nor matter, nor form of P, namely of 'having the sum of internal angles equal to two right angles.' Nonetheless, a middle term of this sort is sufficient to prove that P necessarily belongs to the subject S.

Third, middle terms might reflect other kinds of causes, i.e. efficient or final causes, which are certainly necessitating causes, i.e. causes that make something belong necessarily to something else, without being constitutive elements of the essence of the former. An example of this kind is the stereotypical case of the eclipse. If we take the triple 'moon' (= S), 'interposition of the earth between the moon and the sun' (= M), and 'eclipse' (= P),[17] M is sufficient to prove P of S, although it is not, strictly speaking, the definition of P, but rather only a necessitating cause ('*illa mūjiba*).

An interesting claim, in this connection, is that this sort of necessitating cause might be regarded as a differentia, even if in fact, it is not. As will become clear later, the reason for this claim is that there is one type of definition of the major term, which in fact represents the ideal middle term in demonstrative proofs, whereby a complex relation between two facts is expressed: one is the counterpart of a genus and tells us *what* sort of thing the predicate is, the other expresses the real cause of the former, and might be taken as the counterpart of a differentia. Their combination yields something similar to a definition *per genus et differentiam* of P which ultimately explains why P belongs to S. However, Avicenna claims in this context that, strictly speaking, these quasi-differentiae are not predicated of their subjects in the same way in which genuine differentiae are. Human beings are mortal rational animals, and for this reason they are rational (the differentia is part of the definition, *and* is predicated of whatever the definition is predicated of). But interposition or contact, although they come up in the definition of eclipse and of combustion, are not in fact said either of eclipse or of combustion, unless in an oblique way, in the same way in which fever is said to be caused *by* a putrefaction and not to be a putrefaction. Yet, both middle terms are sufficient to prove that the moon suffers eclipses when the earth is interposed and that wooden logs burn when they are in contact with fire. It will turn out in the end that

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[17] Another example is discussed here: 'wooden log' (= S), 'contact with fire' (= M), and 'combustion (of the wooden log)' (= P).

these complex constructs, following hints in Aristotle and a more elaborate discussion in the commentary tradition (Philoponus), occur both in demonstration and definition, the difference lying in the two distinct canonical forms in which they have to be arranged in one context as opposed to the other.

Fourth, Avicenna makes a general claim about the difference between something's being a cause of the quiddity of something else or a cause of its existence. Genera and differentiae are the causes of quiddity insofar as they express formal relations between terms, i.e. the counterparts of quiddities as such, regardless of their existence. Efficient and final causes are, on the other hand, the causes of existence. The former (genera, differentiae, parts of differentiae) are constitutives of the essence (*muqawwimāt li-l-dhāt*) and are included in the definition of a thing. The latter are not included in definitions but fall under the notion of description, i.e. a characterization of something by means of accidental attributes.[18] It seems therefore that in order for us to be able to talk about facts in a proper way, the recourse to descriptions is an ineliminable feature of scientific discourse.

The upshot of this strategy is that unless one is prepared to call not only genuine definitions but also descriptions 'definitions' – in which case the whole domain of demonstrative middle terms would be covered – the claim that whenever something is a demonstrative middle term that provides the cause that it is a definition (of the major term) turns out to be false because several types of middle terms that feature in demonstrative proofs (intermediate genera, propria, efficient and final causes) perform their function (i.e. they justify both the conclusion that S is P and provide the reason why S is P) without being definitions.

After providing counterexamples to the first claim, Avicenna discusses and rejects the converse claim that whenever a definition is used as a middle term in a demonstrative syllogism this provides the cause of the predicate's belonging to the subject. The basic contention is that if, whenever one has access the definition of a predicate one is also in a position to prove that predicate of the subject, then the very idea of the irreducible character of demonstrative proof would be undermined. Avicenna emphasizes, in

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[18] Avicenna also claims in *Burhān* IV, 1: 265 that if all of the necessitating causes could be included in the definition of something, then the definition would be enough to derive all questions of existence and of predications relative to the defined (Avicenna 1956).

particular, the idea that definitions almost never suffice in and of themselves to prove that what they define belongs to a certain subject. Indeed the burden of proof is typically discharged on the minor premise, i.e. the premise stating that the middle term M [= definition of the predicate, henceforth Def(P)] belongs to S.

In fact, if such a claim were to be true, the definition of P would be by itself a sufficient condition to prove that S is P. For instance by merely knowing what it is for something to have the sum of the internal angles equal to two right angles (= P), one would be able to associate that notion with the notion of a triangle (= S). Again, by merely knowing the definition of 'equal' (= P), one should be able to prove that it belongs to two equilateral triangles that are congruent (their relation being *tanāẓur*) (= S). This claim might hold true in certain situations, but it certainly does not in many others. In the case of geometrical proofs, for instance, understanding that two triangles (or any two other figures) are congruent might require more steps and not just be evident because one knows the definition of equal and the definition of a triangle. The major premise provides a suitably rich characterization of the major term (definitional or non-definitional), but then the real requirement of scientific demonstrations is to firmly establish the minor premise by means of which that characterization is predicated of the minor term. In most cases, proving the latter is a process that requires much more than simply positing the definition of P as a middle term. In order to see why this is the case, let us consider the following argument.

First, Avicenna maintains the principle that

(i)   It is impossible to prove P (if P has a definition or a description) of S unless by positing Def(P) or Des(P) as a middle term between S and P

which means that if one is to prove that S is P, then Def(P) or Des(P) must apply to S.

The justification for (i) is that

(ii)   if Def(x) or Des(x) is not affirmatively predicated of y, then x is not affirmatively predicated of y

i.e. by contraposition

(iii)   if x is affirmatively predicated of y, then Def(x) or Des(x) is affirmatively predicated of y.

On the other hand, it is also true that

(iv)   if Def(*x*) or Des(*x*) is not negatively predicated of *y*, then *x* is not negatively predicated of *y*

   i.e. by contraposition

(v)   if Def(*x*) or Des(*x*) is affirmatively predicated of *y*, then *x* is affirmatively predicated of *y*.

   Now, (iii) and (v), taken together, yield

(vi)   Def(*x*) or Des(*x*) is affirmatively predicated of *y* iff *x* is affirmatively predicated of *y*.

This principle seems to be plausible. In particular, (iii) seems to provide a justification for (i). On the other hand, the question of our assenting to the minor premise depends, on this model, on (v). The issue is not the plausibility of the conditional statement (v), but the truth of its antecedent. People who claim that having the definition of P as a middle term in a demonstrative syllogism is sufficient to prove that P belongs to S are implicitly assuming that the antecedent of (v) is satisfied as soon as we have a definition of P. But this is obviously not the case. The point is that we need to be able to affirm that Def(P) or Des(P) belong to S in order to conclude that P belongs to S. And proving that does not depend on our having Def(P) or Des(P).

Having a definition is not a sufficient condition to prove P of S. Positing a definitional characterization of P as the middle term does not warrant that P is demonstratively predicated of S and understood to be so. The problem has deeper epistemic implications. If the middle term is a definition of the major term, as in this case, the major premise expresses a general claim about the relation of convertibility between a term, P, and its own definition. The minor premise, by contrast, will express the fact that the definition of P, namely M, belongs to S. Avicenna's claim is that if posting the definition of P as a middle term were a sufficient condition, then we would already know the conclusion from the very beginning. In other words, when Def(P) is predicated of S – i.e. when the minor premise is true – P would be immediately (in a literal way, for there would be no need of a mediating term) understood as belonging to S. But what is precisely at stake in the process of demonstrative knowledge (leaving aside the *a posteriori* use of demonstration as a tool for the organization of a structured body of knowledge) is that the conclusion is neither better known than nor as well known as any of the premises.

We must be genuinely in doubt about whether S is P if we are really looking for a demonstration that S is P. Consequently, if we already know facts that would make seeking whether S is P a purely cosmetic exercise, we are not really doing science. Having a clear knowledge that the definition of P applies to S (minor premise) is one such bit of information that would make the question whether S is P pleonastic. If we know that a suitable definitional or descriptional characterization of the major term belongs to the minor, i.e. if we know the minor premise, we should not be in doubt about whether the major term belongs to the minor in the first place.

But it is uncontroversial, according to Avicenna, that in a vast majority of cases, the fact that Def(P) applies to S (minor premise) is just as unclear to us as the fact that P belongs to S (conclusion), and therefore the minor premise itself needs to be established before proving the conclusion. In particular, the minor premise itself will have to be established as the conclusion of a (chain of) syllogism(s) whose middle term(s) provide the justification for the connection between Def(P) and S.

In most situations, the fact that the definition of P is predicated of S (minor premise) is just as unclear as the fact that P is predicated of S (conclusion), so even if we posit the former, it still will not be enough to prove that S is P, at least from an epistemic standpoint. So in fact, what is needed is often a chain of middle terms, and the definition of P alone is not enough to prove that S is P. If we already have adamantine knowledge of the minor premise, seeking that S is P would be pointless. It would be a bogus demonstration. The fact is that in most cases we do not know much about the minor premise and we need to prove it. When we have it (not immediately, as if we posited the definition of P as the only middle term in the proof, but as a result of a sequence of sub-proofs) we can safely predicate P of S. To reach the right epistemic and logical status concerning the minor premise, we need other middle terms that provide the link between Def(P) and S. Those additional middle terms, according to Avicenna, are not definitions of the major.

Before concluding that S is P (i.e. that the expression signified by the defined P belongs to S) we need to conclude *via* additional steps that M, i.e. Def(P), belongs to S. The bottom line is that the claim that demonstrations with definitions as middle terms always supply the cause of the predicate's belonging to the subject is false because we would not be able to demonstrate anything except when the minor premise is evident, namely that Def(P) belongs to S, whereas P's belonging to S is still to be determined.

III   *Taṣawwur* and *Taṣdīq*/definition
and description-syllogisms

The model described by Avicenna relies on a classification of scientific inquiries centered around two irreducible types of questions: ifs and whats. Certain facts need to be established by means of demonstrations (typically claims of the form 'S is P'). Certain other facts (typically relations between essences, but not only) are assumed as principles and are stated either by means of definitions or more broadly as descriptions within the framework of a particular domain of knowledge. The bridge between these two areas of epistemology is provided by a certain conception of the underlying logic. One domain is demonstrative knowledge, i.e. mediated knowledge of logically derived conclusions. It turns out that the items that are supposed to warrant the mediation (middle terms in the syllogistic formulation of proofs) are taken from the other domain, namely the domain of definition (or description), which gives us the set of assumptions or stipulations concerning the meanings of the terms involved and the nature of the things signified by those terms. In spite of the fact that ifs and whats are irreducible questions, they are nonetheless connected. The mediated knowledge of ifs, which is proper knowledge only when we can answer to why-questions relative to those ifs, is warranted by entities (middle terms) that must ultimately be taken from the domain of whats (strictly speaking definitions or often also descriptions, i.e. accounts that do not merely give the essential constitutives of the predicate term but richer factual information about it).

The two domains of knowledge pertaining to demonstration and definition ultimately reflect a distinction that came to be fundamental in Arabic logic, after al-Fārābī and Avicenna, between conception (*taṣawwur*) and assent (*taṣdīq*).[19] The two operations roughly correspond to (i) the conceptual representation of things and their discrimination from one another and (ii) the acknowledgment of the truth or falsehood of a judgment.

Conception and assent have linguistic counterparts: differentiating phrases (*qawl mufaṣṣil*) and syllogisms (*qiyās*). *Taṣawwur* stands to

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[19] For the subsequent discussion by Avicenna, see *Burhān*, I, I: 51–52 in Avicenna 1956. See also *Ishārāt wa-l-tanbīhāt* (Avicenna 1971) and *Najāt* (Avicenna 1985). For a systematic discussion of *taṣawwur* and *taṣdīq*, see the comprehensive study by Lameer 2006. An analysis of the types of assent and their Avicennan classification is found in al-Ṭūsī 1971: 460–461.

taṣdīq in the same way as *qawl mufaṣṣil* stands to *qiyās*. Just as there are various types of conception and assent, so there are different types of differentiating phrases and syllogisms. Different types of conceptions stand to different types of assent in the same way as different types of differentiating phrases stand to different types of syllogisms.

Types of conceptions are divided according to whether they are carried out by means of (1) essential notions (*dhātiyyāt*) or by means of (2) accidental notions (*ʿaraḍiyyāt*). In each case, the set of notions used to represent a concept can be proper to what is being represented, like (1.1) 'mortal rational animal' or (2.1) 'two-footed walking animal' to 'human,' or common to what is being represented and to some other notion, like (1.2) 'animal' or (2.2) 'walking,' which is common to 'human' and other animals. Thus, the resulting discrimination is such that it can either (1.1) single out something against everything else by means of essential attributes, or (1.2) single out something against some other things but not against all other things by means of essential attributes, or (2.1) single out something against everything else by means of accidental attributes, or (2.2) single out something against some other things but not against all other things by means of accidental attributes.[20]

The corresponding types of differentiating phrases will be (1.1) complete definition (*ḥadd tāmm*), (1.2) incomplete definition (*ḥadd nāqiṣ*), (2.1) complete description (*rasm tāmm*), and (2.2) incomplete description (*rasm nāqiṣ*). Types of assent, on the other hand, are classified according to their epistemic status as (1) certain (*yaqīnī*), quasi-certain (*shabīh bi-l-yaqīnī*), persuasive, and presumptive (*iqnāʿī ẓannī*). The first class is such if *p* is assented to, then the belief that *p* is accompanied by a belief that *p* cannot be otherwise. The second class is such that if *p* is assented to, then the belief that *p* is not accompanied by the belief that *p* cannot be otherwise or if it is accompanied by such a belief, the latter is defeasible. The third class is such that if *p* is assented to, then the belief that *p* is accompanied by a belief that the contradictory of *p* is possible. The corresponding types of syllogisms will be the (1) demonstrative syllogism (*qiyās burhānī*), (2) dialectical syllogism (*qiyās jadalī*), and (3) rhetorical syllogism (*qiyās*

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[20] In a porphyrian tree, when a given node is defined, the aggregate of its definitional features (summarized by the combination of proximate genus and last differentia) is proper to it alone, i.e. it picks out that node alone and nothing else. If we go up a level, for instance, by removing the last differentia, the remainder will be an incomplete definition with respect to the original node, giving only part of its essence and being shared by that node and one or more other nodes.

khaṭābī).[21] The operations that correspond to definition and demonstration ultimately go back to these two notions.

V Reconciliation

On this epistemological model, the domains of definition and demonstration are reconciled by the properties of middle terms that play the key role in demonstrative syllogisms. Despite the irreducible character of definition and demonstration, on the one hand, and conceptualization and assent, on the other, in the model of demonstrative knowledge discussed here, there is a way in which the two pairs are connected, ideally by rearranging the terms occurring in the logical structure of syllogisms and in the formulation of definitions. If we use a definition (or a description) of P as a middle term in a demonstrative syllogism, and we prove (possibly through additional steps involving further middle terms) that P belongs to S, then we have a demonstration that S is P in which cause will be synthetically expressed by the definition/description plus the additional middle terms. On the other hand, if we take the middle term expressing the cause of S being P, and arrange it in a suitable way in a phrase that gives an account of P (definitional or descriptional), then what we get is a definition (or a description) of P. In Aristotle, this model is suggested and illustrated by way of examples in B2 (eclipse, consonance) and then again in B8 (eclipse, thunder). Avicenna follows the same model, but with the support of ancient commentators (especially Philoponus) puts forward a more systematic characterization of the relation between the terms involved in a demonstration and the connection with the domain of definition. Consider the following two examples:

> S = moon, P = eclipse (of the moon), Y = disappearance of light (from the moon), Z = interposition of the earth (between the moon and the sun)

(1)	(1.1) Z belongs to S	(2)	[(2.1) Y belongs to S]
	(1.2) Y belongs to Z		(2.2) P belongs to Y
	(1.3) Therefore Y belongs to S		(2.3) Therefore P belongs to S

Four terms and two syllogisms are involved in Avicenna's reinterpretation of the materials that are to be found in *An. Post.* B8. We want to prove that S is P, namely that a certain attribute belongs per se to S by providing the cause of its belonging to S; and in order to do this,

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according to Aristotle, we should ideally look at the definition of P and use it as a middle term. According to Avicenna, the path that leads to that conclusion has two steps. The middle term M is in fact split into two (I shall call them Y and Z for the sake of clarity). One of them (Y, i.e. the effect, which is also the term that gives us a grasp of what the thing is) occurs in both syllogisms, while the other (Z, i.e. the cause) occurs only in the first syllogism. The fact that S is P is established as the conclusion of the second syllogism.

Both middle terms, Y and Z, occur in the definition of P, which is obtained by concatenating them in a canonical form whereby the effect/account stands in the place commonly occupied in a definition by the genus and the cause stands in the place commonly occupied in a definition by the differentia. Thus, it holds in general that

P $=_{df}$ (Y | because of Z).

In the above example, this yields in turn

Eclipse (of the moon) $=_{df}$ Disappearance of light (from the moon) | due to the interposition of the earth (between the moon and the sun).

S' = cloud, P' = thunder, Y' = noise (in the cloud), Z' = quenching of fire

(3)   (3.1) Z' belongs to S'   (4)   [(4.1) Y' belongs to S']
      (3.2) Y' belongs to Z'   (4.2) P' belongs to Y'
      (3.3) Therefore Y' belongs to S'   (4.3) Therefore P belongs to S'

P' $=_{df}$ (Y' | because of Z')

Thunder (in the cloud) $=_{df}$ Noise (in the cloud) | due to the quenching of fire

In this context, Avicenna refers to the terms as follows. P is the major term of the second syllogism in the demonstration, i.e. the major term that we ultimately want to prove of S. P is also the *definiendum* whose characterization (i.e. the *definiens* of which) we are going to make use of in order to prove that P belongs to S. The corresponding *definiens* has two parts, expressing an effect and a cause, respectively. Y is the effect and plays the role of genus in the definition of P. It is also called a 'conclusion of the demonstration' because it is the major term in the conclusion of the first syllogism. Z is the cause, and plays the role of differentia in the definition

of P. It is also called a 'principle of the demonstration,' because it is the middle term in the first syllogism.

What needs to be demonstrated is that S is P. To do this, we make use of an account of P (namely Y), which is proved of S by mediating it with Z, i.e. the cause of S's being Y. Then, since we can predicate P of Y, because Y is a account of P (definitional or descriptional, albeit still partial), we can use the first conclusion (namely that S is Y) to prove the second conclusion, which is what we were aiming at from the very beginning, namely that S is P. Thus, P is proved to belong to S by means of a complex middle term in two steps. The complex middle term provides an account Y of what P is, together with the cause Z of Y's belonging to S (the minor premise). In the first syllogism, the cause Z justifies the claim that a certain account of P, namely Y, attaches to S, which is the minor premise of the second syllogism, whereby we prove that the thing of which Y is an account, namely P, belongs in turn to S.

We therefore obtain both a characterization of the predicate P and a cause of its being predicated of the minor term. Definitional features in the above examples (expressed by Y) and causal justifications (expressed by Z) turn out to play a role in the proof that P is S (second syllogism). If Z is quenching of fire in the clouds, desire for revenge, interposition of the earth, Y is noise in the clouds, boiling of the blood in the heart, disappearance of light, respectively, then we might say that Y distinguishes P from other phenomena (eclipses, thunders, and anger from other things) and Z provides the cause of Y's being predicated of that of which it is an attribute per se (the moon, the clouds, or the heart).

Thus, starting with a classification of scientific inquiries, Avicenna offers an articulate account of various types of questions and of their relations. If-questions and what-questions turn out to be particularly relevant since they are the typological questions to which all inquiries eventually reduce. What-questions, in the case of middle terms, are related to why-questions because when we look for the cause of the conclusion of a given demonstrative syllogism we are looking for what the middle term is. Middle terms and definitions are related in demonstrative syllogisms, but in the end they answer to different needs and are functional to different epistemological processes. The distinction is grounded in the characterization of knowledge as conception (*taṣawwur*) and assent (*taṣdīq*). As Avicenna quite nicely puts it in *Burhān* i, 1, knowledge follows two parallel paths, the one which obtains by means of conception has a logical counterpart in definition (or description according to whether the account of something is given in terms of essential or accidental notions), while the one

which obtains by means of assent has a logical counterpart in syllogisms (or rather statements that occur as conclusions of syllogisms). The trajectory starting in *Burhān* IV, 1 ends in *Burhān* IV, 4 with an account of the Aristotelian claim that there is a sense in which demonstration and definition differ only with respect to the arrangement of terms. At the end of the discussion we get an attempt to solve some problems that are left open in *An. Post.* B8.

The discussion of *An. Post.* B10, where Aristotle recapitulates the types of definitions is matched by Avicenna with his own systematic account, which should be now looked at in the light of our previous characterization of what-questions. We may have the following types of definition: 1. definitions referring to the meaning of a name without any commitment to the existence of what is signified by that name (e.g. 'equilateral triangle' at the beginning of Euclid (Proposition 1)). We introduced this type above while discussing what-questions concerning the meaning of the name. When the appropriate corresponding if-questions have been answered and we know that something is the case then we seek. 2. definitions referring to the essence, which can be divided into three sub-types:

2.1   conclusion of a demonstration (= Y)
2.2   principle of a demonstration (= Z)
2.3   perfect definition (= Y | Z)

This model of definition applies typically to the case of attributes per se. Finally, when we are dealing with items in the domain (genus) of a science, another kind of definition is at stake, which does not refer to a cause other than the thing itself which is being defined (because there is none, or because the cause is the thing itself): 3. definition of things that either have no causes, or whose causes are not apart from their essence (it is the case with notions like point or unit). In a concise presentation of a demonstrative proof one might be tempted to compress the chain that connects an attribute per se to its subject by means of an abbreviated formulation whereby M is the definition of P. The question that remains open is whether this idealization is compatible with Avicenna's awareness of the complexities involved in the relation between why-questions and what-questions (explanatory middle term and definition/description). Avicenna seems to be willing to claim that there is much more to this than meets the eye. A way out would be to broaden Aristotle's claim that definition alone should be used as a middle term in demonstrative proofs and make use of

descriptions along with definitions. If Y and Z (i.e. the account of P and the cause of its applying to the subject) range over a broader set of entities and phenomena, then the cost of rejecting the *littera* of Aristotle's text with its excessively demanding requirements might well be worth what we get in return, namely a richer theory with more explanatory power and a more flexible conceptual vocabulary.

The Rhetoric *and* Poetics *in the Islamic world*

Uwe Vagelpohl

> The night before, two doubtful words had halted him at the begin-
> ning of the *Poetics*. These words were *tragedy* and *comedy*. He had
> encountered them years before in the third book of the *Rhetoric*; no
> one in the whole world of Islam could conjecture what they meant.[1]

With these words, Jorge Luis Borges introduces the reader to the problem
his protagonist, the Muslim philosopher Ibn Rushd (d. 1198), grapples with
in his celebrated short story "Averroes's search":[2] while composing his
commentary on Aristotle's *Poetics*, he keeps encountering these two inex-
plicable terms. Ibn Rushd finally follows a hunch and writes that the
former is Aristotle's term for "panegyrics," the latter for "satires and
anathemas."[3] One of the many ironies of Borges' story is the fact that in
the short span of an afternoon and evening, while meditating on the
meaning of tragedy and comedy, the solution stares him in the face
twice: first, he observes children acting out a scene in the garden, and
later, one of the guests at the evening's entertainment describes to his
unbelieving audience a theatrical display he witnessed in far-away China.

Borges' account, while not entirely historically accurate,[4] touches on a
fundamental issue affecting the reception of the *Poetics* (and *Rhetoric*) in
the Islamic world. In his words, "Averroes ... closed within the orb of

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[1] Borges 2000: 181.   [2] "La Busca de Averroës," originally published in 1949.
[3] Borges 2000: 187.
[4] At the risk of imposing excessive demands of historical accuracy on a work of fiction, the following
points may be noted: Borges claims (181) that his protagonist consulted Alexander of Aphrodisias
(fl. late second and early third centuries), who, however, did not comment on the *Poetics*. He adds
that he compared the translations of Ḥunayn ibn Isḥāq (d. 873) and Abū Bishr Mattā (d. 940). The
former translation was produced not by Ḥunayn, but probably by his son Isḥāq and was a translation
into Syriac, not Arabic (more below). Ibn Rushd who, as Borges himself states, was ignorant of Syriac
and Greek (181), would not have been able to make use of it. Most importantly for this chapter, the
"revelation" that, as Borges describes, led Ibn Rushd to identify tragedy with eulogy and comedy
with satire was none: as we will see below, this equation was part and parcel of his sources, among
them Abū Bishr's translation of the *Poetics*.

Islam, could never know the meaning of the terms tragedy and comedy."[5] The story seems to question the ability of even the most accomplished scholar to understand concepts that have no counterpart in his or her own culture.[6] Such concepts, comedy and tragedy among them, abound in the *Rhetoric* and especially the *Poetics*. What did translators, commentators, and Muslim scholars make of these two books?

I   Reception history

The basic facts of the translation and reception of the *Rhetoric* and *Poetics* in the Muslim world are by now reasonably well known. Before we return to the question posed above, let us briefly outline how these texts were translated into Arabic and assimilated into Islamic philosophy.[7]

   Between the eighth and the eleventh century, hundreds of Greek philosophical, scientific, and medical texts were translated from Greek into Arabic; many such texts passed through the medium of Syriac. The extant Arabic translations of the *Rhetoric* and *Poetics* were produced at very different stages of this translation movement, one toward the beginning (the anonymous *Rhetoric*, translated sometime during the early years of the ninth century),[8] the other relatively late (the *Poetics* by Abū Bishr Mattā, produced before 932).[9] The crucial phase of the translation movement bookended by these two texts saw a marked improvement in translation techniques and terminology. At the same time, the availability of

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[5] Borges 2000: 187.

[6] On this and other important issues of interpretation and translation touched on by Borges, see Dapía 1999, Sharkey 2006, and Jullien 2007.

[7] In this section, we will concentrate on those aspects that are immediately relevant for this chapter. The following sources paint a more detailed picture: on the *Rhetoric*, see Goulet 1989: 455–472 and 2003: 219–223 and Vagelpohl 2008: 39–61, 181–204; on the *Poetics*, see Heinrichs 1969: 105–162; Dahiyat 1974: 3–58; Schrier 1997, and Goulet 2003: 208–218.

[8] Extant in a single manuscript, Paris, Bibliothèque Nationale ar. 2346, in Aristotle 1959a (ed. Badawī); and the much improved, Lyons 1982; Panoussi 2000: 238–247 signaled some of the problems of these editions, mostly affecting Badawī, and suggested a number of emendations. See Vagelpohl 2008: 39–51.

[9] The translation, also extant in a single version in the same manuscript as the *Rhetoric*, is incomplete: thanks to a missing folio, it stops at 1462b5. It was edited by Margoliouth 1887: 1–76 and Tkatsch 1928: 220–293. Unlike his edition of the Arabic text itself, the latter's account of the textual and translation history has largely been superseded by more current research; see the review by Kutsch 1937. Additional editions in Aristotle 1953: 85–145 (ed. Badawī) and Aristotle 1967 (ed. ʿAyyād) have not improved on Tkatsch's work. A second translation by Yaḥyā ibn ʿAdī, attested by Ibn al-Nadīm 1871–1872: 250, which, it seems, was the text the philosopher Ibn Sīnā used in his *Kitāb al-Shifāʾ* (*The Cure*); see Schrier 1997, esp. 268–273, may have been little more than a revision of the older version (see Goulet 2003: 211) with different terminology. For a study of some of the divergences between these two versions, see Afnan 1947 and the notes by Dahiyat 1974 to his English translation of the relevant sections of the *Shifāʾ*.

translations induced scholarly research that in turn generated demand for new translations and improved versions of older ones.[10] The intellectual ferment inspiring and inspired by the work of translators and commentators was fed by much more than a set of written texts. Philosophical and scientific ideas found their way into the Islamic world through numerous routes, by way of written texts as well as oral exchanges between exponents of the many cultures and languages coexisting under the roof of the Islamic state.[11]

Once the *Rhetoric* became available to Arabic-speaking scholars in the early ninth century, it gave rise to a remarkable range of commentaries and other writings. Although it never became as central a text in the Islamic Aristotelian tradition as some others, the contrast between the extensive and sustained Arabic commentary tradition and the virtual silence surrounding the *Rhetoric* in late antiquity is remarkable.[12] As a handbook of oratory, it had been superseded by the technical writings of rhetorical specialists such as Hermogenes (fl. around 170) and Aphthonius (fl. in the late fourth century).[13] Unmoored from its immediate political and social context, Aristotle's rhetorical theories became, together with the system of dialectics outlined in his *Topics*, part of the theoretical underpinnings of philosophical education: they provided methodologies of presenting or arguing for philosophical concepts.[14]

As we will see below, the reappraisal of the *Rhetoric* in late antiquity became a central element of its reception in the Islamic philosophical tradition. Muslim philosophers took up the study of the *Rhetoric* with remarkable vigor. With the exception of al-Kindī (d. *c*.870), who apparently did not know the translation and generally evinced little interest in the subject,[15] all of the major figures of Islamic philosophy wrote at least one substantial commentary and in most cases also at least one shorter text outlining their thinking on Aristotelian rhetoric and poetics.

As we will see below, there are two distinct textual strands in the reception of the *Rhetoric* and *Poetics*. They are exemplified by two different types of writings devoted to these works: the former, shorter type explains theoretical concepts, most importantly the role and place of the *Poetics* and *Rhetoric* in the Aristotelian *Organon*. It tends to dispense with direct references to the texts and follows a pattern of introductory treatises or *prooemia* on the *Organon* established in late antiquity. The latter, longer

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[10] See Rashed 1989: 208.
[11] On the role, scope and problematic nature of oral transmission of knowledge, see Vagelpohl 2008: 3–5.
[12] See Watt 1995a: 17–19.   [13] Aouad and Rashed 1997b: 43–44.
[14] See Hadot 1980 and Woerther 2009: 65–66.   [15] Vagelpohl 2008: 183–185.

type consists of full-fledged commentaries aimed at explaining the text in
some detail, quoting or closely paraphrasing it. These two types coexisted
throughout the reception history of the *Rhetoric* and *Poetics*, influencing
each other and sometimes merging.[16]

Al-Fārābī (d. 950) summarized and interpreted the theoretical aspects of
rhetoric, especially those relevant to logic, in his *Kitāb al-Khaṭāba*,[17] which
formed part of a series of such *prooemia* devoted to individual parts
of Aristotle's *Organon*.[18] In addition, we know of a *Long Commentary*
combining paraphrase and close phrase-by-phrase commenting. Its intro-
duction and the sections discussing the first few lines of the *Rhetoric* survive
in a thirteenth century Latin translation entitled *Didascalia in Rethoricam
Aristotilis ex glosa Alpharabii*, produced by Hermannus Alemannus.[19]
Thanks to the discoveries of Maroun Aouad, we now know a number of
extensive quotations of the Arabic original embedded in a manual on logic
compiled by the Cairene physician Ibn Riḍwān (d. 1061 or 1068), the *Kitāb
fī l-Mustaʿmal min al-manṭiq fī l-ʿulūm wa-l-ṣanāʾiʿ* (*On What is Used from
Logic in the Sciences and Arts*).[20]

Al-Fārābī's writings on logic exerted a strong influence on Ibn Sīnā, who
discussed the subject matter of the *Rhetoric* in many of his works. Among
others, he devoted substantial sections of two comprehensive surveys of
Aristotelian philosophy, his early *Ḥikma al-ʿarūḍiyya* (*Philosophy for
ʿArūḍī*), also called *Kitāb al-Majmūʿ* (*The Compilation*),[21] and the later
and more substantial *Kitāb al-Shifāʾ*, to rhetoric.[22] Both these sections are
part of a wider discussion of the logical teachings of Aristotle's *Organon*.
The former only covers part of the *Rhetoric*: in one chapter, Ibn Sīnā
summarized the contents of Book 1 (excluding the last chapter), in another,
he discussed those chapters of Book 2 that describe the passions orators
aroused in their audience. The *Shifāʾ* takes on the entirety of the *Rhetoric*,

[16] See Heinrichs 1969: 111–112, 130–131.
[17] See al-Fārābī 1971: 30–121. There are also two later editions, see al-Fārābī 1976 and 1987–1989: 456–492.
[18] See the discussion of four of these treatises, including those on the *Rhetoric* and the *Poetics*, by Galston 1988.
[19] Al-Fārābī 1971: 149–252.
[20] The text remains unedited, but Aouad has edited the section on rhetoric (Aouad 1998a) and extracted and studied fragments from al-Fārābī's commentary from the remainder of Ibn Riḍwān's book, see Aouad 1997a and 1998b.
[21] On the dating and contents of this work, his earliest comprehensive philosophical survey, see Gutas 1988: 87–93.
[22] For the two chapters dealing with the *Rhetoric* in the *Ḥikma al-ʿarūḍiyya*, see Avicenna 1945 and 1954. The relevant part of the *Shifāʾ* is partly translated into German by Würsch 1991: 140–174; see also the improvements and corrections to the edition and translation proposed by Aouad 1993.

but offers a "running exposition . . . as reconstructed according to his own opinion" rather than reverting to the format of close commentary employed by his predecessors.[23] Its introduction, itself an example for the still ongoing tradition of *prooemia*, illustrates how the high-level conceptual outline of a *prooemium* seeking to explain the place of the *Rhetoric* and *Poetics* in the *Organon* could be merged with the more detailed exegetical paraphrase Ibn Sīnā offered in the sections of the *Shifāʾ* devoted to individual works of the *Organon*.

Ibn Rushd (d. 1198) also engaged with the *Rhetoric* during different phases of his life. In an earlier text, known as the *Jawāmīʿ*, *Short Commentary on the Rhetoric*,[24] he concentrated on theoretical principles of logic he extracted from the book; the text formed part of a series of more theoretically oriented *prooemia* on individual works of the *Organon*. Ibn Rushd focused in particular on the second chapter of Book 1, the same chapter al-Fārābī studied in his *Kitāb al-Khaṭāba*, which also belonged to the *prooemium* tradition. The "Fārābian" interpretation Ibn Rushd offered and the similarity in structure and content of the two texts illustrate how close his thinking was to that of his illustrious predecessor.[25] Almost twenty years later, he wrote a *Middle Commentary* on the *Rhetoric* that illustrated how his thinking had shifted away from the Arabic commentary tradition and explicitly emphasized the Aristotelian text itself while downplaying the elaborate interpretations of his precursors.[26]

The authors and writings surveyed above are the most prominent exponents of a tradition of commenting on and writing about the *Rhetoric* that stretched from the tenth to the thirteenth century and beyond. Latin translations, e.g. of parts of al-Fārābī's *Long Commentary* (the *Didascalia* mentioned above) and Ibn Rushd's *Middle Commentary*, transmitted the interpretations developed in the Islamic philosophical tradition to Latin-writing scholars. Their influence can be traced to the Renaissance and beyond.[27]

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[23] Gutas 1988: 102. Echoes of Ibn Sīnā's elaboration of Aristotle's theory of the *enthymeme* (understood by late antique and Muslim commentators to be a rhetorical syllogism based on accepted opinions rather than incontrovertible truths) and its connection to the demonstrative syllogism can also be found in his *Kitāb al-Ishārāt wa-l-tanbīhāt* (*Pointers and Reminders*); see Reisman 2009. On the meaning of *enthymeme* in Aristotle's *Rhetoric*, see the detailed discussion by Burnyeat 1996.

[24] See Averroes 1977: 63–78 (ed. Butterworth). The philological accuracy of Butterworth's edition and the validity of his interpretation have been called into doubt by a number of reviewers, e.g. Zimmermann 1979, Badawī 1979–1980, and Schoeler 1980.

[25] See the comparison between the two books and the Arabic translation of the *Rhetoric* in Aouad 1994.

[26] See Schoeler 1980.   [27] See e.g. Rosier-Catach 1998a and Vagelpohl 2008: 202–204.

The reception of Aristotle's *Poetics* followed a similar, but slightly different path. The first prominent author to take up its study after it had been translated into Arabic was, again, al-Fārābī. He did not, however, embark on a full-scale commentary, but selectively presented issues raised by the *Poetics* that he considered relevant to logic in two texts that firmly follow the form of *prooemia*. In his *Risāla fī qawānīn al-shiʿr* (*Epistle on the Canons of Poetry*),[28] al-Fārābī elaborated on the notion of "poetic statements" (*aqāwīl shiʿriyya*), the role of imitation and poetry in logic, types of poetry and poets and characteristics of poetic analogy.[29] The closest al-Fārābī came to defining poetry is to state that "poetic statements" are syllogistic,[30] even though they are neither demonstrative, argumentative, rhetorical, or sophistical.[31] This and other notions developed in the *Qawānīn* represent a curious mix between material gleaned from the translation of the *Poetics* and secondary information possibly derived indirectly from the late antique tradition of introductory and exegetical writings.[32] In addition, al-Fārābī wrote another short treatise on the subject matter, the *Kitāb al-Shiʿr* (*On Poetry*).[33] Based in part on the first three chapters of the *Poetics*, its four parts consider rhyme and rhythm in Arabic poetry, explain the difference between rhetoric and poetry, describe the relationship between *muḥākāh* (imitation) and *takhyīl* (evocation of images)[34] and conclude with an assessment of the distance between original and imitation.[35] It forms part of the same series of introductory writings that included his *Kitāb al-Khaṭāba*, but, as the outline above demonstrates, steps away somewhat from the more logical concerns of the latter.[36]

Echoes of the *Qawānīn* figure prominently in Ibn Sīnā's thought about the *Poetics*.[37] Like the *Rhetoric*, he commented on the text in the *Ḥikma al-ʿarūḍiyya*[38] and the *Shifāʾ*.[39] The former largely presents a shortened version of many of the same ideas spelled out in greater detail in the

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[28] See Arberry 1938 and Aristotle 1953: 149–158.   [29] See Dahiyat 1974: 20–27.

[30] On the notion of the "poetic syllogism" with some examples from the commentary literature, see Schoeler 1983.

[31] Arberry 1938: 268.

[32] The evidence for the availability of antique commentaries on the *Poetics* is rather murky. Ibn al-Nadīm 1871–1872: 250 claims to know of a commentary by Themistius translated into Arabic, but adds that this ascription was considered false. In his *Qawānīn*, al-Fārābī also names Themistius and alludes to other Greek treatises on the subject, see Arberry 1938: 270; but these references seem to have been second-hand at best; see Dahiyat 1974: 24–26, 66–68.

[33] Al-Fārābī 1959.

[34] On this central concept of Islamic philosophical poetics, see Heinrichs 1978.

[35] See Galston 1988: 193–198.   [36] See also Heinrichs 1969: 141–154.

[37] Dahiyat 1974: 27–28. For a more detailed analysis, see Heinrichs 1969: 131–141.

[38] For the section dealing with the *Poetics*, see Avicenna 1969a.

[39] The relevant section was edited by Margoliouth 1887: 80–113, Aristotle 1953: 161–198 and again in Avicenna 1966 and finally translated into English by Dahiyat 1974 and partly by Cantarino 1975. See

latter.[40] Like the section on the *Rhetoric*, the latter offers an extended exposition of Ibn Sīnā's thought on the contents and purpose of the *Poetics* rather than a commentary, preceded by an introduction that draws on the *prooemia* tradition. With al-Fārābī, he emphasized the notion that poetical utterances can be analyzed logically, but rejected his claim that poetical syllogisms necessarily be false.[41]

Ibn Rushd's *Short Commentary* (*Jawāmiʿ*) *on the Poetics*, less than two printed pages of text,[42] recounts many important interpretive *topoi* presented by al-Fārābī and Ibn Sīnā, putting particular emphasis on *takhyīl* (the evocation of images in the minds of listeners).[43] Typical for such an introductory text, Ibn Rushd raised the issue of the place of the *Poetics* in the *Organon* and maintained that it belonged to the "syllogistic arts" (*ṣināʿa qiyāsiyya*), but that it does not operate with actual (or explicit, *bi-l-fiʿl*) syllogisms.[44] This idea reproduces al-Fārābī's distinction between actual (*bi-l-fiʿl*) and potential (or implicit; *bi-l-quwwa*) syllogisms, among which he subsumed poetic devices such as simile or analogy (*tamthīl*) and induction (*istiqrāʾ*).[45] By the time he wrote his *Middle Commentary on the Poetics*, Ibn Rushd's thinking had undergone a shift similar to the one we observed in the case of the *Rhetoric*: he had shed some of the doctrines introduced by al-Fārābī and Ibn Sīnā and attempted to realign his interpretation with what he thought were Aristotle's original intentions.[46] For one, more than his predecessors, Ibn Rushd attempted to apply Aristotle's *Poetics* to Arabic poetry. According to his *Middle Commentary*, the distinguishing mark of poetics is that it is an art "not based on argumentation and discussion" but *mimesis*, aspects of which he labeled *tashbīh/tamthīl* (comparison) and *muḥākāh/takhyīl* (artistic imitation/evocation of images); this seems to be a key difference to (philosophical) rhetoric.[47]

Ibn Rushd's enormous achievement marked the high point of Muslim philosophical engagement with the *Rhetoric* and the *Poetics*, but it did not end with him. Before and after Ibn Rushd, other philosophers, including some of his own students and their students in turn, wrote mainly introductory texts on logic and its various disciplines, including rhetoric and poetics. Of the common themes of Muslim philosophical rhetoric and poetics, both its logical bent and its dissociation from traditional Arabic

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also Afnan 1947 on the textual differences between Abū Bishr's Arabic translation and the lemmata quoted in Avicenna's *Kitāb al-Shifāʾ*.
[40] Anawati 1957: 175.   [41] See Kemal 2003: 171.   [42] Averroes 1977: 83–84.
[43] See Schoeler 1980: 298–299.   [44] Averroes 1977: 205.   [45] Schoeler 1980: 299.
[46] See Schoeler 1980: 295.   [47] See Cantarino 1971: 17–18, 20–21.

poetical and rhetorical thought persisted. In the prologue to his *Madkhal li-ṣināʿat al-manṭiq* (*Introduction to the Art of Logic*), Ibn Rushd's student Ibn Ṭumlūs (d. 1223) introduced a division of the sciences squarely based on al-Fārābī's *Iḥṣāʾ al-ʿulūm* (*Enumeration of the Sciences*). In it, he classified "oratory" (*al-khuṭab*) as a "propaedeutic science" among the "sciences of the Arabic language" (together with lexicography, poetics and related fields, e.g. metrics). Logic on the other hand (including Aristotelian rhetoric and poetics) was part of the "ancient" or "universal" sciences.[48]

Even though the Arabic translations of both texts gave rise to numerous commentaries and other writings, their impact remained limited. Nearly all of these writings originated with and circulated among scholars of Muslim philosophy: Aristotle's *Rhetoric* and *Poetics* were relegated to "philosophical" poetics and rhetoric.[49] Except for polemical purposes, few writers outside this field seriously engaged with Aristotelian poetics and rhetoric or attempted to apply these theoretical frameworks to Arabic rhetorical and poetic genres, either in spite or perhaps because of the fact that Arabic literature offered a highly developed rhetorical and poetical tradition of its own.

The approach to literary criticism developed in the *Kitāb Naqd al-shiʿr* (*Assaying of Poetry*) by Qudāmah ibn Jaʿfar (d. 948?), a close contemporary of al-Fārābī, exemplifies the diffuse influence of Aristotelian logic on the methodology of literary criticism.[50] While mainly indebted to the preceding tradition of Arabic literary criticism, Ibn Qudāmah's systematic analysis of poetry also echoes ideas from Aristotle's *Rhetoric*.[51] The first literary scholar (writing outside the confines of philosophical scholarship) seriously attempting to apply Aristotle's poetical theory to Arabic poetry, particularly his concepts of *mimesis* (*muḥākāh*) and evocation of images (*takhyīl*), seems to have been Ḥāzim al-Qarṭajannī (d. 1285).[52] His importance rests on the fact that he was also the first eminent literary critic with comprehensive philosophical training and the first to have attempted to meld traditional Arabic literary theory and Greek philosophical poetics.[53] Interestingly, in spite of his chronological and geographical proximity to Ibn Rushd, al-Qarṭajannī only explicitly refers to the writings of Ibn Sīnā.[54]

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[48] Aouad 2006: iv.   [49] See Heinrichs 1969: 111 and 1987: 188–189 on the *Poetics*.
[50] See Heinrichs 1987: 182.   [51] See Cantarino 1975: 118.   [52] Ibid. 206.
[53] See Heinrichs 1969: 103–104.   [54] Cantarino 1975: 206.

Traces of formal elements associated with Greek rhetorical learning have also been identified in Arabic literary works, e.g. *the Arabian Nights*[55] or the descriptions of cities in a number of different texts including al-Ḥarīrī's (d. 1122) celebrated *Maqāmāt* (*Sessions*).[56] The work of Arabic translators may also have been influenced by Greek rhetorical conventions.[57]

But for each scholar who embraced the Greek legacy made available by the Greek–Arabic translation movement, there were several who vigorously debated its usefulness or even rejected it out of hand. The more specific criticism of Greek poetics and rhetoric was part of and often blended into a broader critical attitude toward Greek logic and the translation of Greek literature in general, expressed not only by exponents of "traditional" Arabic disciplines such as Arabic theology and grammar, but also by bellettrists such as al-Jāḥiẓ (d. 868), who was deeply influenced by Greek philosophy and science. In a much-quoted passage of his *Kitāb al-Ḥayawān* (*Book of Animals*), he remarked on the impossibility of translating Arabic poetry and went on to present a catalogue of qualifications required of a translator seriously striving to convey the meaning of a non-Arabic text to an Arabic-speaking audience. None of the translators he was familiar with met this high standard. Paired with his insistence on the inadvisability even to attempt to translate scripture, the impression al-Jaḥiẓ leaves is that of an inveterate opponent of translation in general and Greek–Arabic translation in particular.[58] In the same book, he thoroughly rubbishes the Arabic translation of Aristotle's *Meteorology*, accusing the translators of "inventions" and "ignorance."[59] But his well-known reliance on the output of the Greek–Arabic translation movement suggests that these and other passages are perhaps better understood as partly ironic, prompted by the frustration of an accomplished Arabic stylist with translations of often inferior quality, produced by mostly Christian translators and native speakers of Syriac whose grasp of the Arabic language was sometimes imperfect at best.[60]

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[55] von Grunebaum 1942; see Watt 1995b: 68, who calls these parallels "literary" rather than "rhetorical."
[56] von Grunebaum 1944.
[57] See the analysis of the Arabic translation of pseudo-Plutarch's *Placita philosophorum* by Daiber 1980: 61–68. Partly in reaction to the skeptical position espoused by Bonebakker 1970: 90–95 on the possible impact of Aristotelian rhetoric and poetics on Arabic literary theory, Larcher 1998 signals a number of other indirect influences of "Hellenizing" (i.e. philosophical) rhetoric on scholars operating outside the philosophical fold.
[58] See Vagelpohl 2010a: 261–262.   [59] See Endress 1997b: 43–44.
[60] See al-Fārābī 1981: LXXVI, where the editor F. W. Zimmerman rates Abū Bishr's translation of the *Poetics* as "uncommonly inarticulate" and notes that their deficient command of Arabic was one of the charges brought against the logicians who were educated in convents and other institutions that belonged to "the least Arabicized sections of the Christian community."

The same applies to the equally well-known debate between the grammarian Abū Saʿīd al-Sīrāfī (d. 979) and the logician (and our translator of Aristotle's *Poetics*) Abū Bishr on the relative merits of logic and Arabic grammar, reported in Abū Ḥayyān al-Tawḥīdī's (d. 1023) *Kitāb al-Imtāʿ wa-l-muʾānasa* (*Book of Enjoyment and Conviviality*). Challenged by an experienced and well-regarded exponent of the "classical" Arabic sciences, Abū Bishr fails miserably to defend the universality (and therefore relevance) of Aristotelian logic. Even though this "debate" should not be read as a faithful protocol of an actual exchange between these two scholars, it illustrates the depth and fierceness of opposition against Greek thought among a substantial cross-section of Muslim scholars.[61]

The inadequacy of the rhetorical and poetical theories expounded by the commentators on the basis of the Arabic translations of the *Rhetoric* and *Poetics* was also keenly felt by those they could have appealed to most: scholars of literature. At the beginning of his *al-Mathal al-sāʾir* (*The Current Proverb*), Ḍiyāʾ al-Dīn ibn al-Athīr (d. 1239) mounted a vigorous attack on the relevance of Greek poetics for creators and critics of Arabic poetry. Ibn Sīnā in particular came in for harsh criticism; Ibn al-Athīr pronounced everything he said about Aristotle's *Rhetoric* and *Poetics*, especially the link between poetry and logic, "totally useless for any Arabic-speaking person."[62]

II A reception "framework"

The commentaries and secondary texts discussing Aristotle's *Poetics* and *Rhetoric* all share a number of assumptions and interpretive motifs, e.g. the connection between rhetoric, poetics and logic and the interpretation of realia such as tragedy and comedy, all of which represent elements of an interpretive framework that differs in key aspects from that of Aristotle's immediate audience. They appear in different configurations throughout the reception history of the two works. In addition, they were independent of the translations: we find several of them in texts that clearly antedate the Arabic translations themselves.

A case in point is the Arabic reception of the *Poetics*, which started even before the text itself was translated, possibly under the influence of a lost

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[61] See Vagelpohl 2010a: 256–258. The background to and relevance of the debate were analyzed in great detail by Endress 1986.

[62] See Cantarino 1975: 191–193 and Heinrichs 1969: 109–111.

late antique summary of the *Organon*.[63] In his *Risāla fī kammiyyat kutub Arisṭāṭālīs* (*Epistle on the Number of Aristotle's Books*), the philosopher al-Kindī reported that the *Poetics*, the ninth part of the *Organon*, discusses "the art of poetry [treating] of words and what metric is used in every species of poem, such as the poem-of-praise and the poem-of-mourning and the poem-of-denunciation and others."[64] Besides providing evidence for at least a limited amount of information about the *Poetics* antedating its translation, the *Risāla* also demonstrates that certain elements of the interpretive framework that influenced the translation and commentary tradition of this work and the *Rhetoric* had also put down roots at a relatively early time.[65]

Of these elements, we find two in this short treatise: first, the classification of both *Rhetoric* and *Poetics* as parts of Aristotle's *Organon* – toward the beginning of his epistle, al-Kindī introduced both as the seventh and eighth part respectively of what he termed *al-manṭiqiyyāt*, the "logical" works.[66] Second, in his description of the contents of the *Poetics*, al-Kindī already referred to the distinction of poetic genres into "eulogy" and "satire," i.e. the very same rendering of the terms "tragedy" and "comedy" we find in Abū Bishr's translation and in subsequent commentaries.[67] While this is not a classification Aristotle himself proposed, it echoes his description of the earliest forms of poetic expression alluded to in chapter 4 of the *Poetics*.[68]

Were these elements of the late antique interpretive framework also present in the Syriac translations? As suggested above, many, mostly early translations were made directly from a Greek source, others were based on a Syriac intermediary. While this is not assured in the case of the *Rhetoric*,[69] Abū Bishr's Arabic *Poetics* was in fact translated from a Syriac version produced in the early tenth century, possibly by Isḥāq ibn Ḥunayn (d. *c.*910), the son of the famous translator Ḥunayn ibn Isḥāq (d. *c.*873).[70] The only extant fragment of this Syriac version, quoted in a

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[63] Guidi and Walzer 1940: 378, but see also Gutas 1983: 241, n. 22.

[64] Rescher 1963: 57. See Guidi and Walzer 1940: 402, 10.13–14: "ṣināʿatu l-shiʿri min al-qawli wa-mā yustaʿmalu min al-awzāni fī kulli nawʿin min al-shiʿri ka-l-madḥi wa-l-marāthī wa-l-hijāʾi wa-ghayri dhālika." See Heinrichs 1969: 123–126. On this treatise, see also Jolivet 2004.

[65] On the possible sources of this information, see Heinrichs 1969: 126.

[66] Guidi and Walzer 1940: 392, 22–24. See Rescher 1963: 53.

[67] See Tkatsch 1928: I: 132b. Gutas 1990: 92–101 compares Aristotle's definition of tragedy with those included in Ibn Sīnā's and Ibn Rushd's commentaries; see also Schrier 1997.

[68] E.g. 1448b25–27. See Hardison 1970: 67–68.   [69] See Vagelpohl 2008: 54–61.

[70] See Schrier 1997: 264–265. As Schrier 1995: 344–345 explains, Ḥunayn himself must have been unaware of the text. In a gloss of the term preserved in the dictionary of Bar Bahlūl, he explained

thirteenth-century scientific compendium entitled *Ktābā d-Diyālogō* (*Book of Dialogues*) by the West-Syrian scholar Jacob bar Šakko (d. 1241),[71] is too short to draw far-ranging conclusions about the presence of the above-mentioned elements. For one, it sidesteps the problem of translating "tragedy" by simply transliterating it, a strategy we observe in many Syriac and also a number of Arabic translations, mainly those produced during earlier stages of the translation movement.[72]

The Arabic translation of the *Rhetoric* uses both terms sparingly, we find two occurrences each of κωμῳδία and τραγῳδία.[73] Each time, the translator chose to transliterate as *qūmūdiyya* and *ṭrāghūdiyya*, respectively, rather than translate. His translation for the related term κωμῳδοποιός (comic poet)[74] shows that he did not resort to transliteration exclusively: he rendered it as *dhākirī al-masāwiʾ* (those who tell about evil deeds/short-comings) on the first occasion. On the second, he reverted to transcription and called them *alladhīna yaṣnaʿūna l-qūmūdiyyāt* (those who produce comedies).

Unsurprisingly, κωμῳδία and τραγῳδία appear rather more frequently in the *Poetics*. The former is mentioned about thirty times, the latter more than a hundred. In a representative example toward the beginning of the book, Aristotle pinpoints the difference between comedy and tragedy:

> ἐν αὐτῇ δὲ τῇ διαφορᾷ καὶ ἡ τραγῳδία πρὸς τὴν κωμῳδίαν διέστηκεν· ἡ μὲν γὰρ χείρους ἡ δὲ βελτίους μιμεῖσθαι βούλεται τῶν νῦν. (1448a16–18)

> This very distinction separates tragedy from comedy: the latter tends to represent people inferior, the former superior, to existing humans. (trans. Halliwell)

Abū Bishr Mattā translates as follows:

> *wa-bi-hādhā l-faṣli bi-ʿayni-hi l-khilāfu lladhī li-l-madīḥi ʿinda l-hijāʾi wa-huwa anna-hu ammā tilka fa-bi-l-arādhili [wa-]ammā hādhihī fa-kānat tushbihu bi-l-akhyāri wa-īyā-hum kānat tuḥākī.*[75]

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tragedy and comedy as kinds of music, the former intended to admonish those sinning through hot temper, the latter those sinning through lust.

[71] The fragment corresponds to 1449b24–1450a10. For the Syriac text with translation and commentary, see Schrier 1997: 265–266.

[72] The editor of the Arabic *Poetics*, Jaroslaus Tkatsch, maintains that the Syriac version transliterated these terms throughout (Tkatsch 1928: 1: 156b, 204a).

[73] Comedy is mentioned at 1408a14 (189:17) and 1415a22 (204:22), tragedy at 1403b23 (172:3) and 1404a30 (174:13). The numbers in brackets refer to the page and line numbers of the Arabic text in Lyons 1982.

[74] The two occurrences are at 1384b10 (105:8) and 1406b7 (183:6).   [75] Tkatsch 1928: 222:22–23.

> Exactly this division constitutes the difference between eulogy and satire:
> that the latter emulates more contemptible [people] and the former superior
> [people] and represents them.

The key terms in this rendering are almost identical to those used by al-
Kindī: *madīḥ* (eulogy) for tragedy and *hijāʾ* (satire) for comedy. Even
though Abū Bishr continues to rely on transliterations for other important
terms in the *Poetics*, e.g. *ṣināʿat al-afī* (ἐποποιία, epic poetry) and *drāmāṭā*
(δράματα, theatrical performances), he consistently renders κωμῳδία and
τραγῳδία as *hijāʾ* and *madīḥ*.[76]

Our lack of additional Syriac sources does not allow us to follow the
eulogy/satire or, more generally, praise/blame distinction further back
than al-Kindī's short sketch.[77] The philosopher may have attempted to
"accommodate" the alien Greek poetic genres by transposing them into
categories familiar to his Arabic-speaking audience.[78] The ultimate
inspiration, however, must have come from a lost Arabic secondary
text or a translation of a late antique summary of the *Organon* that
supplied either the terms themselves or at least described the contents
of the *Poetics* in a way that suggested *hijāʾ* and *madīḥ* as appropriate
equivalents for κωμῳδία and τραγῳδία. It is difficult to imagine that
al-Kindī, himself unable to read Greek or Syriac,[79] came up with these
terms all by himself.

The connection between rhetoric and poetics on the one hand and logic
on the other is both more prominent and better documented than the
evolution of the praise/blame motif.[80] Grouping the *Poetics* and *Rhetoric*
with Aristotle's logical writings may not have been uncontroversial – late
antique commentators did not have an easy time justifying this to us
somewhat counterintuitive idea[81] – but was, in spite of these debates,
taken for granted by Muslim writers.[82] The Neoplatonist Elias (fl. *c*.550)
presented a classification[83] of Aristotle's works that anticipated the struc-
ture of the most well-known Arabic classification outlined in al-Fārābī's
Iḥṣāʾ al-ʿulūm. This short work, translated into Latin under the title

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[76] Tkatsch 1928: 1:185a, 204a.
[77] As we have seen above, the translator Ḥunayn ibn Isḥāq, a close contemporary of al-Kindī,
apparently was not aware of this distinction.
[78] According to Gutas 1990: 95. On accommodation as a translation strategy, see Vagelpohl 2010b.
[79] See Endress 1997b: 44.
[80] The philosophical implications of this connection have been explored by Black 1990 under the label
"context theory," a term coined by Hardison 1970: 60. See also Lameer 1993, a detailed and critical
review of Black's study.
[81] See the examples quoted by Walzer 1934b: 5–14.
[82] Heinrichs 1969: 105–106 and Schoeler 2005: 45.   [83] See Gutas 1983: 241–246.

De scientiis, first by John of Seville (fl. eleventh century)[84] and then by Gerard of Cremona (d. 1187),[85] became an important transmitter of the notion of the "logical" character of the *Rhetoric* and *Poetics* to the Latin West.

The writings of Paul the Persian,[86] a Nestorian theologian and philosopher active at the Persian court of Khusrau Anūshirwān (r. 531–578), illustrate how this classification quickly crossed cultural and linguistic boundaries. In an otherwise lost introduction to the works of Aristotle, quoted at length (in Arabic) by the Persian philosopher and historian Miskawayh (d. 1030) in his *Tartīb al-saʿādāt* (*The Arrangement of Happiness*), Paul correlates five kinds of syllogisms with five different parts of the *Organon*, the *Rhetoric* and *Poetics* among them. His system largely parallels that of Elias and is in turn – with minor modifications – mirrored by that of al-Fārābī.[87]

Of the *Poetics* and the *Rhetoric*, the latter seems a better fit for the "extended" *Organon*. The book itself suggests links to other parts of the *Organon* that facilitated its eventual subsumption among the logical subdisciplines. After proposing that rhetoric is an ἀντίστροφος (counterpart) of dialectics at the very beginning of Book 1, Aristotle elaborated on the meaning of this statement in the second section of the same book (1355a3–14).[88] Since dialectics, to which Aristotle devoted his *Topics* (a text the *Rhetoric* refers to on a number of occasions), is a branch of logic, rhetoric must also form part of it. References to other logical texts only confirmed the applicability of the late antique interpretive framework the translator and later scholars worked with. The *Poetics* did not offer such obvious support, but Arabic scholars took its logical relevance for granted even before the text itself was translated. Needless to say, the translator played as important a role in pinpointing the presumed logical content in Aristotle's *Poetics* as the commentators who took up his text.

Even without the impact of such large-scale interpretive assumptions that influenced translators and commentators alike, the reception of the *Rhetoric* and especially the *Poetics* would have remained problematic:

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[84] See Steinschneider 1956: 40–50, here: 44.   [85] See ibid. 16–32 and Rosier-Catach 1998a: 90.

[86] Cf. Gutas 1983: 238–239 with n. 14.

[87] See ibid. 234. Gutas also speculates about the author of this Arabic translation and suggests Abū Bishr Mattā, the translator of the *Poetics*, who also happened to be the teacher of al-Fārābī. He would provide a direct link between Paul's classification (and, indirectly, the late antique commentary tradition) and that of al-Fārābī outlined in the *Iḥṣāʾ al-ʿulūm* (Gutas 1983: 253–255).

[88] On the meaning and relevance of the term ἀντίστροφος, the relationship between rhetoric and dialectics and the discussions it sparked in late antiquity, the Middle Ages and the Renaissance, see Aristotle 2002: 2: 19–25.

conveying Aristotle's discussions of literary, rhetorical, social and political phenomena relevant to his fourth-century BCE audience across the intervening linguistic, chronological and cultural barriers to a ninth- and tenth-century Muslim audience went beyond the abilities of even the most gifted translator. Still, convinced of the importance and validity of Aristotle's writings, whatever the subject, translators felt compelled to translate these texts they were virtually bound to misunderstand.[89] It was this hybrid text, replete with misunderstandings and seemingly idiosyncratic interpretations, which became the source for subsequent interpreters.

Muslim commentators took these already imperfect translations and sought to square them with their understanding of the position of the *Rhetoric* and *Poetics* among the works of Aristotle and their knowledge of Aristotelian philosophy and ancient Greek culture. The result was a rich and creative tradition of Arabic philosophical writings devoted to the task of solving the mysteries of these texts. By emphasizing different notions suggested by or alluded to in the text or the commentary tradition as known to them, each of the main commentators arrived at their own individual interpretations. In the process of translation and commenting, even misunderstandings became the occasion for acute insights in fields as varied as psychology, political philosophy, aesthetics and philosophy of religion. Given the creative potential of this highly fascinating process, it would be short-sighted simply to stress its problematic aspects and dismiss the results as a massive misunderstanding.[90] On the contrary, considering the ingenuity of the commentators and their creative responses to concepts that inevitably remained elusive, the translation and appropriation of these two works can be understood as an instance of transcultural transformation of knowledge.[91] After the translation stage, scholars and commentators elaborated on these texts and applied its supposed teachings e.g. to political philosophy (*Rhetoric*, al-Fārābī),[92] the philosophy of religion (*Poetics* and *Rhetoric*, al-Fārābī),[93]

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[89] Among others, Heinrichs 1969: 119–120 stresses the desire of translators and scholars to make the entire corpus of Aristotle's works available in Arabic. Left untranslated until a relatively late stage of the translation movement, the *Poetics* (and also the *Posterior Analytics*) were needed to complete the Arabic translation of Aristotle's *Organon*.

[90] As did Gabrieli 1929: 235 in the case of the *Poetics*.

[91] See Abattouy, Renn, and Weinig 2001: 4–5, 9–10 for another instructive example for such a process: the transmission of elements of antique mechanical knowledge, repackaged into a "science of weights," from Arabic into Latin.

[92] See e.g. Watt 1995a, Woerther 2009.

[93] See e.g. Heinrichs 1987: 190, Watt 1998, and Schoeler 2005.

ethics (*Poetics* and *Rhetoric*, Ibn Sīnā and Ibn Rushd),[94] or logic (*Rhetoric* and *Poetics*, al-Fārābī, Ibn Sīnā and Ibn Rushd).[95]

These circumstances require that any assessment of the interpretive efforts of Muslim scholars needs to remain aware of the fact that the commentators were operating in a "closed system" – after the translation stage, none of them was able to consult the Greek text. Their only guide for their reading of the *Rhetoric* and *Poetics* were the translations themselves, a certain amount of second-hand information derived from late antique sources[96] and, as time progressed, the various Arabic commentaries on and elaborations of these two books. As Dimitri Gutas wrote about Ibn Rushd, "[h]is understanding . . . was circumscribed objectively by the semantic and ideational range of the Arabic translation in front of him and of whatever commentaries were available to him."[97]

Returning to "Averroes's Search," we find that Borges not only posed the problem of translatability, he also stressed the centrality of the context of texts and utterances – e.g. the available interpretive "framework" – for their interpretation and translation. At the evening's entertainment Borges' fictionalized Ibn Rushd attends, he defends the value of metaphorical speech and explains how, in the course of time, the interpretation of poetry becomes more complex: at the time of its creation, a metaphor devised by a poet only links two images his audience were immediately familiar with. Several centuries later, Ibn Rushd and his companions read the same metaphor in the context of their own lives and that of intervening historical events: the two images now also evoke the memory of its creator and seem to speak to the misfortunes of contemporary readers. He concludes: "The figure had two terms then and now it has four. Time broadens the scope of verses and I know of some which, like music, are everything for all men."[98] In a similar process, the simple relation between comedy and tragedy on the one hand and their understanding by Aristotle's audience on the other was supplemented at every step of the reception; equally, additional strands were woven into the thread connecting Aristotle's *Poetics* and *Rhetoric* and its readers at various times while other strands frayed and ultimately snapped.

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[94] See e.g. Kemal 2003: 128–173 on Ibn Sīnā and al-Fārābī; see also Aouad 2002b: 1, 109–114 on Ibn Rushd.
[95] See e.g. Black 1990 and Schoeler 1983. On al-Fārābī, see also Aouad and Schoeler 2002; on Ibn Sīnā, Dahiyat 1974, 31–45; on Ibn Rushd, Aouad 2002b: 1, 88–95.
[96] Characterized as "pseudo-Aristotelian hearsay" by Dahiyat 1974: 13–14.　　[97] Gutas 1990: 93.
[98] Borges 2000: 186. See the interesting discussion of this passage by Dapía 1999: 153–154.

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Al-Fārābī and the Didascalia

Frédérique Woerther

The identity of the *Didascalia* was the subject of prolonged debate after A. Jourdain discovered the only manuscript known to contain it (BnF Lat. 16097)[1] at the end of the nineteenth century.[2] Today, however, it is accepted wisdom that the *Didascalia*[3] constitutes the Latin translation of the prologue of al-Fārābī's *Long Commentary on Aristotle's Rhetoric* (a work that has been lost in Arabic) completed by Hermann the German in Toledo in the thirteenth century.[4] Without entering into excessive detail, we can organize the evidence for this view into three categories:

1. Bio-bibliographical sources which attest to the existence of al-Fārābī's *Long Commentary on Aristotle's Rhetoric*.[5]
2. Textual evidence. In his *Middle Commentary*, Averroes (1126–1198) explicitly attributed certain passages to al-Fārābī that are probably taken from his *Long Commentary*. In his Latin translation of the Arabic version of Aristotle's *Rhetoric*, Hermann the German refers several times to a *Long Commentary* written by al-Fārābī.
3. Finally, M. Aouad has shown that Ibn Riḍwān (988–*c*.1061), the author of the *Book on What Is Used in Logic, Science, and the Arts*, knew the *Long Commentary* and makes use of passages found in the Latin translation of the *Didascalia*.[6]

This text owes much to Aouad's work on the *Didascalia*, which I will mention in the notes. I would like to thank Timothy Chatman for assistance with the translation.

[1] The *Didascalia* was for a long time believed to be Hermann the German's summary of a treatise written by al-Fārābī on Aristotle's *Rhetoric*. See Steinschneider 1889: 87; Nagy 1893. Lacombe is the first to mention the *Didascalia* as an authentic work of al-Fārābī, see Aristotle 1939: 102, n. 3.

[2] Jourdain 1843: 145, n. 1.

[3] See al-Fārābī 1971. A new edition of this text, accompanied by a new French translation and a commentary has been completed in collaboration with Aouad and will be published soon. The Latin text and the French translation used in this chapter are taken from this work.

[4] On Hermann the German and his translations, see Luquet 1901; Boggess 1965; Alemparte 1983; Gonzalez 1992; and Gonzálvez Ruiz 1996 and 1997.

[5] The details of this argument will appear in our forthcoming edition of the *Didascalia*.

[6] See Aouad 1997a and 1998a.

Here we will attempt to understand al-Fārābī's activity as a commentator, notably by describing the influence of the Alexandrian School and observing how the *Didascalia* reinterprets the means of persuasion in Aristotle's *Rhetoric* in light of a new historical, political, philosophical, and religious context.

Generally speaking, Aristotle's *Rhetoric* enjoyed a privileged position in the Eastern tradition. Along with the *Poetics*, it formed part of the Aristotelian *Organon* in the "enlarged"[7] version adopted by Neoplatonic philosophers as early as the fifth century and was used in their pedagogy as a propaedeutic to the study of Plato's dialogues. Later these logical treatises began to be translated into Syriac to respond to the needs of monastic schools. Philosophy, reduced to logic (but including *Rhetoric* and *Poetics*), was considered an instrument for the exegesis of the Church Fathers and the fight against heresies. Finally, in the eighth and ninth centuries, the Abbasids launched a cultural–political movement on a massive scale: the translation into Arabic of Greek scientific and philosophical texts.[8] All signs, however, point to the conclusion that the Arabic translation of Aristotle's *Rhetoric* – which we still possess and represents the version of the text on which the three great commentators al-Fārābī, Avicenna, and Averroes worked – precedes the vast "translation movement."[9] Often obscure and containing numerous errors, the Arabic translation itself was very likely produced from a Syriac intermediary.

I   Inscribing al-Fārābī in the Alexandrian tradition

It was in a strongly Hellenized context that al-Fārābī undertook his commentary on Aristotle's *Rhetoric* in the tenth century. The influence of the Eastern tradition is visible in the *Didascalia* on at least two levels. This tradition was to be inherited by Abū Bishr Mattā and the Nestorian Christian Yuḥannā Ibn Ḥaylān, with whom he studied logic at Baghdād.

I.1   The structure of the Didascalia

A study of the structure of the *Didascalia* indicates that al-Fārābī first borrowed the structure of his prologues from the Alexandrian School, a fact that he announces in §2:

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[7] On the presence of Aristotle's *Rhetoric* and *Poetics* in the *Organon* of the Eastern tradition, see Black 1990.

[8] See Gutas 1998 and the first two chapters of Saliba 2007.   [9] See Aouad 1989b.

> We will therefore begin the commentary on this book with those themes that are usually explained in such prologues. There are eight: the aim (*intentio*) of the book, the agreement between the title of the book and its aim (*convenientia tituli libri cum ipsius intentione*), the sections (*partes*) of the book, the usefulness (*utilitas*) of what is in it, its filiation (*proportio sive comparatio*), its rank (*ordinatio*), the mode of instruction (*modus doctrine*) used to progress through the subject matter, and the identity of the author (*auctor ipsius*).[10]

However, before going directly to the first theme, al-Fārābī lays out different kinds of beliefs (*creditiones*) in order to define the concept of persuasion that will be the fundamental element of the definition of rhetoric.[11] In the paragraphs dedicated to the aim (*intentio*) of the *Rhetoric*, al-Fārābī mentions (1) the incomplete definitions of rhetoric, described as the art that concerns particulars and aims at pleasant persuasion; (2) the three types of listeners; (3) the three genres of discourse; and (4) necessary rhetoric and complete rhetoric,[12] the latter of which takes its propositions from the same sources as necessary rhetoric, as well as from ethics and politics. The agreement of the title of the book with its aim (*convenientia tituli libri cum ipsius intentione*) is discussed in §§31–33. §§34–36 deal with rhetoric's filiation (*proportio*) with other disciplines and claims that rhetoric's *habitus* does not fall within the domain of logic. It is rather the science of the operations intrinsic to this *habitus* that belong there. Here al-Fārābī also states that rhetoric is connected to logic by means of enthymemes and examples. The rank or place (*ordinatio*) of the *Rhetoric* in the series of Aristotle's logical treatises is addressed in §37 when al-Fārābī distinguishes the *Prior Analytics*, the *Topics*, and the *Sophistical Refutations* – texts that are instructive for those who work on the sciences – and the *Rhetoric* and the *Poetics* – texts directed toward the well being of the many. The latter type of texts present the tools of persuasive discourse that are indispensable for philosophers when they need to communicate scientific knowledge to those incapable of following logical argumentation. The sections (*partes*) of the *Rhetoric* are enumerated in §§39–56, where al-Fārābī lays out a comprehensive survey of the large sections (§§39–41) and the small sections (§§42–56) of the treatise. Al-Fārābī mentions the usefulness (*utilitas*) of the *Rhetoric* and its mode of instruction (*modus doctrine*) – here Aristotle most often uses the method of division and analysis – in §57. The commentary proper on Aristotle's text begins (and is interrupted) in §58 with a citation from the text followed by its gloss.

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[10] Al-Fārābī 1971: §2.   [11] Ibid. §§3–12.   [12] On these two notions, see Aouad 2007.

This method, which successively deals with the aforementioned eight themes before beginning a commentary on a philosophical text, is borrowed from the Alexandrian tradition. The "Canon of Proclus," introduced in the fifth century by the commentator of the same name, established rules for writing a prologue. He emphasized that six themes must be addressed before being able to proceed to a reading of a text: (1) aim; (2) usefulness; (3) title; (4) sections; (5) authenticity; and (6) the place of the work in a series of treatises. In the first half of the sixth century, Ammonius divided the last theme into two: the part of philosophy to which the treatise belongs, and its position in the field. A bit later, in the second half of the sixth century, Elias and David, who worked in the tradition of Ammonius and were the first to write prologues of the eight themes, added a paragraph on pedagogy in their introduction to Porphyry's *Isagoge*, which was absent in their predecessors' works.[13]

A closer examination of the *Didascalia* raises two points. First, of the eight themes announced in §2, all the themes subsequently become the object of study except one: the authenticity of the *Rhetoric*. The same holds for al-Fārābī's treatise *Kitāb al-Alfāẓ al-mustaʿmala fī al-manṭiq*,[14] where the eight themes are also mentioned, and in his *Middle Commentary on De Interpretatione* where only seven are presented (the same as those of the *Didascalia* except for the name of the author). Second, although the "name of the author" is referred to in §2, this theme will never be explicitly examined in the *Didascalia*. It is possible that this theme has been dealt with by addressing the authenticity of the treatise. All this being taken into account, it seems that al-Fārābī did not slavishly follow his predecessors, but rather adapted the methods employed by Alexandrian commentators for his own needs and used certain parts while neglecting others. This is in fact what he claims in a passage of his treatise, *On Terms Used in Logic*:

> Most [modern commentators] make every effort to multiply [these distinctions]. As for us, let us leave this task to them. In the introduction of each work, Aristotle and his early disciples employ only [the distinctions] they need, and sometimes they use none at all. In most of the treatises Aristotle deals with the most important themes, namely the goal and the usefulness. He often mentions the relation [of the treatise] to his entire corpus and he sometimes mentions the mode of instruction used in the treatise.[15]

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[13] See al-Fārābī 1981.   [14] See al-Fārābī 1986: 94, 15–95, 8.   [15] Ibid. 95, 9–16.

In this way al-Fārābī attaches himself to the Alexandrian tradition by borrowing the structure of the prologues which he nonetheless modifies to meet his own needs.

I.2 The Eastern Organon: the political value of rhetoric from Plato to al-Fārābī

A second element makes it possible to connect al-Fārābī's work to the Alexandrian tradition. This concerns the passage where the Second Master takes up the Platonic "Allegory of the Cave"[16] at the end of a passage dedicated to the position the *Rhetoric* has in relation to Aristotle's other logical treatises:

> The example (*proverbium*) that Plato gave us in his *Republic* concerning the cave – how man leaves then comes back to it – corresponds to the order (*ordini*) that Aristotle established for the parts of the art of logic (*partibus artis logices*). Indeed, he begins with general precepts (*sententiis summatis*), that is to say those that pertain to many things (*que pertinent pluribus*), then he rises gradually and progressively to the most perfect science (*ad perfectissimam scientiam*). Next, he begins to descend until he comes to the lowest sciences, the smallest and the most vile (*ad infimam et minimam et vilissimam earum*). What is found in the *Book of Demonstration* is what is most complete and most excellent in the sciences, whereas in the *Poetics* we see what is most imperfect. This order resembles that of the sciences that Plato described when discussing the shadows in the cave. Of course, the person that lives in the cave does not know himself or the others with him by the direct view that he could have of them. Instead, he only knows himself and others by seeing each person's shadow. The *Topics* is more similar to demonstrative science (*scientie demonstrative*); after it comes the *Sophistical Refutations*, then the *Rhetoric*. That is why Aristotle began with the *Categories*, with general and well-accepted knowledge (*a notitiis notoriis et summatis*). After he progressed in the direction of *Peri Hermeneias*, he set down a kind of knowledge that was higher in rank than what was found in the *Predicamenta*, and this is also true in the case of the *Prior Analytics*. He in fact produced the fourth *Book* to address what is most complete in the sciences. Then, he progressively descends, as has been noted, to what is most base within them, that is to say, the *Poetics*. It is therefore plausible that in the aforementioned example Plato sought the very method that Aristotle followed in the teaching of logic (*hanc viam quam processit Aristoteles in traditione logices*).[17]

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[16] On this passage, see Boggess 1970.   [17] Al-Fārābī 1971: §38.

In this text, al-Fārābī explicitly places himself within the Eastern tradition that includes the *Rhetoric* and the *Poetics* in the *Organon*.[18] But this passage also emphasizes the fundamentally political role that the Second Master attributes to the *Rhetoric*, since here he defines the path that the philosopher must take, vested as he is with a mission to reveal the results of demonstrative science to a multitude with no access to reasoning. First, he must leave the shadows of the cave and progress from the *Categories* to the *Peri Hermeneias*, then to the *Prior Analytics* and *Posterior Analytics* (which represent the most perfect science). Then the philosopher returns to the cave, step by step, with the *Topics*, the *Sophistical Refutations*, then the *Rhetoric* and the *Poetics* (which is the most imperfect of the logical sciences) in order to finally communicate his knowledge to the multitude. Here the eminently political value of rhetoric recalls al-Fārābī's *On the Attainment of Happiness*, where he examines the conditions that allow citizens to reach happiness from a philosophical point of view. This task is directly related to a certain political order: the regime of the virtuous man. Four human things make it possible for nations and citizens to attain happiness: the theoretical virtues, the deliberative virtues, the moral virtues, and the practical arts. If the Prince possesses these four things to a supreme degree due to the excellence of his nature, the same cannot be said of the citizens who constitute the many. The "multitude," in opposition to the "elites," is incapable of grasping first principles and the cause of beings as demonstrated by philosophy. The moral virtues and the practical arts will therefore be instilled in this multitude by an elite that uses persuasion or constraint depending on whether or not the citizens submit voluntarily. As for theoretical principles, the Legislator-Prince, who is also a philosopher, should make them intelligible by taking images from these theoretical principles, images that he will then establish in the soul of the many by means of persuasive discourse. Thus, philosophy provides an explanation of the intelligibles based on an intellectual grasp of things and provides a demonstrative and certain explanation, whereas rhetoric or religion imitates philosophy but can provide only an image of these intelligibles by explaining them on the basis of persuasive arguments:

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[18] See Watt 1995a: 19: "Like the Alexandrian commentators, Arabic writers treated the *Rhetoric* and the *Poetics* as the final two works of the corpus of Aristotle's logical writings. Furthermore, in al-Fārābī the justification of this eight volume corpus is the same as we find in the Alexandrian commentator Elias: the five types of syllogism (apodeictic, dialectical, sophistical, rhetorical, and poetical) are each treated by Aristotle in different parts of the corpus, the first in the *Posterior Analytics*, with the *Categories, De Interpretatione*, and *Prior Analytics* as introductory to it, and the other four in the *Topics, Sophistical Refutations, Rhetoric* and *Poetics*."

> Once the images representing the theoretical things demonstrated in the theoretical sciences are produced in the souls of the multitude and they are made to assent to their images, and once the practical things (together with the conditions of the possibility of their existence) take hold of their souls and dominate them so that they are unable to resolve to do anything else, the theoretical and practical things are realized. Now these things are *philosophy*, when they are in the soul of the legislator. They are *religion*, when they are in the souls of the multitude. For when the legislator knows these things, they are evident to him by sure insight, whereas what is established in the souls of the multitude is through an image and a persuasive argument. Although it is the legislator who also represents these things through images, neither the images nor the persuasive arguments are intended for himself. As far as he is concerned, they are certain. He is the one who invents the images and the persuasive arguments, but not for the sake of establishing these things in his own soul as a religion for himself. No, the images and the persuasive arguments are intended for others, whereas, insofar as he is concerned, these things are certain. They are a religion for others, whereas, insofar as he is concerned, they are philosophy.[19]

Following the Platonic and Neoplatonic tradition, al-Fārābī recognizes a political role for rhetoric, which is simultaneously persuasive discourse, imitation of philosophy, and religion. That is to say, rhetoric is the means by which the Legislator and the philosophical Prince imposes his law on the multitude.

Taken together, these elements show that – by adopting the schema of Alexandrian prologues and following the Eastern tradition of the "enlarged" *Organon* – al-Fārābī explicitly associates himself with the school of Hellenistic commentators, of which he is the heir. In doing so, he vigorously affirms a continuity between Alexandrian Aristotelianism and Arabic Aristotelianism.[20]

II   The reinterpretation of Aristotelian means of persuasion in the *Didascalia*

Although he emphasizes his involvement in a tradition, al-Fārābī also advances a new interpretation of Aristotle's *Rhetoric* that was to influence all subsequent commentators, the most important of whom are Avicenna and Averroes. For this reason it is necessary to try to explain its specificities after describing the main characteristics of his reinterpretation of the Aristotelian means of persuasion. But first it is important to briefly recall

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[19] Al-Fārābī 1962 (rev. 1969): §59, 49.   [20] See Grignaschi 1968.

how Aristotle organizes the means of persuasion in the first two books of the *Rhetoric*, which focus on the invention of arguments. The Stagirite establishes a division of means of persuasion according to the criterion of technical skill. He deals with non-technical means of persuasion, which exist before the orator's creation of the discourse and are excluded from the work of invention: laws, testimony, conventions, torture, and oaths. These are different from the three technical means of persuasion, which are acquired by means of a method: demonstration (*logos*) with enthymemes and examples, the character of the orator (*ethos*), and the passions (*pathos*). The *logos* is examined in Book I, where Aristotle enumerates the premises that make it possible to construct enthymemes and examples for each of the three types of oratory: deliberative (I, 4–8), epidictic (I, 9), and judicial (I, 10–14). *Ethos* is addressed in the treatises at three points. In Book I, 1356a 5–13, Aristotle says that persuasion through character occurs when the discourse, now called ethical, is performed in a way that makes the orator trustworthy because we place our trust more rapidly and more fully in honest people. However, this trust must be the effect of discourse and not a mere bias concerning the character of the orator. Later (at 1366a 8ff.), Aristotle says that discourse is called ethical when we trust an orator because he has a certain character, that is to say, because he appears "virtuous or bene-volent, or both." These two qualities reappear at the beginning of Book II (1378a 6–16) with a small modification because a third quality, prudence, now appears alongside virtue and benevolence.[21] At any rate, no passage that describes *ethos* makes it possible to conclusively determine if the discursive form of this means of persuasion is an enthymeme or narrative. A passage from Book II certainly indicates that the orator must avoid formulating enthymemes when he deploys ethical discourse,[22] but Book II asserts that the maxim, defined as a part of a syllogism, is the form that best allows for the expression of *ethos*.[23] Finally, the passions (*pathos*) are defined as that which brings the listener to an experience of a passion, "for we do not give the same judgment when grieved and rejoicing or when being friendly and hostile."[24] In Book II, Aristotle will divide the analysis of the passions into three parts: in the case of anger it is a question of examining (1) in what frame of mind it is experienced; (2) with whom one habitually becomes angry; and (3) regarding which topics. As was the case with *ethos*, no decisive sign makes it possible to define the discursive form

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[21] I have proposed an explanation that accounts for this modification in Woerther 2007b.
[22] *Rhet.* III.17, 1418a15ff.   [23] *Rhet.* II.21, 1395b11ff.   [24] *Rhet.* I.2, 1356a14ff.

of this means of persuasion, namely, whether it has the structure of an enthymeme.

The way the means of persuasion are organized in the *Didascalia* reveals an entirely different logic. Indeed, instead of keeping technicality as the criterion of classification, al-Fārābī uses the form of the means of persuasion, that is, whether it is an enthymeme to classify and hierarchize. This particular way of reframing the issue is explained by the inclusion of the *Rhetoric* in the corpus of Aristotle's logical works.

As early as the first lines of the *Didascalia*[25] al-Fārābī describes the place of the *Rhetoric* relative to two other logical treatises, the *Posterior Analytics* and the *Topics*, by identifying three types of beliefs (*creditiones*): (1) a belief with certitude (*certitudo*), defined as a belief without contradiction; (2) a belief close to certitude (*credulitas propinqua certitudini*), the opposite of which are admitted only with difficulty; and (3) persuasive beliefs (*credulitates persuasive*) of rhetoric, defined as those beliefs to which the soul assents, although it could assent to the opposite. Each of these kinds of beliefs can be achieved with or without syllogisms. Certitude, which is studied in the *Posterior Analytics*, belongs to demonstrative science when the belief is acquired through a syllogism; when acquired without a syllogism it is achieved through first propositions. When obtained by a syllogism, a belief close to certainty, which is studied in the *Topics*, is acquired by topical or inductive syllogisms. When obtained without a syllogism, it is acquired by a belief based on what is probable. Finally, a persuasive belief acquired by a syllogism is attained by a rhetorical syllogism or enthymeme. Obtained without a syllogism, it is acquired through eight things: (1) the testimony of a person (*testimonium*); (2) the affirmation of a person (*dictum alicujus*) supported by particular laws (*leges proprie*); (3) conventions (*conditiones et pacta*); (4) oaths (*juramentum*); (5) "miraculous or nearly miraculous words or deeds that call an adversary to become an equal" (*dicta vel facta externa alicujus quasi miraculosa vel vere miracula in quibus adversarius ipsius verbo conatur ei coequari*); (6) torture (*cruciatus*); (7) the reputation of the orator for honesty (*verbum alicujus qui reputatur apud nos vir magne honestatis*); and (8) the face, appearance, and body of the orator (*vultus constantia et habitudo faciei et totius corporis gestus*). These means of persuasion are realized without syllogisms but can often be supported by and laid out with syllogisms. As for the rhetorical syllogism, it is formed from contingent propositions, the composition of which is either

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[25] Al-Fārābī 1971: §§3–9.

contingent, necessary, or formed from necessary propositions of contingent composition.[26] The eight persuasive things and the enthymemes are studied in the *Rhetoric*.

The reorganization of the means of persuasion in the *Didascalia* calls for two remarks. First, among the eight things that he considers "persuasive," al-Fārābī includes five non-technical means of persuasion from Aristotle's *Rhetoric*. He thereby rejects the Aristotelian criterion used to set up a fundamental dichotomy between technical and non-technical means of persuasion, instead employing the distinction between means of persuasion that have a syllogistic form and those that do not. Also, among the three other "persuasive things," what Aristotle defined as the *ethos* of the orator seems to be divided into two parts: on the one hand, the honesty of the orator, and on the other hand, his face, appearance, and body. We also see a new element that must be explained, what al-Fārābī calls the words, miracles, and challenges.

Comparing the Aristotelian system with what al-Fārābī proposes in the *Didascalia* raises many questions: the function of the passions in this treatise,[27] the definition of the rhetorical syllogism and its relation to the dialectical syllogism, the influence of the science of eloquence (*'ilm al-balāgha*) on the doctrine of the *Didascalia*,[28] etc. Nevertheless, I will limit myself here to clarifying three points: the division of the Aristotelian *ethos* into two distinct elements,[29] the addition of words, miracles, and challenges as one of the eight persuasive things, and the reinterpretation of the notion of "law" in an Islamic context.

In Aristotle's *Rhetoric*, the discursive form taken by *ethos* remained an open question. Al-Fārābī seems to have clearly defined the problem. By making the Aristotelian *ethos* one of the eight persuasive things that in themselves have no syllogism, he resolves this question and explicitly affirms that the persuasive image of the orator is not realized by means of a demonstration, but can nevertheless be corroborated by an argument. Moreover, the *ethos* is now represented by two distinct elements: the honesty of the orator and what al-Fārābī calls his face, appearance, and body. This last category does not appear in Aristotle where he enumerates the three means of technical persuasion. In fact, it would be quite surprising if Aristotle had mentioned it, since he systematically underlines the

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[26] Aouad 1992 has examined the difficulty raised by this definition of the persuasive syllogism in the *Didascalia*, noting that nothing currently appears to distinguish the dialectical syllogism from the rhetorical syllogism.

[27] See Woerther 2007a.   [28] See Aouad 2009.

[29] For an exhaustive treatment of the problem of *èthos* in the *Didascalia*, see Woerther 2008.

purely discursive, non-referential character of this technical means of persuasion, the construction of which is not based on the real person of the orator, even less on his body or face. How can the appearance of this category be explained? Was al-Fārābī recalling Book III of the *Rhetoric* where Aristotle dedicates several lines at the beginning of the chapter to oratorical action?[30] This hypothesis does not seem convincing, not only because in the *Didascalia* al-Fārābī never refers to the questions dealt with in Book III, but also because in the prologue he mainly refers to Book I.2, which Arabic commentators generally considered the core of Aristotle's doctrine on rhetoric.

A more likely hypothesis requires that I refer to the Arabic version of the *Rhetoric* which al-Fārābī relied on to write his commentary. This is an ancient translation carried out by means of a Syriac intermediary before the eighth to tenth centuries. In the passage where the three technical means of persuasion are enumerated, *ethos* was translated by two words, as is often the case in the Arabic translations. There is *kayfiyya*, which signifies quality in a general sense, and *ṣamt*, a more polyphonic term that refers to a person's way of being, his sense of calm, and his seriousness. Al-Fārābī may have interpreted the first term as the orator's excellence or honesty, with the second referring to the orator's physical aspect alone.[31] Moreover, it is not impossible that al-Fārābī was influenced by Arabic rhetoric, notably that of the *Kitāb al-Bayān wa-l-tabyīn* by Jāḥiẓ, where the notions of oratorical action, the physical mastery of the orator, and questions related to bodily movements or pronunciation are discussed.[32]

If the addition of the orator's body to the persuasive things can be clarified by referring to the version of the *Rhetoric* used by al-Fārābī, other changes in the economy of proofs in the *Didascalia* are due to the Islamic social-political context. The "words, miracles, and challenges" which are defined as "beliefs produced by miraculous or nearly miraculous words or deeds that call an adversary to become an equal"[33] are derived from the "inimitable character of the dogma" (*iʿjāz*) of the Qurʾān. The *iʿjāz* is indeed a challenge issued by the prophet: those who believe the Qurʾān is a human product are invited to compose an equally beautiful work, "Say: If men and jinn banded together to produce the like of this Qurʾān, they would never produce its like, even though they backed one another."[34] Their inability to produce such a work is a sign that the Qurʾān is miraculous and of divine origin. In the context of rhetoric, the category

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[30] *Rhet.* III[1], 1403b22ff.   [31] This interpretation is also found in Averroes, see Aouad 1992: 161.
[32] See Woerther 2008: 402–404.   [33] Al-Fārābī 1971: §7.   [34] Qurʾān, XVII, 90/88.

"words, miracles, and challenges" is in itself persuasive, but it is not yet rhetorical. It only becomes rhetorical at the moment when the orator demonstrates that a miracle has occurred. For example, if someone affirms that a poet has written a work as beautiful as the Qurʾān, it will be necessary to demonstrate that there are imperfections in it.

The Islamic context also accounts for the changes in the passage on law from the *Rhetoric* to the *Didascalia*.[35] In chapter 15 of the first book, Aristotle examines two cases and establishes a distinction between common law and written law.[36] First, he enumerates the areas that allow for the precedence of common law over written law in cases where the former is favorable to us. If the written law changes often, he tells us, the common law that exists by nature (κατὰ φύσιν) is stable (οὐδέποτε μεταβάλλει) and therefore more just. The justice of honest men never changes, hence the words of Antigone, who buried her brother contrary to the law of Creon but in conformity with the non-written law, which "[has] life, not simply today and yesterday, but forever."[37] The written laws, on the other hand, are subject to interpretation when they contradict themselves or each other, when a law is ambiguous and requires exegesis, or when a law was motivated by circumstances that no longer exist at the moment of the application of the law. Second, Aristotle addresses those areas favorable to written law when he states, for example, that not applying a written law is equal to having no law at all, and that one should not presume to be wiser than the laws. In the *Didascalia*, at the beginning of the paragraph dedicated to the law, one reads:

> The [second] thing is a belief caused by what another says (*dictum alicuius*), what one says about that person (*eius relationem*), or the particular law (*lex propria*) of the speaker. Indeed, old laws and decrees, as will be said in what follows, fall into two categories: some are the product of the particular law of a certain nation and valid for a certain period of time and for a certain people. An example of this is the command, "It is forbidden to eat pork" and "It is forbidden to slit the throats of animals," along with similar injunctions. These are distinct from common law, which does not concern one nation or period more than another. Examples of this kind of command are "One must not act badly towards someone who has offended you," and "One must not treat one's parents badly."[38]

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[35] On the treatment of law in the *Didascalia*, see Aouad 2008.
[36] *Rhet.* 1.15, 1375a25. See also the distinction between particular law vs. common law in *Rhet.* 1.10, 1368b6–8, where Aristotle defines the unjust act as one that violates the law, and *Rhet.* 1.13, 1373b4–18 where he discusses the assessment of guilt.
[37] Sophocles 1994: 456 (trans. Lloyd Jones).   [38] Al-Fārābī 1971: §5.

Here al-Fārābī takes up the Aristotelian dichotomy of particular law versus common law. The first is of limited application and valid only at certain times, like old laws and decrees, and among his examples are two precepts of the law of Islam – the laws against eating pork[39] or a dead animal that has not previously had its throat slit[40] – while the common law is valid at any time or place. Moreover, a more precise examination of the first sentence indicates that a certain type of particular law is assimilated to the Qurʾān. The expression "a belief caused by what another says" refers to the testimony of Muḥammad, who received the word of God, the Qurʾān. "What one says about that person" refers to the *ḥadīth*, traditions that collect the words and acts of Muḥammad. Put differently, al-Fārābī reinterprets the Greek opposition written law versus non-written law within the context of Islamic civilization by recognizing the Qurʾān and the *ḥadīth* as having a specific role among particular laws in contrast to common law.

If we characterize al-Fārābī's work in the *Didascalia* in this way, it is important to keep in mind at least three fundamental points that were to influence subsequent Arabic commentaries on the *Rhetoric*. Al-Fārābī takes his place within the Eastern Alexandrian tradition that recognizes the *Rhetoric* (along with the *Poetics*) as a treatise on logic, and grants rhetoric a decisive role in the relationship between a people and their ruler, a point that the Second Master emphasizes in *On the Attainment of Happiness*. This study of al-Fārābī's reinterpretation of certain Aristotelian means of persuasion has also allowed me to emphasize the role of the Arabic version of the *Rhetoric*, the text of reference for Arabic commentators. This translation is a version of the text that, due to its own particularities, often distances itself from the Greek and invites the exegete to reconstruct its logic. Finally, it is important to keep in mind the resonance of the Islamic context, which leads the Arabic philosopher to adapt his reading to the social and religious conditions of his time and milieu.

[39] See Schacht 1991.   [40] See Viré 1986.

Aristotle's 'physical' works and the Arabic tradition

Paul Lettinck

I   Introduction

In this contribution we discuss how Aristotle's 'physical' works, in particular the *Physics* and the *Meteorology*, were translated into Arabic, how these works were studied and interpreted in the Arab world, and what Arabic scholars contributed to the understanding of the phenomena that are dealt with in these works of Aristotle. It will be seen that those who commented upon Aristotle's works or wrote treatises on natural phenomena remained within the framework of the Aristotelian worldview, but were not uncritical. They disagreed with certain views of Aristotle and presented new ideas and arguments. Several translations were made of the *Physics*, only one of which has been preserved, namely that of Isḥāq ibn Ḥunayn. The Greek commentaries of Alexander of Aphrodisias, Themistius, and Philoponus were also translated and studied by the Arabs. These translations have not been preserved, except for a few quotations; a summary of the commentary of Philoponus is included in the manuscript of Isḥāq's translation of the *Physics*.

Arabic commentaries on the *Physics* were written by al-Fārābī (not preserved), Ibn Bājja, and Ibn Rushd. Ibn Sīnā discusses the topics of the *Physics* as a part of his encyclopedic work, *Kitāb al-Shifāʾ* and in an abridged form in his *Kitāb al-Najāt*. These topics were also treated by later scholars of the 'school of Ibn Sīnā' who wrote similar encyclopedic works, such as Abū l-Barakāt al-Baghdādī. Also, some short commentaries are included in the manuscript of Isḥāq's translation by various scholars from the Baghdād school of Yaḥyā ibn ʿAdī where the *Physics* was studied. One Arabic version of the *Meteorology* has been preserved, namely the one of Yaḥyā ibn al-Biṭrīq. This is rather a paraphrase than a translation. Arabic translations of the Greek

commentaries of Alexander and Olympiodorus existed and were studied by Arabic scholars, but they are not preserved. Besides these, a work known as Olympiodorus' *Commentary on Aristotle's Meteorology*, translated by Ḥunayn ibn Isḥāq, existed in the Arab world. This is not an Arabic translation of Olympiodorus' Greek commentary.[1] It is mostly a paraphrase and systematization of Olympiodorus' commentary, but it also contains features that are not in Olympiodorus. Possibly it is a translation of a Greek or Syriac treatise on meteorology, largely but not exclusively based on Olympiodorus' commentary. We have called its author Pseudo-Olympiodorus. Arabic scholars, especially Ibn Sīnā, have used this work.

Arabic commentaries on the *Meteorology* have been composed by Ibn Bājja and Ibn Rushd. Al-Kīndī wrote a few letters on meteorological phenomena. The subject matter was discussed by Ibn Sīnā in his *Kītāb al-Shifāʾ*, and by those belonging to his 'school,' such as Abū l-Barakāt al-Baghdādī and Fakhr al-Dīn al-Rāzī. In what follows, we shall first give an example of what could happen to an Aristotelian text when it was translated and interpreted in the Arab world. Then we shall review some of the contributions of Arabic scholars to the understanding of the physical phenomena that were discussed by Aristotle. This review is far from complete; due to limited space we can discuss a few selected topics only, and we had to omit others, such as the discussion of the infinite, and in connection with this, the eternity of the world. The idea of an eternally existing world without beginning or end, such as adopted by Aristotle, could not be accepted by some Muslim scholars, and so they adduced proofs that the world cannot exist for an infinite time. This led to a further examination of the concept of the infinite, one of the important topics in the *Physics*, by scholars such as al-Kindī, Ibn Sīnā, and Ibn Bājja. Aristotle's definition of place was another topic from the *Physics* which was found problematic by ancient Greek and medieval Arabic scholars. Ibn Bājja and, following him, Ibn Rushd proposed an adaptation of the definition which would solve the difficulties. Ibn Bājja and Ibn Rushd also criticized and adapted Aristotle's explanation of the nature of the Milky Way in the *Meteorology* since this explanation did not agree with certain observational facts.[2]

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[1] See Zimmermann and Brown 1973.
[2] For these topics and others, especially the reception of the *Physics* and the *Meteorology* in the Arab world, see Lettinck 1994 and 1999.

II Translation and interpretation of Aristotle's works

The translations of Aristotle's works into Arabic, which were the source of knowledge of these works in the Arab world, were of various quality. This does not mean that a translation that is not very faithful to the Greek text of Aristotle has been made by a 'bad' translator. Various factors may have caused the deviations from the Greek text. For instance, the Arabic version of the *Meteorology* by Ibn al-Biṭrīq differs from Aristotle's Greek text in many respects: the order of chapters is different, and some chapters do not correspond to any text by Aristotle at all, whereas certain paragraphs of the Greek text do not occur in the Arabic version. Also, commentaries are added and on certain subjects views are presented that differ from Aristotle's view. One has to conclude that it was not Aristotle's original text that was rendered into Arabic, but a later Hellenistic paraphrase.[3] Moreover, this Greek paraphrase was probably first translated into Syriac, and then from Syriac into Arabic. Deviations from Aristotle's text are sometimes due to mistranslations, whereas misunderstanding of the text by the Greek author of the Hellenistic paraphrase may have had the same result.

All Arabic scholars who wrote treatises on meteorology used Ibn al-Biṭrīq's version of the *Meteorology*. They were under the impression that they read Aristotle's text, whereas in fact they read a rather different version of it. This situation led to confusion. Ibn Rushd, for instance, thought he was reading Aristotle's text when he read Ibn al-Biṭrīq's version. At the same time, he also read the Arabic translation of Alexander's commentary on the *Meteorology*, which gives a faithful rendering of Aristotle's text. In this way, Ibn Rushd could find two different opinions on a certain subject, the one by Alexander, who in fact represents Aristotle's opinion, the other by someone he thought was Aristotle, but who was in fact the author of the Hellenistic–Arabic paraphrase. Faced with this situation, Ibn Rushd does not choose between both opinions, but tries to harmonize them: he says that there is some truth in both, or that they are different aspects of the same thing.

As an example we shall discuss what happened to Aristotle's passage at 362a11ff. of the *Meteorology*, where it is stated that in our (northern) hemisphere a northern wind blows after the summer solstice, and that correspondingly a southern wind will blow in the southern hemisphere after the winter solstice. However, this southern wind will not reach our

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[3] Endress 1974: 506–509.

region. There is a wind ("bird wind") that starts blowing seventy days after the winter solstice, but it is weaker than the northern wind after the summer solstice. In Ibn al-Biṭrīq's version corresponding to this passage it is stated that people have asked why northern winds blow after the end of the summer season and after the end of the winter season. This shows a misunderstanding of Aristotle's text, partly caused by the mistranslation of "after the summer solstice" (*meta tas therinas tropas*) by "after the end of the summer season" (*baʿda inqiḍāʾ faṣl al-qayẓ*), and similarly for "after the winter solstice."[4] An answer to the question is given in Ibn al-Biṭrīq's text, and the question and its answer are quoted in Ibn Rushd's *Middle Commentary on the Meteorology*. Ibn Rushd then remarks that he has found this in the Aristotelian text available to him, but that in Alexander's commentary instead it is asked why northern winds blow after the summer solstice and southern winds start to blow seventy days after the winter solstice. This in fact corresponds to Aristotle's text. After having suggested two possible replies on this question, Ibn Rushd concludes his commentary saying that both accounts, that of Aristotle (which is in fact Ibn al-Biṭrīq's modified version), and that of Alexander (which is more or less Aristotle's original version) are not contradictory and may both be valid, since it is possible that two contrary winds blow successively in the same season.[5]

III　　Contributions of the Arabic scholars

(A)　The definition of motion (change)

The first three chapters of Aristotle's *Physics* III are devoted to the definition of motion.[6] Motion is defined by means of the concepts, actual and potential existence. In each of the several categories of existence (substance, quality, quantity, place, etc.), existence may be actual or potential. Something has an actual existence when it has a certain form; if it does not have that form and if it is such that it may get that form, its existence is potential (in relation to that form). These two ways of existence are opposites (form and privation), and a thing may move (change) between these opposites. This may occur in each of the categories and this gives rise to different kinds of motion or change: change of substance, of quality, of quantity, of place, etc.

[4] Ibn al-Biṭrīq 1967: 70, 4; 71, 5.　　[5] Averroes 1994a: 108, 6; 109, 11.
[6] We use here and in what follows the word 'motion' (*kinēsis*) in an Aristotelian sense, that is, it refers not only to local motion, but to any kind of change, such as change of color, temperature, size, etc.

Now Aristotle defines motion as 'the actuality of what potentially is, as such' (*hē tou dunamei ontos entelecheia, hēi toiouton* – *Physics* III.1, 201a11), often more extensively rendered as 'the actuality of what exists potentially, insofar as it exists potentially' (i.e. insofar as it is potentially that actuality). For instance, the process of building occurs, when what is buildable (e.g. bricks and wood, which are potentially a house) has its actual existence as being buildable (i.e. as being potentially a house). The further explanation of this definition has occupied commentators from Themistius until modern times and has also been a subject of discussion by Arabic scholars. We first give the most plausible interpretation which is subscribed by most but not all modern scholars and which is based on the article by L. A. Kosman.[7]

The phrase 'actuality of what exists potentially' in the definition of motion is apparently not meant by Aristotle to refer to the actual final result of the motion: the actuality here is not the actual house after it has been built from the raw materials that were potentially a house before. Also, 'actuality' here does not mean '(the process of) actualization.' If that were the case, the definition would be circular, it would contain the concept which is to be defined, since (the process of) actualization is nothing but the motion (process) from something being potentially X to something being actually X.

Thus, 'actuality of what exists potentially' must refer to the motion (e.g. the process of building) without meaning '(the process of) actualization of what exists potentially.' That 'actuality' may indeed refer to motion becomes clear when one realizes that it is during the process of building that the potentiality (of the raw materials to be an actual house) is actually active ('alive') as potentiality. It is then that the potentiality becomes manifest; before that this potentiality was only 'latent.' It is during the motion that the potentiality (for having reached the final point of the motion) is actualized. This explains the definition, the use of 'actuality' in the definition, and the addition 'insofar as it exists potentially.' As long as the motion continues, there is actual potentiality; when the motion is finished, there is no potentiality any more.

Thus, one may distinguish two actualities: (1) the actual being of a thing X; and (2) the actuality of something which is potentially X, insofar as it is potential, and that is the motion of what is potentially X to what is actually X.[8] Indeed, as we shall see below, the commentators explicitly

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[7] Kosman 1969.
[8] We do not mean that the word 'actuality' has two meanings, but that there is an actuality of two different things: the actuality of what is potentially X, when the motion to X is completed, and the

distinguish two actualities: the actuality of the motion and the actuality of the result (final product) of the motion. This is also implicitly recognized by Aristotle when in *Physics* III.2 he takes up the definition of motion again and says that motion is an incomplete actuality (for as long as the motion goes on it is not yet complete), and he distinguishes this from simple actuality (the result of the motion).

If one applies the definition of motion to the process of making a statue out of bronze, then what is potentially a statue is the bronze, and motion to a statue takes place when this potentiality (to be actually a statue) is actually active, not as itself (not as bronze), but as something being potential (i.e. being potentially a statue). The actuality of bronze as bronze is bronze and that is not the motion. The motion is the actuality of bronze as being potentially a statue. Apparently, being bronze and being potentially a statue are different, although they refer to the same object, namely, a piece of bronze (the former is the matter, the latter is the privation).

Corresponding to the two actualities, one may distinguish two aspects of the potentiality to be a house: (1) the potentiality of the raw materials to be actually a house; and (2) the potentiality of the raw materials to become active as potentiality, that is, as being potentially a house; the actuality of the potentiality under this aspect is the motion.

We now turn to the ancient Greek and medieval Arabic commentators and compare their comments with the above interpretation of Aristotle's definition of motion. Themistius modified Aristotle's definition as follows: "motion is the first actuality of what potentially is, insofar as it potentially is."[9] Apparently he had realized that the term 'actuality' is ambiguous and might refer to different kinds of things. This is clearly set out by Philoponus in his commentary on Aristotle's definition.[10] He says that 'actuality' may refer to two things: (1) something may be said to be actual when it has reached its form or perfection, and all potentiality in it has disappeared. For instance, bronze is potentially a statue since it may be made into a statue by a sculptor. When the statue is ready and has reached its final, perfect form, it is completely actual with no potentiality left in it. (2) Something may also be said to be actual when it has left its state of complete potentiality and is in the process of going toward its final form. This actuality exists while the sculptor is making the bronze into a statue.

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actuality of what is potentially X, as potentiality or in other words, the actuality of the potentiality to be X.

[9] Themistius 1900: 70, 6–8.   [10] Philoponus 1887–1888: 342, 10; 344, 7 and 351, 8–15.

During this process the potentiality is still (partly) preserved; this potentiality has completely disappeared when the statue is completed. There is motion as long as there is potentiality. When there is no potentiality left, the motion is completed. Motion is the first actuality of what potentially exists. The final result of the motion, when the form is completely acquired, is the second or last actuality.[11]

Arabic scholars commenting upon Aristotle's definition of motion all adopt Philoponus' (originally Themistius') distinction between first and second actuality or perfection (*kamāl*). Ibn Sīnā defines motion as the actuality and first perfection of something which exists potentially as far as it exists potentially. He explains this as follows in his *Kitāb al-Najāt*:

> When a body is actually in A and potentially in B, then as long as it is in A it is at rest, and potentially moving and potentially arriving in B; when it is moving, then the first actuality or perfection is reached (i.e. it is not potentially moving any more, but actually moving); by means of this first perfection, which is motion, it arrives at its second perfection or actuality, which is arriving in B. But as long as it is in its first perfection (= in motion), it is still in potentiality with regard to being in B. A body is in motion insofar it is potentially in B, not insofar it is actually something, like a man or bronze. Thus, motion is something between pure potentiality and pure actuality; it is a perfection, but not a complete one.[12]

In his *Kitāb al-Shifā* he says that motion is a kind of perfection, but that it differs from other perfections in that when a perfection (other than motion) is reached, then the thing X actually exists and no potentiality for being X exists in it anymore. For instance, when something becomes actually black there does not remain anything which is still potentially black, but the perfection which is motion keeps potentiality in it as long as the motion is not finished.[13] In fact, when a body is resting in A it has two potentialities: the potentiality to be moving to B and the potentiality to be in B. Corresponding to these two potentialities, there are two actualities (perfections). When the first potentiality becomes actual (first actuality), then this is the motion; as long as the motion continues this potentiality remains, since it is still moving to B, while the second potentiality also remains present in this first actuality. The second potentiality disappears and becomes actual at the arrival in B. Then also the first potentiality has disappeared.

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[11] The concept of first and second actualities (and potentialities) is also used by Aristotle, but he uses it in a different context, see Lettinck 1994: 170.
[12] Avicenna 1985: 142, 16; 143, 2.   [13] Avicenna 1983: 82, 9; 83, 4.

After having stated the definition of motion, Ibn Sīnā says that one may conceive motion in two ways.[14] The first way of conceiving motion is that one is aware of the fact that a body was at position A first and then has arrived at position B. From this awareness, one derives the concept of motion from A to B. This can be a mental conception only with no actual counterpart in reality. For when this awareness occurs, the actual motion from A to B is already finished. The second way of conceiving motion does have a counterpart in reality and properly describes the actual state of a moving body. It is the state of the body while it is between the starting point and the end point. This state is characterized by being such that at any instant the body is at a position at which it has not been before that instant and will not be after that instant. This is the 'form of the motion that exists in the moving body' and this is the first perfection. Thus, this description could well serve as an alternative definition of motion.

A further study of Ibn Sīnā's definition of motion, its use at other places in his *al-Shifāʾ* and a comparison with earlier scholars has been presented by Hasnawi, with a French translation of the relevant passages from *al-Shifāʾ*.[15] Ibn Bājja says that motion is something between a purely potential being (in which there is no actuality) and a purely actual being (in which there is no potentiality); it is a way of being between these two extremes which has a part of both.[16] Take for instance the motion of a body X along the line AB from A to B. When X is still in A, it is potentially in B and it has nothing in it of (actually) being in B. When X is in B, then the potentiality of being in B has completely disappeared. When X is in C, a point between A and B, then X has a part of (being in) A and a part of (being in) B. Parts of A and B are actual in X, whereas it is also still partly potentially being in B. In fact, X is never completely actual in any point between A and B: when we want to find it in any such point, we find it has already passed that point. It is this kind of being that is motion and change. Here Ibn Bājja states an essential feature of motion, namely that what is in motion is never at the same point at different instants. The same feature was recognized by Ibn Sīnā when he said that when a moving body is at a certain point at a certain instant it is not at that point before or after that instant (see above).

Ibn Bājja further states that, applying Aristotle's definition of motion to the building of a house, one may say that the process of a house being built is the perfection or actuality of what is buildable (what is potentially something being built).[17] The form of the house when the building is

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[14] Ibid. 83, 18; 84, 18.   [15] Hasnawi 2001.   [16] Ibn Bājja 1978: 29, 16; 30, 8.   [17] Ibid. 31, 2–17.

completed is also an actuality or perfection, but a different one; the former perfection is the perfection of the buildable 'as buildable,' i.e. insofar as it has the potentiality of being (in the process of being) built, the latter one is the perfection of the buildable insofar as it has the potentiality to be a (completed) house. Aristotle added the phrase 'insofar as it is potential' to make clear that motion is the former kind of actuality.

Ibn Rushd discusses the definition of motion along the same lines as Ibn Bājja. In his *Long Commentary* he states: "In the definition of motion, Aristotle adds 'insofar as it is potential,' because what is mova- ble (potential) has two perfections: a perfection insofar as it is not movable, and a perfection insofar as it is movable, and the latter is what motion is."[18] In the *Middle Commentary* he elaborates on this, saying that perfection is either an actuality at rest, in which no potenti- ality remains, and which is (being at) the end point of the motion, or it is an incomplete actuality, which still keeps some of the potentiality. This last kind of actuality is what motion is.[19] The two perfections are again distinguished in his *Short Commentary* in almost the same formula- tion.[20] Reviewing the commentaries on Aristotle's definition of motion we note that Philoponus, following Themistius, distinguishes two actu- alities: the first one is the actuality of the potentiality of a thing to be X, while this potentiality remains (partly) present in the actuality, and that is the motion; the second one is the actuality which arises when the thing has become X and when no potentiality is left. Apparently Philoponus considers the potentiality of a thing to be X to be a kind of quality which it may possess in a larger or smaller degree, such as a body may be more hot or less hot. At the beginning of the motion this potentiality is present at its maximum and during the motion it gradually decreases until it has vanished when the motion is completed.

Ibn Sīnā also distinguishes between two actualities and corresponding to them two potentialities: the potentiality to be moving to X and the potentiality to be X. Motion is the actuality of the first potentiality. This definition is vulnerable to a criticism which was formulated by Kosman, namely that it does not say anything informative about motion; saying that motion is the actuality of the potentiality to be moving is like saying that black is the actuality of the potentiality to be black. Although Ibn Bājja does not explicitly use the expressions 'first actuality' and 'second actual- ity,' it is clear that he makes the same distinction into what Philoponus and Ibn Sīnā have called first and second actuality or perfection. He also

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[18] Averroes 1562: 88A12–B3.   [19] Ibid. 450A7–C6.   [20] Averroes 1983: 31, 9–14.

distinguishes, like Ibn Sīnā, between a first and second potentiality: the potentiality to become involved in the process of building (moving), and the potentiality to be a built house (at the final point of the motion). The ancient and medieval commentators have progressed into the direction of the modern explanation of Kosman with their distinction of two actualities. Still, Kosman's interpretation is different in its details and avoids motion to be defined as the actuality of the potentiality to be moving, such as found in Ibn Sīnā.

(B) Aristotelian dynamics

Several aspects of dynamics were discussed by Aristotle and his Greek and Arabic commentators, a discussion that continued throughout the Western Latin Middle Ages until Galileo Galilei. The first one is the question of the cause of a body's motion. Aristotle's view is that natural motions (heavy bodies falling and light bodies rising) occur because bodies if they are not in their natural place by nature, move to that place, thus actualizing a not yet fulfilled potentiality. Bodies with a non-natural motion, for instance, a stone thrown upwards, are moved by another body that is in contact with it, like the hand of the thrower. When the thrown body is no longer in contact with the thrower, there must be something else that moves it. In *Physics* IV.8 and VIII.10, Aristotle explains that it is the medium through which the body is moving that moves it: when a stone moves up through the air it is the surrounding air which somehow pushes the stone further upward. This was found quite unbelievable by Philoponus. He presents an extensive refutation of this theory and then proposes his own theory.[21] For instance, he says that if a stone was placed at a certain point and if one were to move the air under it, the stone would not move upward from its place, even if it were a very strong stream of air. Instead, he introduced the concept of 'impressed force': the thrower transfers a certain incorporeal moving force (*kinētikē dunamis*) into the body, and that is what causes its motion. This force gradually weakens during the motion so that finally the motion ceases. The natural motions of bodies and the circular motions of the celestial spheres are also caused by such impressed forces.

Most modern scholars have argued for the originality of Philoponus' idea of 'impressed force,' but Philoponus himself ascribes it to Aristotle.[22]

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[21] Philoponus 1967: 637, 6; 644, 22; for the most part translated into German by Böhm, 135–141.
[22] For instance, see Wolff 1987.

In *Physics* III.3, Aristotle discusses the question whether the motion (change) exists in what is moved (the patient) or in the mover (the agent), since in fact, the mover, when it causes something else to move, also moves, with the same motion as what is moved by it. If one asks where the motion exists, in the mover or in what is moved, one should say that the motion is located in what is moved, whereas it is brought about by the mover, which has the same motion. The processes of causing motion and being subject to motion are in fact one single process. But they are differently defined, just as the road uphill and downhill are the same and the processes of teaching and learning are the same, but differently described.

Commenting upon Aristotle's statement that the change is located in that which is subject to it (patient), whereas it is originated in that which causes it (agent), Philoponus says that this does not mean that the agent itself is not subject to change; in fact, often it can bring about change only by being subject to change itself. This is especially clear for local motion.[23] Aristotle means, says Philoponus, that there is a certain power or force which is able to cause change (motion). This moving power (*kinētikē dunamis*) has its origin in the agent of the motion and the agent transfers it to what is moved by it where it is actualized, i.e. by bringing about the motion. It is like when a teacher is teaching a certain theorem. Then a certain influence, which has its origin in the teacher, is transmitted to the pupil and causes him to learn a theorem. Philoponus' theory of impressed force became known in the Arab world and was propounded by Ibn Sīnā, who called this force an 'acquired force' (*quwwa mustafāda*) or 'inclination' (*mayl*).[24] In the Latin Middle Ages it was known as the impetus, and it was much discussed until Galilei. The subject has been investigated extensively by modern scholars.[25]

Another situation discussed by Aristotle and his commentators is that of a body with mass M which is moved by a force F and has acquired the velocity v.[26] His ideas about the relation between M, F, and v, set out in *Physics* IV.8 and VII.5, are usually summarized by the formula v = F/M. If the motion is a natural one, for instance a body falling in a certain medium, such as air or water, the formula becomes v = W/D, in which W is the weight of the body and D is the density of the medium. For in this case, the

[23] Philoponus 1967: 384, 11; 385, 11.
[24] Avicenna 1983: 1, 133, 6; 134, 1; 314, 13; 315, 11; 326, 6–7; Pines 1979; Hasnawi 1984.
[25] See Maier 1951 and Wolff 1978.
[26] Using 'force,' 'mass,' and 'velocity' here in the sense of classical mechanics is an anachronism, but it agrees with Aristotle's intentions. The same holds for the use of formulas in what follows.

weight of the body is the force that is working on the medium which must be moved away during the motion. It follows that if a body were to move in a void, the motion would be instantaneous (the speed would be infinite). This is one of Aristotle's arguments against the existence of void. Philoponus, Ibn Bājja, and later Thomas Aquinas and others did not agree with this formula for a motion in a medium and have proposed a different formula. One of their arguments was that the celestial spheres do not move in a medium and nevertheless move with various finite velocities.

Philoponus argues that if motion were to occur in a void it would not be instantaneous but will take a certain time to cover a certain distance.[27] If motion occurs in a medium, the medium will resist the motion and therefore a certain extra time will be needed to cover that distance. This extra time will be proportional to the density of the medium. The total time needed to cover that distance becomes $t = t_0 + t \times D$, in which t is a constant. Note that the corresponding Aristotelian formula would be: $t = t \times D$.

Ibn Bājja adopts Philoponus' idea and formulates it as follows: motion in a void is not instantaneous, and motion in a medium is subject to a retardation in comparison with motion in a void.[28] It is not clear from the text how one should interpret 'retardation.' One possibility is that in order to get the velocity in a medium, one should subtract a certain amount from the velocity v_0 in void: $v = v_0 - f \times D$, in which f is a constant.[29] This is Moody's interpretation in the paper in which he claimed that Ibn Bājja was a precursor of Galilei. Another possibility is that for motion in a medium, an extra 'slowness' should be added to the 'slowness' in a void, where 'slowness' must be interpreted as the inverse of the velocity $1/v$. Thus, 'slowness' is proportional to the time needed to cover a certain distance and therefore Ibn Bājja's view in this interpretation is exactly the same as Philoponus' view.

Ibn Bājja's works have not been translated into Latin, but his text about motion in a medium became known in the Western Middle Ages through a quotation by Ibn Rushd in his *Long Commentary on the Physics*, where Ibn Rushd defends Aristotle's view against that of Ibn Bājja. This work of

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[27] Philoponus' theory is explained in his *Corollarium de inani*, which forms a part of his commentary on the *Physics*, see Philoponus 1967: 667, 8–675, 11. An English translation is available in Philoponus 1991.

[28] Ibn Bājja 1978: 142, 10; 144, 16.

[29] This is Moody's interpretation in the paper in which he claimed that Ibn Bājja was a precursor of Galilei (Moody 1951: 163–193 and 375–422).

Ibn Rushd was translated into Latin.[30] Thomas Aquinas adopted Ibn Bājja's view. He interpreted the text according to the second possibility mentioned above, which agrees with Philoponus' view. The subsequent discussion in the Middle Ages between the followers of Ibn Bājja (Avempace) and Aristotle continued up to Galilei, and has been investigated by various modern scholars.[31]

(C) Ibn Sīnā on winds

Aristotle's theory of winds, explained in *Meteorology* II.4–6, contains a problem that was recognized by all commentators. His theory is that wind is dry exhalation which is dissolved from the earth by the sun's heat. It moves horizontally because this exhalation is dragged along with the circular motion of the upper air, which in its turn, is moved along with the motion of the lowest celestial (the moon's) sphere. The problem is that this would mean that wind would always have the same direction. The commentators were reluctant to give up Aristotle's theory of the origin of wind, although Theophrastus and al-Kindī mention the possibility that wind is moving air. However, they have tried to explain the directions of the various winds in several ways different from Aristotle. Ibn Sīnā says that the rising dry exhalation when it reaches the upper air does not partake in the circular motion of that air but is thrust back by it and descends again; or it arrives in a cold layer of the atmosphere, becomes heavy, and descends again.[32] The descending dry exhalation meets other rising exhalation and the combination of descending and rising motion results in a horizontal motion, the direction of which may vary. A similar explanation was proposed by Pseudo-Olympiodorus and it is one of the indications that Ibn Sīnā knew his treatise.[33]

(D) Ibn Sīnā and his school on the heat in the tropics

In *Meteorology* II.5 Aristotle claims that the regions of the earth that are inhabitable are restricted to the area between the tropic of Cancer and the northern polar circle and the corresponding area on the southern hemisphere. Outside these areas the climate is either too cold (near the poles) or too hot (between the tropics). This was already disputed by Ptolemy, who knew that there were people living south of the tropic of Cancer. Ibn Sīnā

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[30] Averroes 1562: 160C7–162C10. [31] For instance, Maier 1958: 244–274.
[32] Avicenna 1964: 58, 4; 59, 11. [33] Pseudo-Olympiodorus 1971: 118, 23; 119, 23.

differs even more radically from Aristotle. According to him, the climate in tropical countries is in fact the most moderate one on earth: there it is always like spring and so it is the most suitable place to live.[34] In the region north of the tropic of Cancer, the climate is more extreme: it is very hot in summer and very cold in winter. Fortunately, the bodies of the people living in those areas are adapted to these extreme circumstances. Ibn Sīnā relates that he was once in Bukhārā, when the inhabitants were complaining about the hot weather at the time and he saw a visiting Bedouin who was shivering, wrapped up in clothes, and crying for help.

Ibn Sīnā explains the moderate climate in the tropics as follows: he first assumes that the heat on earth is determined by the height of the sun, or more precisely, by the maximum height the sun reaches during the day. Then, it follows that at the summer solstice, when the sun reaches the zenith in countries that are on the tropic of Cancer, it is as hot there as it is at the spring equinox in the countries on the equator. However, the height of the sun is not the only factor. Heat is also accumulated so that the longer the sun shines, the hotter the earth becomes. The sun approaches the tropic of Cancer slowly and therefore it is (almost) vertically above that region during a long time. The sun passes the equator quickly and therefore it is vertically above that region during a short time only. This effect is enhanced because in summer in the area of the tropic of Cancer days are long and nights are short, whereas on the equator, day and night are of equal length. Thus, more heat is accumulated in summer in the region of the tropic of Cancer than in spring in the region of the equator and therefore the heat is more extreme around the tropic of Cancer than around the equator.

This view of Ibn Sīnā was shared by Abū l-Barakāt al-Baghdādī, but not by Fakhr al-Dīn al-Rāzī. The latter showed that heat must be stronger at the equator than at the tropic of Cancer.[35] On the equator, the sun is never far from the zenith throughout the year so that heat will accumulate to a larger extent there than around the tropic of Cancer where the sun is near the zenith only once a year. The effect of longer days will have not much influence on the heating of the earth since at the poles the days last for six months and still it remains very cold.

[34] Avicenna 1964: 26, 14; 30, 15.   [35] Al-Rāzī 1966: 201, 18; 203, 8.

(E) Halo and rainbow

Aristotle discusses the halo and the rainbow in *Meteorology* III.2–5. He maintains that these phenomena are caused by the reflection of the light of the sun or the moon against small water drops in a cloud. In the case of the halo, this cloud is located between the observer and the source of light. In the case of the rainbow, the cloud and the source of light (sun) are in opposite directions in relation to the observer. He does not explain why, in the case of the halo, reflection only occurs at certain points of the cloud, not at all points, so that the halo appears as a circle on the cloud, not as a whole bright cloud. Aristotle correctly explains why the rainbow is a semicircle when the sun is at the horizon and becomes part of a semicircle when the sun rises above the horizon. He does not give a correct explanation of why only (part of) a circle on the cloud appears colored and not the whole cloud. Instead, he states that reflection occurs at those points of the cloud that are such that their distances to the observer and to the sun have a fixed ratio c, and he describes a method to find the points of reflection on the cloud when c is given. As for the colors, Aristotle tried to give an explanation in terms of weakening of visual rays but he did not arrive at a consistent result.

Ibn Sīnā says he is not satisfied with Aristotle's theory of the rainbow.[36] His dissatisfaction partly stems from his own observations of the rainbow. He observed rainbows without a cloud being present. Also, he observed a rainbow that appeared partly in a cloud around a mountain and partly in the air with the mountain as a background; and even a rainbow in a cloudless sky with a mountain as a background. He concluded that a cloud is not necessary for a rainbow. A rainbow is formed when there is moist air containing many small watery particles, like a spray, and when behind this moist air there is a dark body. Reflection occurs in the water drops due to the presence of the dark background like when a reflection occurs in a glass covered on one side. The background may be formed by a cloud but also, for instance, by a mountain. Ibn Sīnā further says that Aristotle's explanation of the colors is nonsense but admits that he does not know a correct explanation.

Ibn al-Haytham did not write a commentary or treatise on meteorology but his field of research was optics. He extensively studied the reflection and refraction of light rays and in his *Treatise on the Burning Spheres* he studied the course of rays through a glass sphere that refracts incident rays

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[36] Avicenna 1964: 50, 8; 56, 2.

to certain (burning) points behind the sphere.[37] He also wrote a special treatise about the halo and rainbow. Despite his knowledge of refraction, he explained these phenomena, following Aristotle, by reflection against a cloud. However, he tries to explain why reflection occurs at certain points of the cloud only so that these phenomena appear as circles and he uses the law of reflection of light rays in this explanation. This explanation is adopted by Ibn Rushd.[38]

Significant progress in the explanation of the rainbow was made by Kamāl al-Dīn al-Fārisī in the fourteenth century.[39] He studied the paths of light rays through a transparent sphere more extensively than Ibn al-Haytham had done. He explained the rainbow by successive refraction, reflection, and refraction of sunrays that enter water drops in a cloud. The secondary rainbow arises when the ray is reflected two times. This correct principle was found at almost the same time, independently from Kamāl al-Dīn, by Dietrich von Freiberg.

[37] This treatise has been edited and translated by Rashed 1993.
[38] See Averroes 1994a: 141, 10; 143, 18 and 160, 15; 163, 9; Averroes 1947: 61, 14; 64, 4 and 68, 10; 72, 17.
[39] See Rashed 1970.

<center>7</center>

Defining nature: from Aristotle to Philoponus to Avicenna

Andreas Lammer

I   Aristotle and the ambiguity in nature

At the beginning of *Physics* II.1, Aristotle contrasts things that come-to-be "by nature" (φύσει) with things that come-to-be "through other causes" (δι᾽ ἄλλας αἰτίας). He states that things of the former category, e.g. wood and stone, have within themselves a principle of motion and rest (ἀρχὴν ἔχει κινήσεως καὶ στάσεως), whereas things of the latter category, e.g. a bed and a sculpture, have such a principle only insofar as they consist of the former. For Aristotle, this shows "that nature is a certain principle and cause (ἀρχῆς τινὸς καὶ αἰτίας) of being moved (κινεῖσθαι) and of being at rest (ἠρεμεῖν) in that to which it belongs primarily, by itself and not by accident" (ἐν ᾧ ὑπάρχει πρώτως καθ᾽ αὑτὸ καὶ μὴ κατὰ συμβεβηκός).[1] This is Aristotle's definition of nature. The purpose of his argument is not to establish the existence of nature as a principle of motion but to emphasize its being "in that to which it belongs primarily, by itself and not by accident," i.e. to stress that nature is an internal principle belonging to things by themselves. Things that came-to-be "through other causes" such as art just do not have an "innate impulse for change" (ὁρμὴν . . . μεταβολῆς ἔμφυτον),[2] as Aristotle himself paraphrases his definition – they surely have an impulse, but it does not belong to them "primarily" nor is it "innate." This much is relatively clear.

It is more challenging, however, to determine how Aristotle wants us to understand this internal principle or innate impulse, because his language gives rise to two altogether different interpretations. The first expression he uses, ἀρχὴ κινήσεως ("principle of motion"),[3] seems to convey a

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[1] *Phys.* II.1, 192b20–23, trans. Hardie/Gaye, modified.
[2] *Phys.* II.1, 192b18f, trans. Hardie/Gaye, modified.   [3] *Phys.* II.1, 192b14.

grammatically active meaning of nature as being responsible for bringing about motion. Motion, thus, comes about and has its beginning in nature, which is its source and principle. This certainly is the most natural understanding for anyone who has read Plato's *Phaedrus* and *Laws* X.[4] In contrast, the medio-passive infinitive κινεῖσθαι, employed in the definition itself, may recommend a more reserved understanding of nature as a passive principle of "being in motion" or "being moved." Among interpreters, there is no consensus as to how we ought to read these expressions.[5]

There is, likewise, no agreement on how Aristotle's account in *Physics* II.1 relates to his remarks in *Physics* VIII.4, in which nature is explicitly said to be a principle "not of moving something or of producing [motion], but of suffering it" (οὐ τοῦ κινεῖν οὐδὲ τοῦ ποιεῖν, ἀλλὰ τοῦ πάσχειν). The real efficient causes which are ultimately responsible for the motion of a natural thing are either that which generated it in the first place (γεννήσαντος καὶ ποιήσαντος) or that which removed the obstacle which had previously prevented its natural motion (τὰ ἐμποδίζοντα καὶ κωλύοντα λύσαντος).[6] In other words, while Aristotle in *Physics* VIII.4 opts for two external efficient principles in order to account for natural motion, his audience remains somewhat puzzled as to whether φύσις in *Physics* II.1 should be taken as an active or a passive principle of motion and rest.

The ambiguity exploited: Philoponus on nature as an active power

Philoponus (d. *c.*575) makes short work of Aristotle's passive solution of chapter VIII.4. At the beginning of his commentary on *Physics* II, he writes:

> natural things clearly have in themselves the principle of their own motion and rest, for animals when they move are not moved by something outside but have the mover in themselves (ἐν ἑαυτοῖς ἔχει τὸ κινοῦν), and likewise inanimate things, e.g., stones on being released are not

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[4] See *Phdr.* 245c5–246a2; *Laws* x, 894a8–896a5. It is commonly suggested that Aristotle's investigation of nature in *Physics* II.1 should be read as an engagement with or even a reaction to Plato's remarks on soul in *Laws* x; see Mansion 1945: 82–105; Solmsen 1960: 95–102; Wieland 1992: 240–247; Broadie 1982: 209–214 and n. 24, 238.

[5] See Sorabji 1988: 220: "the word *kineisthai* stands indifferently for the intransitive *being in motion* and for the passive *being moved.*" Broadie 1982: 39, 163, 204–207, has argued that κινεῖσθαι "is passive as to its grammatical form, but not necessarily passive as to its meaning," and translates Aristotle's definition as "a principle and cause of change and stasis." A passive reading as reflected in the above-quoted translation by Hardie and Gaye is vehemently defended by Lang 1992 and 1998. Lang has been severely criticized for her "claims about Greek usage" by Gill 2000. Most other translators tend to render κινεῖσθαι at 192b21 not in a passive sense (e.g. Wicksteed/Cornford, Ross, Wagner, Charlton, Waterfield); Fritsche 2010 emphatically argues for an active reading.

[6] *Phys.* VIII.4, 255b29–256a3; *De Caelo* IV.3, 310a31f. and 311a9–12.

moved downwards by the releaser (οὐχ ὑπὸ τοῦ ἀφιέντος) – for he has merely released them – but the natural inclination in them (ἡ ἐν αὐτοῖς φυσικὴ ῥοπὴ) brings them down.[7]

Here, the account of nature as a principle of suffering motion by two external causes is dismissed straight away and replaced by an active understanding of nature as a natural inclination (φυσικὴ ῥοπή).[8] Philoponus' account is the culmination of a Neoplatonic project or – since Alexander of Aphrodisias (fl. *c*.200), as we shall see, has been one of the main contributors – even Peripatetic project of aligning nature and soul, and indeed of identifying nature with soul, on the grounds that both constitute an inner principle of motion.[9] This project can be found at play in Philoponus' critical engagement with Aristotle's definition of nature in *Physics* II.1.

In his commentary, Philoponus immediately relates the distinction between things that exist "by nature" (φύσει) and things that exist "through other causes" (δι' ἄλλας αἰτίας) from the first line of *Physics* II.1 to the differentiation between the animate (τὸ ἔμψυχον) and the inanimate (τοῦ ἀψύχου) in *De anima* I.2 – a differentiation which conveniently consists in the former's aptitude for *motion* and sensation (κινήσει τε καὶ τῷ αἰσθάνεσθαι).[10] He, then, attacks Aristotle for having merely shown "the activity of nature" (τῆς ἐνεργείας τῆς φύσεως), instead of having explained "what nature is" (τί ἐστιν ἡ φύσις).[11] In his attempt to correct this defect and to give an adequate account of the "substance" of nature (τῆς οὐσίας αὐτῆς), Philoponus expands upon Aristotle's

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[7] Philoponus 1887–1888: 195.24–29, trans. Lacey, modified.

[8] Philoponus' position bears similarities to Aristotle's remarks in *De Caelo* III.2, esp. 301a20–26. Historians of science were fascinated by Philoponus' theory and his views about trajectory motion, which he explained by means of an "impressed force" or "acquired inclination." This concept, which came to be known as *impetus*, was regarded as a precursor to Newton's exposition of inertia. The related concept of natural, as opposed to acquired, inclination, however, did not receive nearly as much attention. For some viable exceptions; see Wolff 1971 and 1987; Zimmermann 1987. Contrary to Philoponus, Simplicius approves of Aristotle's reasoning in *Physics* VIII.4.

[9] The claim that nature and soul are identical, or conceptually on a par with one another, is already present in Alexander (see Simplicius 1882–95: 268.18–21 and 1219.1–11; Simplicius 1894: 380.29–31 and 387.14; Alexander 2001: §§16–23 and §96; see Pines 1961: 44f.; Moraux, 2001: 137f.). It is often suggested that for Plotinus φύσις is to be identified with the external activity (ἐνέργεια ... ἐκ τῆς οὐσίας) of the world-soul (see *Enn.* III.8.2–4 and IV.4.13; for Plotinus' conception of "double activity," see *Enn.* IV.3.7, 14f. and V.4.2, 27–30). Simplicius was apparently aware of such readings and, in direct engagement with Alexander, rejected them altogether (e.g. Simplicius 1882–1895: 268.18–269.4 and 287.7–17); see also Sorabji 2005: II, ch. 1d.

[10] *De an.* II.2, 403b25–7. Philoponus' approach to Aristotle's text is almost certainly influenced by Plato's *Phaedrus*, e.g. 245e4–6.

[11] Philoponus 1887–1888: 197.30f., trans. Lacey.

definition and states that it would be more appropriate to define nature as "life or power (ζωὴ ἤτοι δύναμις) which has descended into bodies (καταδεδυκυῖα διὰ τῶν σωμάτων), and which moulds and manages them (διαπλαστικὴ αὐτῶν καὶ διοικητική), being a principle of motion (ἀρχὴ κινήσεως) and rest 'in that to which it belongs primarily, by itself and not by accident.'"[12]

Philoponus' decision to finish his own definition by partially quoting Aristotle's definition indicates that he is confident of having legitimately emended the otherwise imperfect formulation from the *Physics*. At the same time, his terminology clearly displays his Neoplatonic leanings, as does his general strategy of approaching the definition of nature from its similarity to soul. We can understand his description of φύσις as ζωή ("life") as a reference to Plato's *Laws*, wherein soul is characterized as life and as self-moved.[13] Nature taken as δύναμις relates to the *Phaedrus*, wherein soul, the immortal and self-moving principle,[14] is depicted as the "power" or "force" (δύναμις) of a chariot with its team of winged horses and its charioteer.[15] The participle καταδεδυκυῖα is reminiscent of several aspects from the analogy of the fall of the soul in the *Phaedrus* and also occurs in similar contexts in Plotinus' *Enneads*.[16] If nature is taken to be a δύναμις along these lines, it emerges as an active principle which, indeed, is "life or power" (ζωὴ ἤτοι δύναμις). As a result, Philoponus' version of Aristotle's nature is by no means a passive principle of being moved but is an active principle of producing motion – and this is perhaps precisely the reason why Philoponus avoids the medio-passive form κινεῖσθαι in his comments on nature altogether replacing it by forms of the noun κίνησις, as Helen Lang has argued, and as we see in his own definition.[17]

Less ambiguous than Aristotle, Philoponus characterizes nature as an active force or mover which is directly responsible for the natural motions of the things which it permeates, forms, and governs (καταδεδυκυῖα . . . διαπλαστική . . . καὶ διοικητική). The idea of an active power permeating the natural bodies and entirely mixed with them is, above all, of Stoic origin, and Philoponus' language has at times a Stoic feel to it, in particular

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[12] Ibid. 197.34–198.1, trans. Lacey, modified.   [13] *Laws* X, 894a8–896a5.
[14] *Phdr.* 245c5–246a2, esp. 245d6f.; see also *Enn.* IV.7.9, 6–9; Philoponus 1897: 114.17–23.
[15] *Phdr.* 246a6f.
[16] *Phdr.* 246d3–248e3; *Enn.* I.6.8, 14, and I.8.13, 23; see also Philoponus 1897: 4.31; Proclus 1903–06: II, 103.14–16. It is important to note that καταδεδυκυῖα διὰ τῶν σωμάτων could be translated as both "descending into bodies" and "permeating through" or "being diffused throughout the bodies"; see McGuire 1985: n. 11, 264f.; Macierowski and Hassing 1988: 82–86; and Lacey's remarks in Philoponus 1993: n. 43, 148f. We shall see both meanings reoccurring in the Arabic tradition.
[17] Lang 1992: 111.

when he characterizes nature as a "cohesive" power (δύναμιν φυσικὴν συνεκτικὴν).[18] Finally, Philoponus explicitly ties his understanding of nature as a self-moving causal principle to his Platonic conception of soul as the living and essentially self-moved principle of animate beings when he declares that he has achieved a definition of nature that "will also embrace (συμπεριλήψεται) the nature of the animate (τὴν τῶν ἐμψύχων φύσιν), which is the soul (ἡ ψυχή), for the life of animate things (ἡ . . . τῶν ἐμψύχων ζωή) is nothing other than soul."[19] Nature, for Philoponus, is equal to soul insofar as nature simply achieves in inanimate things what soul does in animate beings, i.e. in plants, animals, and planets. Nature is, thus, nothing but the soul of the soulless – a description which echoes an assertion by Proclus (d. 485) that nature is something "through which even the things that are most devoid of soul (τὰ ἀψυχότατα) participate in a kind of soul" (ψυχῆς μετέχει τινός).[20]

II   The Arabic reception of Aristotle's definition

This is the background for the Arabic reception of the Aristotelian definition of φύσις and *ṭabīʿa* up to Avicenna. In fact, it provides two definitions of nature, one concerned with its activity (τῆς ἐνεργείας τῆς φύσεως) offered by Aristotle and one with its substance (τῆς οὐσίας αὐτῆς) by Philoponus. We shall now see how the Arabic tradition upheld the dichotomy between the concept of nature as a principle of motion and the concept of nature as a soul-like power permeating the bodies of natural things, while regarding them as complementary rather than antithetic.

Al-Kindī (d. *c.*259/873) in his *Risāla fī ḥudūd al-ashyāʾ wa-rusūmihā* lists two definitions of nature.[21] The first defines it as "a principle of motion (*ibtidāʾ ḥaraka*) and of rest from motion. It is the first of the faculties of the

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[18] Philoponus 1887–1888: 198.3. The exact nature and extent of the influence of Stoic ideas and terminology on Philoponus is not fully established; see Macierowski and Hassing 1988: 82–86; McGuire 1985: 261–264; Sorabji 1988: 242f.

[19] Philoponus 1887–1888: 198.6–8, trans. Lacey, modified. Philoponus' statement that his definition of nature "embraces" or "includes" (συμπεριλήψεται) the soul echoes a view attributed to Alexander who reads Aristotle as having "included (περιείληφε) the soul in his description of nature" (Simplicius 1882–95: 268.18–21, trans. Fleet); Moraux 2001: 138; Philoponus 1897: 114.24–28, n. 10. For his Neoplatonic interpretation, Philoponus could also have availed himself of Aristotelian passages like *De generatione animalium* II.4, 740b36–741a3, and *De partibus animalium* I.1, 641a25–28, which explicitly identify the nature of a thing, in particular that of an animal, with its soul, more precisely either with the entire soul or some parts of it. The latter work calls this nature a "mover" using the active participle κινοῦσα, thus matching Philoponus' reading of nature as a living causal force.

[20] Proclus 1903–1906: I, 11.24f., trans. Martijn 2010: 33 and 61.

[21] The treatise is extant in three manuscripts which differ largely. Moreover, its attribution to al-Kindī has been challenged by Gimaret. Adamson and Pormann discuss Gimaret's claim, arguing for the

soul."[22] An independent manuscript of this work adds another definition: "The definition of nature with regard to teaching (*min jihat al-taʿlīm*) is that it is the principle of motion (*mabdaʾ al-ḥaraka*) and rest. Its definition with regard to its character (*min jihat al-ṭibāʿ*) is that it is the governing power (*al-quwwa al-mudabbira*) belonging to bodies."[23] Both definitions provided by al-Kindī consist of two parts. The first of each resembles the Aristotelian definition of nature as a principle of motion (*ibtidāʾ ḥaraka* and *mabdaʾ al-ḥaraka*) but does not reproduce the medio-passive connotation of κινεῖσθαι as, for example, the Arabic translation of the *Physics* by Isḥāq ibn Ḥunayn (d. 298/910) does.[24] Their second parts introduce elements that are reminiscent of Philoponus by making this principle either one of the faculties or powers (*quwan*) of soul or calling it a "governing power" (*al-quwwa al-mudabbira*), thus reproducing the idea of διοικητική ("governing, managing") which we found in Philoponus' commentary.

Whereas al-Kindī mentions neither Aristotle nor Philoponus, Abū Bakr al-Rāzī (d. 313/925), in a treatise called *Maqāla fīmā baʿd al-ṭabīʿa*, states his disagreement with the definition of nature provided by Yaḥyā al-Naḥwī ("John the Grammarian," i.e. John Philoponus). He relates that Philoponus claimed nature to be "a power (*al-quwwa*) which permeates through (*tanfudhu fī*) bodies and manages them" (*tudabbiruhā*).[25] This passage could be a slightly incomplete quotation from Philoponus' commentary.[26] Although it lacks two crucial points, namely that Philoponus made nature a life (ζωή) which molds or shapes (διαπλαστική) that in which it resides, it faithfully provides other features of Philoponus' redefinition of nature: *al-quwwa* reproduces δύναμις, *tanfudhu*

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text's authenticity, and offer a reasonable explanation for its complex transmission (Adamson and Pormann 2012c: 297–300); see Genequand 1984: 121.

[22] Al-Kindī 1950–1953: I, 165; trans. Adamson and Pormann 2012c, modified: §3, 300.

[23] Al-Kindī 1982: §87, 215; trans. Adamson and Pormann 2012c, modified: §92, 308 which translates from al-Kindī 1950–1953: I, 179 and §117, 311.

[24] One is inclined to assume that al-Kindī's formulation goes back to Ibn Nāʿima al-Ḥimṣī (fl. *c.*215/ 830), who was a member of al-Kindī's circle and translated Aristotle's *Physics* together with Philoponus' commentary on Books V–VIII (but, as far as we know, not on Book II); see n. 55. Isḥāq ibn Ḥunayn translated ἀρχῆς τινὸς καὶ αἰτίας τοῦ κινεῖσθαι καὶ ἠρεμεῖν ἐν ᾧ ὑπάρχει πρώτως καθ᾽ αὑτό καὶ μὴ κατὰ συμβεβηκός (*Phys.* II.1, 192b21–23) as *mabdaʾan mā wa-sababan li-an yataḥarraka wa-yaskuna l-shayʾ alladhī hiya fīhi awwalan bi-l-dhāt lā bi-ṭarīq al-ʿaraḍ* (Aristotle 1964–1965: 79.7–9).

[25] Al-Rāzī 1939: 118.1; Peters 1968b: 34; Lucchetta 1987: 35–37; Gannagé 2011: 521; Adamson 2012b: n. 51, 263f.

[26] As in the case of al-Kindī, we do not know which translation of Philoponus' commentary al-Rāzī could have used; see n. 55.

fī renders καταδεδυκυῖα, and *tudabbiruhā* conveys the meaning of διοικητική.[27] Moreover, these features are highly reminiscent of another thinker and if we now advance further into the Arabic reception, we are paradoxically required first to move backwards a little in time.

Alexander of Aphrodisias in tenth-century Baghdād

One of Alexander's works, which is preserved in Syriac and Arabic, is known by its Arabic title as *al-Qawl fī mabādiʾ al-kull bi-ḥasab raʾy Arisṭāṭālis al-faylasūf*.[28] In this treatise, Alexander likened the nature which pervades the universe to a ruler who governs a city:

> This nature and power (*al-ṭabīʿa wa-l-quwwa*), they are the cause of the unity of the world and its order. In consideration of that according to which things are in one city which has one ruler (*mudabbir*) residing in it [and] not being separate from it, we likewise say that a certain spiritual power permeates through the whole world (*quwwa mā rūḥāniyya tasrī fī jamīʿ al-ʿālam*) and holds its parts together . . . and all things which are in it [i.e. in the world (in analogy to the city)] seek to be in contact with that which is unchanging and aim at the material union with that which rules and governs it, and preserves its arrangement and order (*yudabbiruhu wa-yasūsuhu wa-yaḥfiẓu ʿalayhi tartībahū wa-niẓāmahū*) by a spiritual power which permeates through all of its parts (*bi-quwwa rūḥāniyya tasrī fī jamiʿ ajzāʾihi*).[29]

Like Philoponus after him, Alexander depicts nature as a power which permeates bodies, and indeed the entire universe, governing, managing, and preserving it like a ruler or a steersman.[30] When we mentioned above Plato and Plotinus as the main sources of inspiration for Philoponus in his account of nature, we now have to include Alexander of Aphrodisias in that

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[27] The implications of a nature that is described as "alive" and as "forming" nonetheless dominate al-Rāzī's subsequent critical discussion. Other than that, al-Rāzī remarks that the idea of a corporeal power permeating through a body entails the unfavorable consequence that two bodies occupy the same place. This is a common criticism against the Stoic idea of κρᾶσις διʾ ὅλου ("mixture through and through") because the Stoics, indeed, regarded the universal πνεῦμα that permeates the bodies as corporeal, for otherwise it could not be an active power.

[28] Apart from the Syriac version, which has recently been edited by E. Fiori (Alexander 2010), the treatise exists in two different Arabic translations one of which was edited by A. Badawī as part of his collection *Arisṭū ʿinda l-ʿarab*. C. Genequand published an edition and translation of both versions under the title *On the Cosmos* (Alexander 2001). The treatise has been discussed in Pines 1961: n. 85, 42f., and King 2010 as well as Fazzo and Zonta 2014.

[29] Alexander 2001: §§128f., trans. Genequand, modified.

[30] The idea that nature "preserves" that in which it is, is also one of the main points in Philoponus' argument, even though it is not an explicit part of his actual definition of nature; see, Philoponus 1887–1888: 196.13–15. We shall see this feature reoccurring in Avicenna's interpretation of Philoponus' account.

list. One might even suspect that Philoponus, when he reformulated the Aristotelian notion of nature, was effectively citing from the Greek original of Alexander's treatise or his commentary on the *Physics*. However, lacking these Greek texts, the most we can assert is that the Arabic of *al-Qawl fī mabādiʾ al-kull* certainly could go back to the same Greek terminology we read in Philoponus' commentary.

Both Alexander and Philoponus were very influential in tenth-century Baghdād. We find traces of both commentators in marginal notes throughout Ms. Leiden or. 583, an annotated copy of Isḥāq ibn Ḥunayn's translation of the *Physics* from the study circle around Yaḥyā ibn ʿAdī (d. 363/974). The only comments on the definition of nature we find in this manuscript are by Yaḥyā ibn ʿAdī's student, Ibn al-Samḥ (d. 418/1027), who primarily stresses that nature is the "form of something by which it is what it is" (*ṣūrat al-shayʾ allatī bihā huwa mā huwa*).[31] His teacher Yaḥyā ibn ʿAdī, on the other hand, provides a literal commentary on Aristotle's definition in his *Maqāla fī l-mawjūdāt*. He explains that the term "principle" (*mabdaʾ*) signifies both the matter as a passive principle of being receptive (*al-qābil*) and the form as an active principle of acting (*al-fāʿil*). The latter, then, is said to be "like the soul of the animal" (*ka-nafs al-ḥayawān*).[32] Yaḥyā ibn ʿAdī's own teacher, al-Fārābī (d. 339/950–951), remarks in his treatise, *Falsafat Arisṭūṭālīs*, that Aristotle had identified a thing's nature with its essence (*māhiyya*) which, in turn, is responsible for bringing about a natural thing's act (*al-fiʿl*).[33] In addition to that, al-Fārābī states in the well-known *al-Madīna al-fāḍila* that the term "living" (*ḥayy*) may be attributed even to an inanimate thing provided that it is such that from it proceeds (*yaṣduru ʿanhu*) whatever naturally (*min shaʾnihī*) proceeds from it.[34]

The Ikhwān al-Ṣafāʾ show similar traces of the same Peripatetic and Neoplatonic influence in their philosophical conception of nature. They write in Epistle 20 that "nature is just one of the powers of the universal heavenly soul and it is permeating through all the bodies (*sāriya fī jamīʿ al-ajsām*) which are below the sphere of the moon . . . This power, I mean nature, is permeating through all of them like the permeating of light through air; it is their mover as well as that which brings to rest, governs, completes, and perfects (*muḥarrika lahā wa-musakkina wa-mudabbira*

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[31] See Ibn al-Samḥ's comments edited by Badawī in Aristotle 1964–1965: 8if., and paraphrased in Lettinck 1994: 121f.

[32] Ibn ʿAdī 1988: 269.   [33] Al-Fārābī 1961a: 89.15–21; see McGinnis 2011: 61f.

[34] Al-Fārābī 1985b: 1.10, 76.9–13; in the Greco-Arabic translations, *min shaʾnihī* has often been used to render of πέφυκεν.

wa-mutammima wa-muballigha) each one of them."[35] The terminology just as the cosmological framework is not unlike what we have found in Alexander and Philoponus, and reflects an awareness of and familiarity with the materials produced and discussed predominantly in Baghdād.

More evidently relevant for our purposes are the writings produced in the circle around the Baghdād intellectual and logician Abū Sulaymān al-Sijistānī (d. *c.*374/985) for whom Alexander has been said to have been a major source.[36] In one of al-Sijistānī's authentic treatises, *al-Maqāla fī l-muḥarrik al-awwal*, we find the following two definitions of nature:

> Someone defined nature as the principle of motion and rest (*mabdaʾ al-ḥaraka wa-l-sukūn*) for something in which it is primarily, by itself, and not by way of accident, and this, then, is with regard to natural inquiry (*bi-ḥasab al-naẓar al-ṭabīʿī*). Someone [else] defined it as a power which permeates through the bodies (*tanfudhu fī l-ajsām*) and so gives them shaping and formation (*fa-tuʿṭīhā l-takhalluq wa-l-taṣawwur*) through specific forms for each one of them, and this, then, is with regard to the inquiry into metaphysics (*bi-ḥasab al-naẓar fīmā baʿd al-ṭabīʿa*).[37]

We immediately recognize the explicit distinction between a definition of nature "with regard to natural inquiry" and a definition "with regard to the inquiry into metaphysics." Similar to the dichotomy we found in al-Kindī, this may imitate Philoponus' division into an account of "the activity of nature" (τῆς ἐνεργείας τῆς φύσεως) and an account of "its substance" (τῆς οὐσίας αὐτῆς).[38] The first definition is an almost verbatim quote from Isḥāq ibn Ḥunayn's Arabic translation of the *Physics* only differing in rendering the medio-passive κινεῖσθαι not through the reflexive *yataḥarraku* ("to be in motion") but the less literal noun *ḥaraka* ("motion"), which grammatically also requires the nominalization of *yaskunu* ("to be at rest") as *sukūn* ("rest"). The second definition with regard to the "inquiry into metaphysics," is not only strikingly similar to Philoponus' formulation but also to the terminology we found in al-Rāzī's

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[35] Ikhwān al-Ṣafāʾ 2013: 355f.

[36] See Genequand's introduction in Alexander 2001: 23f.; Wakelnig 2014: 241; Kraemer 1986.

[37] Al-Sijistānī 1974c: 376.10–13; Kraemer 1986: §6.4.4, 292. The first definition can also be found at the beginning of another treatise by al-Sijistānī called *al-Maqāla fī anna l-ajrām al-ʿulwiyya dhawāt anfus nāṭiqa*, where it is explicitly interpreted as a cause that brings about motion (al-Sijistānī 1974a: 367.5f.; Kraemer 1986: §5.1.1, 278). The second definition is mentioned in a further treatise, *al-Qawl fī l-kamāl al-khāṣṣ bi-nawʿ al-insān*. Badawī's edition (al-Sijistānī 1974b) lacks the sentence but the edition published by M. Kügel-Türker has it. The wording is identical with what we have translated here, if one considers Kügel-Türker's n. 146 (al-Sijistānī 1969a: 221.22; Kraemer 1986: §7.4.3, 299). Another treatise attributed to al-Sijistānī only in part, *Kalām fī mabādiʾ al-mawjūdāt* contains both definitions (al-Sijistānī (?) 1969b: 269.6–11; Kraemer 1986: 173–77 and §8.4, 307).

[38] Philoponus 1887–1888: 197.30–198.1, trans. Lacey, modified.

quotation from Philoponus, as the phrase *tanfudhu fī l-ajsām* once again seems to go back to καταδεδυκυῖα διὰ τῶν σωμάτων. However, we are lacking a translation of διοικητική but with *fa-tuʿṭīhā l-takhalluq wa-l-taṣawwur* are given an apt Arabic rendering of διαπλαστική.

  The impression that we are dealing with Philoponus' definition of nature is supported by what we find in *al-Muqābasāt*, a work written by ʿAlī Abū Ḥayyān al-Tawḥīdī (d. 414/1023), al-Sijistānī's closest companion. There al-Tawḥīdī lists at least nine different meanings of the term *ṭabīʿa*, including the following two:

> Abū Sulaymān said in dictation: . . . With regard to the common natural inquiry (*bi-ḥasab al-naẓar al-ṭabīʿī l-ʿāmm*), which is characteristic for the natural philosopher, it [sc. nature] has the meaning which Aristotle defined as the principle of motion and rest (*mabdaʾ al-ḥaraka wa-l-sukūn*) for something in which it is primarily, by itself, and not by way of accident . . . with regard to philosophical inquiry (*bi-ḥasab al-naẓar al-falsafī*), the definition of nature is the meaning which is said that it is life (*ḥayāt*) which permeates through the bodies (*tanfudhu fī l-ajsām*) and so gives them shaping and formation (*fa-tuʿṭīhā l-takhalluq wa-l-taṣawwur*) through specific forms for each one of them, it is like (*ka-annahā*) a power which has descended from the first principle into all the things (*al-quwwa al-sāriya min al-mabdaʾ al-awwal ilā jamīʿ al-ashyāʾ*) which are capable of being affected by it and receptive for it.[39]

This passage conforms largely, both in wording and in content, to what we have found in al-Sijistānī's *al-Maqāla fī l-muḥarrik al-awwal*. Yet, it adds two significant details. First, it expands upon the second definition of nature as "life which permeates through (*tanfudhu fī*) the bodies" by saying that it is like (*ka-annahā*) "a power which has descended (*al-sāriya min . . . ilā*) from the first principle into all the things." These two descriptions very aptly capture the ambivalence encapsulated in the Greek term καταδεδυκυῖα, which we know from Philoponus' commentary.[40] In the Arabic testimonies, then, we find the same ambivalence that was already manifest in Philoponus' definition. Second, whereas in al-Sijistānī's second definition nature is described as a *power* (*quwwa*), here in al-Tawḥīdī's it is said to be *life* (*ḥayāt*) which is like a *power*. Thus, if we combine both testimonies from tenth-century Baghdād, nature clearly emerges as "a life or a power" (ζωὴ ἤτοι δύναμις), just as in Philoponus' original definition.

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[39] Al-Tawḥīdī 1992: §79, 284f.; Kraemer 1986: §2.1.4, 173. It should be noted that al-Tawḥīdī himself further subdivides Aristotle's definition into an active aspect of causing motion and rest, which he attributes to a thing's form, and a passive aspect of being in motion and being at rest attributed to matter.

[40] As we mentioned briefly above, the Greek participle can mean both "permeating through something" and "descending from something into something"; see n. 16.

A brief look into Ms. Marsh 539 from the Bodleian Library, Oxford, confirms this even further. This highly valuable manuscript is a systematically arranged collection of Arabic texts and fragments from various sources of the history of philosophy from antiquity up until the tenth century.[41] Although the author, or redactor, of this manuscript is unknown, it seems to have been produced by a companion of Miskawayh (d. 421/1030) who, again, was an associate of al-Sijistānī. In it, we are given five definitions of nature of which the first states that "nature is a principle of motion and rest (*mabdaʾ ḥaraka wa-sukūn*) in something in which it is as a first thing (*ʿalā l-amr al-awwal*), by itself and not by accident."[42] This definition, which is explicitly reported as Aristotle's, deviates from Isḥāq ibn Ḥunayn's translation more than those by al-Sijistānī and al-Tawḥīdī, in particular in its rendering of πρώτως as *ʿalā l-amr al-awwal*. It is followed by a quotation from Philoponus' commentary in which he explains that Aristotle used the word πρώτως in order to distinguish nature from soul, for only the former seems to qualify as a "first" or "primary" mover.[43] The manuscript, then, continues with a second definition that "nature is life (*ḥayāt*) which permeates through bodies (*tanfudhu fī l-ajsām*) and so effects in them shaping (*fa-tafʿalu fīhā l-takhalluq*)[44] and manages them (*wa-tudabbiruhā*); it is a principle of motion and rest (*wa-hiya mabdaʾ ḥaraka wa-sukūn*)."[45] Not only is this second definition preceded by material taken directly from Philoponus, it bears clear signs of Philoponus' influence and, in fact, is finally a version in which almost all important elements of Philoponus' redefinition of nature as given in his commentary on Aristotle's *Physics* come together: nature is said to be life (ζωή, *ḥayāt*) which permeates through bodies (καταδεδυκυῖα διὰ τῶν σωμάτων, *tanfudhu fī l-ajsām*), gives them shape (διαπλαστικὴ, *tafʿalu fīhā l-takhalluq*) and manages them (διοικητικὴ, *tudabbiruhā*). The version in Ms. Marsh 539 even reproduces the transition in Philoponus' commentary from his reworked definition to his repeated

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[41] The manuscript has recently been edited and translated in full by Wakelnig 2014.

[42] Wakelnig 2014: §70.   [43] See Wakelnig 2014: §70; Philoponus 1887–1888: 196.26–197.4.

[44] Even though the manuscript, as we are told by Wakelnig, often supplies dots and in the present case indicates a verbal prefix beginning with the letter *yāʾ* instead of *tāʾ*, we translate *fa-tafʿalu* as it brings out more clearly the active aspect that nature *brings about* shaping in the bodies. This aspect was apparent in al-Sijistānī's and al-Tawḥīdī's formulation *fa-tuʿṭīhā l-takhalluq wa-l-taṣawwur*. A translation in the passive sense (*fa-yufʿalu*) so that shaping *comes about* in the bodies, as Wakelnig proposes, is also possible and has the advantage of following the dots in the manuscript.

[45] Wakelnig 2014: §71.

citation of Aristotle's own words (. . . ἀρχὴ κινήσεως οὖσα καὶ ἠρεμίας . . . *wa-hiya mabdaʾ ḥaraka wa-sukūn*).[46] It is this last detail which tells us that the two definitions which we have found repeatedly accompanying each other were not regarded as standing in conflict or as being two mutually exclusive alternatives. Instead, both Aristotle's account and the account provided by Philoponus, who once more is not mentioned by name, complement each other. Philoponus merely spells out things in a more robust metaphysical vein and not only "with regard to natural inquiry" as Aristotle had done. Nature as defined by Philoponus is a governing principle that acts through the natural bodies and operates throughout the universe. Of course, it is a principle of motion, but in its substance, i.e. as an answer to the question "what is it" (τί ἐστιν), it is a pervading and all-encompassing, somewhat divine force – a ruler, who "resides in" the world's body, who is "not separate" from it, and who "rules and governs it, and preserves its arrangement and order," as Alexander put it and as the Stoics would certainly have agreed.

Thus, the evidence points in one direction only. The prevalent understanding of the concept of nature in tenth century Baghdād is the one which was formulated by Philoponus as a critical and Neoplatonic enhancement of Aristotle's definition presumably on the basis of an idea that, as far as we know, was first expressed in Alexander but which may ultimately go back to the Stoic theory of an all-pervading πνεῦμα as the operative principle within the natural world. This concept of nature is not viewed as contrary to Aristotle's original definition of nature as a principle of motion, and the critical remarks in Philoponus' commentary are entirely absent from the Arabic sources we have so far examined. In effect, the tradition followed Philoponus in deciding how the ambiguity between *Physics* II.1 and VIII.4 ought to be read: Aristotle's nature is an active principle of moving, not of being moved, i.e. it is a power for producing, not a capacity for suffering, motion.

It is not surprising to see Aristotle's definition prominently reappearing in various works throughout the centuries. However, what is striking is the centrality of Philoponus' contribution to it. We thus have to ask why his account was so well received in the pre-Avicennian era of Arabic philosophy and why it was regarded not as opposing but as complementing its Aristotelian predecessor. There are at least two related answers to these questions. First, figures like al-Sijistānī and Miskawayh are part of a

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[46] Philoponus 1887–1888: 197.35–198.1. Only the explicit designation of nature as a "power" (δύναμις) is absent from Ms. Marsh 539.

tradition which could reasonably be called "Neoplatonic." They regarded the cosmos as a hierarchically structured reality having its ultimate origin in the One God. The universe, and indeed its coming-to-be, is characterized by a continuous descent from its topmost principle to the material and physical world below. Within this scheme, nature has its proper place as the lowest of the higher principles. Situated below intellect and soul, nature functions as a mediator between *there* and *here*, i.e. between the divine realm and the material world, governing the latter in accordance with the former. In this respect it shares certain features of what shall later, in Avicenna's philosophy, become the Giver of Forms, albeit, of course, fundamentally differing from it by being a principle that permeates the bodies of the world rather than being outside it as an immaterial Active Intellect. In their Neoplatonism, al-Sijistānī and his associates exhibit a strong influence from the circle of al-Kindī. While al-Kindī himself was held in high esteem as a philosopher, the translations and works produced in his circle, like the Plotinian *Theology of Aristotle*, were a particularly important source for al-Sijistānī.[47]

Second, philosophers from Baghdād developed their Neoplatonism in critical opposition to the *mutakallimūn* of their times, whose own accounts of the universe and its creation did not rely on an emanative scheme or a plurality of powers and active principles. For a *mutakallim*, there is no place for an operative nature within the world as the world, being a direct creation of God, also receives its causality directly from God.[48] Since the Aristotelian notion of nature in its Greek original wording was indistinct enough so as to be interpreted as both active and passive, one could read the Aristotelian nature as a passive disposition being essentially in need of a divine enactor. In principle, this interpretation of Aristotle's account was compatible with the God of *kalām*. Contrary to this reading, the philosophers in al-Sijistānī's circle regarded the descriptions of nature as a permeating force that governs the world and operates through the bodies, which they found in the writings of Alexander and Philoponus, as a convenient enhancement of the Aristotelian nature as it disambiguated the notion so as to make nature an active principle.[49] Not only did this

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[47] See Adamson 2007a and Kraemer 1986.   [48] See Genequand 1984: 121; McGinnis 2011: 72–76.

[49] As already noted, the versions of Aristotle's definition of nature provided by al-Sijistānī and al-Tawḥīdī seem to go back to Isḥāq ibn Ḥunayn's translation of the *Physics*. However, whereas Isḥāq had accurately translated the medio-passive form κινεῖσθαι by the similarly intransitive or reflexive *yataḥarraku*, thus suggesting a passive reading, the Baghdād philosophers replaced this verb form with the simple noun *ḥaraka*, thereby concealing the passive undertone of Aristotle's original. This remains a noteworthy detail, even though we already found *ḥaraka* instead of *yataḥarraku* in al-Kindī, who may not have used Isḥāq's translation.

active reading conform to their Neoplatonic preconceptions, it also allowed al-Sijistānī and his followers to effectively maintain their oppositional stance toward the *mutakallimūn*.

III   Nature in Avicenna's *al-Shifāʾ*

So far, we have seen a continuous line of understanding nature as a principle of motion or, in other words, as a power which permeates the natural bodies and governs their behavior like a soul. Both descriptions are conceived as being in perfect harmony, spelling out the same idea merely from different perspectives. The exception that proves the rule here is Abū Bakr al-Rāzī who criticized this view precisely in order to emphasize that he regards himself as not being part of this unanimous tradition. Avicenna was aware of the great consensus of his predecessors, but he was also very unimpressed by it. In fact, he regarded their view as mistaken and in critical engagement with Philoponus argued that his predecessor's interpretation is not only void and empty (*bāṭil*) but also wrong and corrupt (*fāsid*).

Avicenna writes in chapter 1.5 of *al-Samāʿ al-ṭabīʿī*, the section on physics within his *Kitāb al-Shifāʾ*, that "nature has been defined as a first principle for the motion (*mabdaʾ awwal li-ḥaraka*) of that in which it is and for [that thing's] rest, by itself and not by accident" (*bi-l-dhāt lā bi-l-ʿaraḍ*).[50] This definition of nature apparently goes back to Aristotle. The fact that it is introduced by the words "has been defined as" (*qad ḥuddat bi-annahā*), together with the later declaration that the definition was "taken from the First Master" (*maʾkhūdh ʿan al-imām al-awwal*), suggests that he provides a quotation from Aristotle. Yet, it is equally clear that his wording does not follow Isḥāq ibn Ḥunayn's translation of the *Physics*. Accordingly, Avicenna is either quoting from another translation, or just paraphrasing or quoting from memory, in which case we ought not to take *maʾkhūdh* and *ḥuddat* literally. In any case, Avicenna signals his approval, but he also mentions that "one [or: some] who came afterwards (*baʿḍ man warada min baʿd*) found this description inadequate and decided to add to it, claiming that it indicated (*yadullu ʿalā*) only nature's activity (*fiʿl al-ṭabīʿa*), not its substance (*jawharihā*), since it indicates only its relation to what proceeds from it."[51]

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[50] Avicenna 2009: 1.5.5.   [51] Ibid. trans. modified.

While the noun *baʿḍ* may be used to refer to both "one person" as well as "some people," the remainder of this passage very clearly focuses on Philoponus alone in that it accurately outlines his general criticism that Aristotle's definition merely pointed out the "the activity of nature" (τῆς ἐνεργείας τῆς φύσεως) but failed to be "indicative" (ἔστι . . . σημαντικός) of "its substance" (τῆς οὐσίας αὐτῆς).[52] In fact, Avicenna's Arabic report conforms largely to the Greek of Philoponus' commentary for *fiʿl al-ṭabīʿa* would be an able rendering of τῆς ἐνεργείας τῆς φύσεως, the verb *yadullu ʿalā* would be a corresponding fit for σημαντικός ἔστι, and *jawharihā* would even reproduce the pronoun of τῆς οὐσίας αὐτῆς. Avicenna tells us that in order to remedy this severe defect within Aristotle's definition, this critic (or these critics) recommended enhancing Aristotle's words with the characterization that "nature is a power (*quwwa*) which permeates through the bodies (*sāriya fī l-ajsām*) and which gives the forms and shapes (*tufīdu l-ṣuwar wa-l-khilaq*); it is a principle of . . . and so forth."[53]

Here again, Avicenna's Arabic matches Philoponus' Greek as *quwwa* has long been the standard term to translate δύναμις, *sāriya fī l-ajsām* would be very literal for καταδεδυκυῖα διὰ τῶν σωμάτων, and *tufīdu l-ṣuwar wa-l-khilaq* could be a slightly verbose but exact rendering for διαπλαστικὴ.[54] Although the terminology employed in Avicenna's *al-Samāʿ al-ṭabīʿī* for both Philoponus' and Aristotle's attempt to define nature differs from the sources we have looked at above, Avicenna gives us the impression that he is working directly from an Arabic copy of Philoponus' commentary on the second book of the *Physics*, the only one which we know to have been produced being the one by Qusṭā ibn Lūqā (d. 300/912).[55] So far, then, it seems to be a fair assumption to regard Philoponus as the sole referent of the "*one* who came afterwards" (*baʿḍ man warada min baʿḍ*).

In his critical analysis, Avicenna breaks down Philoponus' formulation of the essence of nature into the following aspects: nature is (i) a power

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[52] See p. 123 above.   [53] Avicenna 2009: 1.5.5.

[54] The only missing element in Avicenna's version is an explicit equivalent for Philoponus' διοικητικὴ like the "governing power" (*al-mudabbira*) we found in al-Kindī or the related verb *tudabbiru* in al-Rāzī. Maybe Avicenna regarded it as already entailed in the formative function of διαπλαστικὴ, as may be suggested by his overall reductive reading of Philoponus and Aristotle.

[55] This, however, raises a serious question about the source for all the other presumed quotes from Philoponus, which we found in al-Kindī, al-Rāzī, and the members of the circle around al-Sijistānī. What we are told by the few sources we have is that Qusṭā ibn Lūqā translated Aristotle's *Physics* together with Philoponus' commentary to Books I–IV and Alexander's to Books IV–V and VII, and that before him Ibn Nāʿima al-Ḥimṣī, a member of al-Kindī's circle, had already translated the *Physics* together with Philoponus on Books V–VIII (see Peters 1968b: 30); see n. 49.

(δύναμις, *quwwa*) which (ii) permeates through the bodies (καταδεδυκυῖα διὰ τῶν σωμάτων, *sāriya fī l-ajsām*), (iii) provides forms and shapes (διαπλαστικὴ, *tufīdu l-ṣuwar wa-l-khilaq*), and (iv) preserves these shapes (φυλάξῃ ἐν τῷ εἴδει, *ḥifẓ al-khilaq wa-l-ashkāl*).[56] In a next step, Avicenna compares these four features with his own understanding of Aristotle's definition of nature as (1) a principle for motion which (2) is in something and which (3) causes motion as well as (4) rest. Mapping the four aspects of Philoponus' redefinition onto those of Aristotle's original definition, Avicenna declares that "the meaning of (i) 'power' is nothing but (1) 'principle of producing motion that is in something' and the meaning of (ii) 'permeating' is nothing but (2) 'being in something.' Also, the meaning of (iii) 'giving form and shape' is already included in (3) 'producing motion' and the meaning of (iv) 'preservation of forms and shapes' is already included in (4) 'producing rest.'"[57] Apparently, Avicenna's point is that Philoponus' efforts in improving upon the definition of nature were done in vain, for he simply restated in his own terminology what Aristotle had already said.[58]

At this point, however, we need to ask ourselves the following: Since we have seen above precisely how much Philoponus reinterpreted Aristotle's definition so that what Avicenna regards as a simple rewording has in fact been a thorough Neoplatonic *reworking*, how, then, could Avicenna claim that Philoponus' account is in essence identical to Aristotle's definition? Is this not a major misinterpretation of the gist of Philoponus' remarks on behalf of Avicenna? There seem to be two answers to this question. The first is that Avicenna often tries to reduce notions and concepts to their bare and simple meaning. This is particularly evident in his discussions of matter and form as principles of natural things in an earlier chapter of his *al-Samāʿ al-ṭabīʿī*. Matter, he says there, is simply that which is "capable of acquiring some other factor" and form nothing but "a disposition that has been acquired."[59] In the present context, Avicenna continues this deflationary strategy by puncturing the concepts and terms Philoponus had employed. First, he

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[56] We have only briefly mentioned this fourth feature of preserving the forms above as it is not part of the actual definition which Philoponus provided (see n. 30). It nonetheless emerges in the course of his commentary as one of the major tasks of nature (Philoponus 1887–88: 196.13–15); see Avicenna 2009: 1.5.7.

[57] Avicenna 2009: 1.5.7, trans. modified.

[58] In his *Kitāb al-Ḥudūd*, Avicenna also criticizes Philoponus' definition on the grounds that it is circular and repetitive, because it amounts to saying that "nature is a principle of change which is a principle of change – and this is nonsense" (Avicenna 1963: §36).

[59] Avicenna 2009: 1.3.10, trans. McGinnis.

reduces all the central terms of Philoponus' developed account of nature to a simple meaning and then, identifies them with features already present in Aristotle's definition. On Avicenna's reading, not much remains of Philoponus' proposal to view nature as an invigorated force which, full of life, permeates and governs natural beings.

Moreover, when Avicenna concludes that Philoponus merely restated what Aristotle had originally said, he did not misunderstand Philoponus' argument – what he did misunderstand, however, is the Aristotelian notion, for Avicenna, too, regards Aristotle's nature as a principle not of suffering but of causing motion. In his comments on the Aristotelian definition, Avicenna explains that the meaning of "principle for the motion" (*mabdaʾ li-l-ḥaraka*) is that it is an "efficient principle (*al-mabdaʾ al-fāʿilī*) from which proceeds the production of motion" (*yaṣduru ʿanhu l-taḥrīk*).⁶⁰ In a similar way Avicenna introduced the discussion of nature at the end of *al-Samāʿ al-ṭabīʿī* I.3 by saying that he now intends to tackle "the efficient principle common to natural things (*al-mabdaʾ al-fāʿilī l-mushtarak li-l-ṭabīʿiyyāt*) – and this is nature."⁶¹ The idea of nature as a source of *being* moved, which is particularly vital for Aristotle's argument in *Physics* VIII.4, is entirely absent throughout Avicenna's analysis. Instead, he employs causative and transitive terminology when he explains that "nature causes motion (*tuḥarriku*) through itself (*li-dhātihā*) whenever it is in a situation to cause motion (*taḥrīk*) and not due to a forceful compulsion" (*lā ʿan taskhīr qāsir*).⁶² This passage is part of Avicenna's comment on why Aristotle has said that nature is a principle for motion and rest "by itself and not by accident" (*bi-l-dhāt lā bi-l-ʿaraḍ*). Avicenna remarks that, in the absence of all obstacles, it is impossible for nature not to produce motion. So, nature must bring about motion, whenever there is nothing else interfering or hindering nature's unfolding. This, he claims, is the meaning of "by itself." In the just quoted passage, Avicenna subtly develops the Aristotelian requirement "by itself" (*καθʾ αὐτὸ, bi-dhāt*) into the more straightforward claim that it is "*through* itself" (*li-dhātihā*) that nature brings about motion (*tuḥarriku* and *taḥrīk*). An account such as the one put forward by Philoponus certainly appears as void and empty for anyone who, like Avicenna, already attributes to Aristotle the view that nature is an active principle of moving something and not a passive principle of being moved – even more so if one, again like Avicenna, is also ready to apply a deflationary reading to Philoponus' Neoplatonic definition.

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⁶⁰ Ibid. 1.5.6, trans. modified.   ⁶¹ Ibid. 1.3.12, trans. modified.   ⁶² Ibid. 1.5.6.

There is a second answer to the question, which will explain why Avicenna does not only regard Philoponus' exposition as void (*bāṭil*) but also disagrees with him on a philosophical level and rejects his conception as corrupt (*fāsid*). For Avicenna, Philoponus' intention in redefining nature was to make it an "active power." Avicenna claims that "the power he made so as to be the genus in the description of nature is the active power (*al-quwwa al-fāʿila*) and if it is defined, then it is defined as 'principle of motion from another in another insofar as it is another.'"[63] The definition of an active power (δύναμις τοῦ ποιεῖν, *al-quwwa al-fāʿila*) which Avicenna provides here is derived from Aristotle's *Metaphysics* Θ. There, Aristotle discussed the notion δύναμις and defined it generally as a principle of change (ἀρχὴ μεταβολῆς). He draws two further distinctions, one between a power of acting (δύναμις τοῦ ποιεῖν) and a power of suffering or being acted upon (πάσχειν),[64] and another between "a principle of change in another thing or in the thing itself regarded as other" (ἀρχὴ μεταβλητικὴ ἐν ἄλλῳ ἢ ᾗ ἄλλο), which Aristotle calls δύναμις, and "a principle of motion not, however, in something else but in the thing itself *qua* itself" (ἀρχὴ γὰρ κινητική, ἀλλ᾽ οὐκ ἐν ἄλλῳ ἀλλ᾽ ἐν αὐτῷ ᾗ αὐτό), which he calls φύσις.[65]

With this background in mind, we can understand Avicenna's remark more fully. Avicenna takes Philoponus to have consciously turned nature into a power in the sense of δύναμις as developed in *Metaphysics* Θ.8, i.e. into a power that is an active principle of change "in another." Such a reading takes nature as the world's efficient principle, acting on it like a soul manages an animal's body, while remaining separate enough to be a distinct principle. It must be said that Avicenna's reading is plausible, for nature indeed serves as an all-pervading, semi-divine, ruling principle in both the Stoic and the Neoplatonic account, and in Alexander as well as in al-Sijistānī and his colleagues. In Philoponus, we also perceive a tendency to reify nature as a governing entity (*dhāt*) which permeates the universe through and through governing the bodies like a soul, molding them like a ruler or a steersman, while at the same time enjoying an existence somewhat independent (*ghayr muḍāfa*) from

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[63] Ibid. 1.5.7, trans. modified.

[64] *Met.* Θ.1, 1046a19–29. Recall that Aristotle had defined nature as a principle of motion (κινήσεως ἀρχὴν) not of moving something or of producing [motion], but of suffering it (οὐ τοῦ κινεῖν οὐδὲ τοῦ ποιεῖν, ἀλλὰ τοῦ πάσχειν) in *Physics* VIII.4, 255b29–256a3.

[65] *Met.* Θ.8, 1049b5–10, trans. Ross, modified; see *Met.* Θ.1, 1046a11, and also Λ.3, 1070a7f. Avicenna is well aware of *Metaphysics* Θ as has been shown by Bertolacci 2006: 355f.

the material world.[66] This is what Avicenna thinks Philoponus intended to indicate when he modified Aristotle's definition by means of the term "power." For Avicenna, then, Philoponus deliberately chose the word "power," because he "reckoned that when he used 'power,' he had indicated a certain entity (*dhāt*) that is not related to a thing" (*ghayr muḍāfa ilā shayʾ*).[67]

What is more, Avicenna was well aware that some of his contemporaries endorsed such an understanding of nature, in particular some figures from the philosophical circles in Baghdād with whom he already pursued a rivalry, i.e. philosophers such as Miskawayh, al-Tawḥīdī, and al-Sijistānī.[68] With his criticism, Avicenna intended to put an end to a long-lasting tradition of aligning soul and nature. What he regarded as a perverse view of the actual relation between natural powers and efficient principles, such as soul and nature, was nonetheless, one of the most widespread and powerful accounts of his day. When Avicenna saw it epitomized in Philoponus' commentary on the *Physics* of Aristotle, he did what actually is quite unusual for him: he provided a literal commentary on Aristotle's and on Philoponus' definition in order to rebut the latter, restore the former, and put an end to the contemporary nonsense of "*some* who came afterwards" (*baʿḍ man warada min baʿd*), with Philoponus being the primary exponent.

This brings us now to Avicenna's own approach to defining nature. Within his comments on the Aristotelian qualification that nature is a first or primary (πρώτως, *awwal*) principle of motion, Avicenna had already started to severely criticize Philoponus' understanding of the relation between soul and nature. He agrees with him that the qualification "first" served Aristotle as a tool for differentiating a principle of motion, which may be soul, from a *first* principle of motion, which is only nature, for only nature is capable of bringing about all kinds of motion "proximately and without an intermediate" (προσεχῶς, *qarīb lā bi-tawassuṭ*).[69] This agreement in matters of how Aristotle's text ought to be read notwithstanding, it is here that Avicenna finally abandons traditional approaches to delineating the relation between various kinds of natural powers, movers, and efficient principles in order to formulate

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[66] All these are aspects we could already recognize in Alexander's *al-Qawl fī mabādiʾ al-kull*. For a position arguing that Philoponus "reifies" nature, see Macierowski and Hassing 1988: 82 and 86.
[67] Avicenna 2009: 1.5.7, trans. modified.
[68] See Reisman 2002: 166–185 and 2013: 14–19; Brown 1972.
[69] See Philoponus 1887–1888: 196.32f.; Avicenna 2009: 1.5.6.

his own philosophy. He is convinced that an adequate classification of these cannot be accomplished by simply drawing a contrast between soul and nature, as in Aristotle, or between rational (ἡ λογικὴ ψυχή), non-rational (τῆς ἀλόγου), and non-psychological, i.e. natural, faculties (τὴν φύσιν), as in Philoponus.[70] Instead, Avicenna claims that a successful and systematic division can only be obtained by means of differentiating between voluntary and involuntary as well as between uniform and manifold motions. To that end, Avicenna defines nature as "an internal power which brings about motion and change, and from which the act proceeds in a single manner without volition" (*quwwa tuḥarriku wa-tughayyiru wa-yaṣduru ʿanhā l-fiʿl ʿalā nahj wāḥid min ghayr irāda*).[71] This is how Avicenna himself defines nature and how he prefers to speak about it in all his major works. The nature of a stone always acts the same in that it tries to make the stone rest at its natural place, and it does so essentially and without volition.[72] In contrast to this, Avicenna defines the celestial soul also as a power from which the act proceeds in a single manner but this time "with volition" (*maʿa irāda*), because the heavenly souls likewise bring about only one single effect, which is their eternal and circular motion, yet they do so voluntarily as they seek the First Good and desire to imitate its perfection.[73] The vegetative soul of plants is a power which produces many dissimilar effects always acting without volition (*quwwa mutafannina al-taḥrīk wa-l-fiʿl min ghayr irāda*), and the animal soul is just like that but with volition.[74] The soul of plants makes the roots grow downwards and the branches grow upwards, but it does not do so voluntarily, whereas an animal may turn left or right and does so voluntarily.

Since in many of his works, Avicenna provides both definitions, his own and that of Aristotle, we get the impression that he does not want to

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[70] See Philoponus 1887–1888: 196.28–30.

[71] Avicenna 2009: I.5.3, trans. modified. Despite his severe criticism of Philoponus, Avicenna employs the term "power" (*quwwa*) in order to define nature. The core of Avicenna's critique is that Philoponus employs the term in the precise sense of *Metaphysics* Θ as 'a principle of change in another or in something as other' and thereby turns nature into a single universal entity exerting its influence from an exalted position. However, for Avicenna, nature is a particular power that resides in and belongs to each and every body individually. In this regard, Avicenna is much more faithful to his Aristotelian convictions than to his Neoplatonic leanings.

[72] Nature does not only effect local motion but is the principle for all kinds of motion, i.e. local motion, qualitative change, growth, and generation. Apart from a falling stone, another frequent example for illustrating the efficacy of nature is that of water which having been heated up, cools down by itself.

[73] Avicenna discusses and demonstrates this at length in Avicenna 2005: IX.2.

[74] Avicenna 2009: I.5.3.

replace Aristotle's definition with his own account but rather regards both as coextensive and complementary. Yet, there is one aspect in which Avicenna deems Aristotle's definition as ambiguous. This aspect, once again, concerns the Aristotelian qualification which makes nature a *first* principle of motion. Avicenna believes that the faculty of soul which brings about local motion does so directly and without any intermediary. In other words, the motive faculty of soul is a first principle of motion, just as nature is. So, even in Aristotle we have an unclear distinction between soul and nature. However, we have seen that it was one of Avicenna's main objectives to correct the preceding philosophical tradition exactly on this point and to finally provide an account which sufficiently keeps apart the respective definitions of nature and soul. Therefore, he was not content with attacking Philoponus' emendation of Aristotle's definition and with defending the latter as it stands but, moreover, also saw the need for a new definition of nature which does not fall prey to the very same mistake.

We shall conclude our current investigation here with Avicenna, who stands as an exceptional figure in the history of philosophy. He inherits a philosophical tradition which, above all, was characterized by a common and relatively unanimously accepted view about what nature is and how its essence ought to be described. This view was essentially an amalgamation of, on the one hand, the canonical definition well known from Aristotle and, on the other, Philoponus' reformulation, which made the idea of nature as a principle of motion for various reasons even more accessible to certain philosophical currents in the pre-Avicennian era of Arabic philosophy. Avicenna stands to this tradition as the eye of a needle. He absorbs it virtually in its entirety, studies its details and implications, and formulates what he regards to be a clearer version of what he had received. That is not to say that the exploration of the concept of nature or the tradition of commenting on Aristotle's definition came to an end with Avicenna. In the writings of Ibn Bājja (d. 533/1139) and Averroes (d. 595/1198), the western part of the Islamic world witnessed a revival or rather continuation of the commentary enterprise.[75] To what extent the philosophers and theologians of the East reworked and reformulated Avicenna's definition and understanding of nature will have to be a subject for future investigation. We will have to see how thinkers who were often critical toward many aspects of Avicenna's philosophy, like

[75] See Lettinck 1994.

Abū l-Barakāt al-Baghdādī (d. 560/1164–1165) and Fakhr al-Dīn al-Rāzī (d. 606/1210), read Avicenna's definition of nature and we will likewise have to see how his ideas were integrated – if at all – into the framework of later theological discussion among *mutakallimūn*. However, this would be study more fitting for a volume on the later reception of Avicenna rather than the Arabic reception of Aristotle.

Avicenna on self-cognition and self-awareness

Ahmed Alwishah

The concepts of self-awareness (*al-shuʿūr bi-l-dhāt/nafs*) and self-cognition (*taʿaqqul al-dhāt/nafs*) are fundamental to the writings of Avicenna's psychology. Perhaps Avicenna was the first in the history of philosophy to distinguish between these two states of self-knowledge. In this chapter, I will show how Avicenna departs from Aristotle's theory of self-knowledge by presenting an important distinction between self-cognition and self-awareness. With this distinction, Avicenna demonstrates how the limitation of self-cognition in affirming the individuation and essentiality of self-knowledge can be overcome by postulating the state of self-awareness. Unlike self-cognition, self-awareness is identified with (a) a direct access to the identity and the individuation of the self, (b) an essential sameness between the self and its object, and (c) a continuous state – for to be a self is to be aware of itself. I will show that while self-awareness and self-cognition represent different states, they are connected through the epistemic moments of reflexive attention and an awareness of awareness to provide a broader understanding of self-knowledge. Finally, while Aristotle and Avicenna disagree on applying the key attributes of self-awareness to the human rational soul, they agree on applying them to the divine intellect. However, I will show that Avicenna's characterization of the object of divine self-thinking is substantially different from Aristotle's account. Avicenna's view of the distinction and the relation between self-awareness and self-cognition provides both a critical understanding and a necessary assessment of the complexity of human self-knowledge.

I   The distinction between self-cognition and self-awareness

At the outset it is important to sketch Aristotle's view of self-knowledge and to see how it is essentially distinguished from Avicenna's notions of self-cognition and self-awareness. In *De Anima* III. 4, Aristotle asserts

that the intellect is possible until it thinks. This sense of possibility is different from the possibility that precedes "the acquisition of knowledge by learning or discovery" (*De Anima* III. 4, 429b8–9)[1] it is the possibility to think itself. Aristotle offers two reasons why the intellect thinks itself and why the intellect is the same as its object. First, the object of the thought is immaterial, "thought is itself thinkable in exactly the same way as its objects are. For in the case of objects which involve no matter, what thinks and what is thought are identical" (*De Anima* III.4, 430a3–5). Aristotle makes it clear that there are two kinds of objects of thought; one "with matter" and other "without matter," and only the latter is the object of self-thinking. That is to say when the intellect becomes an object of its thinking and given that this object is immaterial, the intellect becomes one with it. Second, the intellect "shares the nature of the object of thought" (*Metaphysics* XII.7, 1072b20). The intellect grasps itself as an object of thought and thus thinks itself.[2] But does the intellect always think itself? For Aristotle, the answer to this question is contingent upon whether we are speaking of the passive or active intellect. In *De Anima* III.4, 430a5, Aristotle claims that the intellect which lacks actuality is not always thinking. In contrast, at *De Anima* III.5, 430a20–25, Aristotle judges the active intellect which is immortal to be always in the state of thinking.

   Many points can be derived from Aristotle's remarks on self-knowledge, but in relation to the scope of this study, one can deduce three key principles:

A.   When the intellect thinks of an object, the intellect thinks itself.
B.   If the object of the intellect is immaterial, the intellect and its object are one and the same.
C.   The intellect (with the exception of the active intellect) is not always thinking itself.

Throughout his corpus, Avicenna endorses these three principles of Aristotle's notion of self-thinking. With respect to (A), Avicenna upholds that "if the intellect is cognizing something else, it must cognize itself."[3] Following Aristotle, Avicenna affirms that in cognizing an object the intellect must cognize itself. Like many previous philosophers, Avicenna

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[1] *De Anima* III.4, 430a3–5. All translations of Aristotle's works are taken from Aristotle 1984b.
[2] Oehler 1974 rightfully interprets this claim as "*nous* knows itself by means of its participation in the nature of its object. The nature of its object is to be knowable. When *nous* participates in it, it assumes the nature of its object, which thereby becomes common to both" (499).
[3] Avicenna 1992: §300, 121. Unless otherwise indicated, all translations from Arabic are my own.

affirms (B). Avicenna's *al-Ishārāt* explicitly states that "that which in itself is denuded from material attachments . . . cognizes itself."[4] With regard to (C), Avicenna's *al-Mubāḥathāt* also insists that "my intellect does not always cognize itself but my self is always aware of its existents. For if my self cognizes in actuality something other than itself, it is always aware that it is cognizing as long as it is cognizing."[5] While he affirms these three points, Avicenna (as we will show) recognizes that Aristotle's notion of self-thinking presents one aspect of self-knowledge and fails to address the other aspect of self-knowledge, i.e. self-awareness.

In what follows, I will show that two problems lead Avicenna to distinguish between self-awareness and self-cognition. One is related to the individuation of self-cognition and the other is linked to the relation between the intellect and the other internal faculties. But before we examine these two problems in detail, it is important to mention that Avicenna paves the way for this distinction by explaining the difference between the term "awareness" (*shuʿūr*) and the term "cognition" (*taʿaqqul*). Unlike "awareness," "cognition" requires the presence (*istiḥḍār*) of an object (an intelligible or intelligible form) in the intellect.[6] That is to say, to cognize X, X must be present as an intelligible form or concept in the intellect, whereas being aware of X requires the presence of neither in the self. Awareness is a precognitive stage that is intrinsic to the existence of the self.[7]

II Self-cognition and the problem of individuation

In *al-Mubāḥathāt*, Avicenna's disciple, Bahmanyār, presents Avicenna with the question of how one can cognize his self and whether it is possible to attain self-cognition within an individual self?[8] On the one hand, self-cognition requires an intelligible, but based on Aristotle's view in *Posterior Analytics* 1.31, intelligibles must be universals – since universals are the proper objects of our understanding. With these assumptions in mind, Bahmanyār claims:[9]

1. To cognize something is to have it as an abstract intelligible.
2. Intelligibles are universals concepts.
3. The cognition of my self is merely a cognition of an abstract universal intelligible of the self.

[4] Avicenna 1957–1960, 1971: ii, 371.   [5] Avicenna 1992: §550, 185–186.
[6] Avicenna 1992: §239, 107–108.   [7] See Alwishah 2006: 62, 85.   [8] Avicenna 1992: §282, 118.
[9] Ibid.

4. But an abstract universal intelligible of the self is different from my individual self.
5. Hence, my self-cognition fails to cognize my individual self.

Bahmanyār's argument rests on the assumption that like any form of cognition, self-cognition must have a universal object and hence its grasp of the self is a grasp of the universal object of the self and not the individual self. A similar argument can be stated against Aristotle's principle (B). For if (B) is true and the object of the intellect is universal, then the intellect is not thinking of an individual intellect. Avicenna is primarily concerned with the individual self more than the individual intellect and thus directs his response to Bahmanyār's challenge by proposing the following, "If one does not call the awareness of my self a 'cognition' – for 'cognition' signifies the universal abstract type of awareness – then one may state that my awareness of my self is not a cognition and that I am not cognizing my self."[10]

Self-cognition has no direct access to the individual self and this type of directness is constrained only to self-awareness. Avicenna's proposal focuses the debate upon which part of the human soul is responsible for self-awareness and in which sense it is different from the intellect. As Bahmanyār claims, given that my intellect is like "the faculty in me which is aware of my individual self" (*al-quwwa allatī tashʿur minī bi-dhātī al-juzʾī*), and it is immaterial – and needs no intermediary in cognizing itself, then why cannot it cognize my individual self?[11] For Avicenna it is not clear that these share similar attributes. While Avicenna consistently affirms the attribute of immateriality to the intellect, he is unwilling to ascribe the attribute of "immediacy to an individual self" to the intellect. For the first time throughout his writings, Avicenna acknowledges that the cognitive faculty of intellect is different from "the faculty in me which is aware of the totality of the self." He identifies the latter to be the "rational soul" (*al-nafs al-nāṭiqa*).[12]

But what is unique about the rational soul and why cannot it be taken merely as an intellect? An examination of Avicenna's remarks on the rational soul reveals that it signifies different attributes of the human soul and in addition to being a cognitive faculty, it is endowed with the ability of being aware of its existence. In *ʿUyūn al-ḥikma*, Avicenna distinguishes the rational soul according to three attributes and each is defined by the degree of its participation with a given body.[13]

[10] Ibid. §283, 118.   [11] Ibid. §286, 119.   [12] Ibid. §287, 119.   [13] Avicenna 1996: 80.

(a) An attribute that relates to the activity of awareness; this activity is "produced solely by the rational soul itself without the participation of the body."[14]

(b) An attribute that relates to the activities produced by the rational soul with the participation of the body and its faculties, such as cognition (*taʿaqqul*), observation (*ruʾya*) of particular objects, and ethical judgments.

(c) An attribute that relates to the activities that are taking place in the body with the participation of the rational soul such as laughter, crying, shyness, and compassion.

Clearly, Avicenna treats the part of the soul pertaining to awareness distinctively from that which concerns cognition. Every act of cognition must be included within this primitive awareness but it is not necessary that the cognition of one's awareness must be cognized by the intellect. In *al-Risāla al-aḍḥawiyya*, Avicenna claims that "the rational soul cognizes its faculty (intellect) and itself; and it cognizes that it is cognizing and there is no intermediary between it and its faculty nor between itself and that it is cognizing another faculty."[15] In contrast to Aristotle, there is an attribute in the rational soul that is aware of every activity occurring in the soul or with the participation of the body and such an attribute is aware of the existence of the soul regardless of whether the cognitive faculty thinks itself or an object or is not thinking at all.[16]

The root of the disagreement between Avicenna and Aristotle lies in their different views of what constitutes the earliest stage of the rational soul. For Aristotle, as we saw earlier, the passive intellect thinks itself only when it thinks of an object. He identifies the passive intellect to be that (a) "which can have no nature of its own, other than that of having a certain capacity," and (b) it "is, before it thinks, not actually any real thing" (*De Anima* III.4, 429a21–24). In his commentary on *De Anima*, Alexander characterizes the material (passive) intellect to be that "which

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[14] Ibid. [15] Avicenna 1969b: 175.

[16] In *al-Risāla al-aḍḥawiyya*, Avicenna identifies "that which is aware of the individual self" to be a specific aspect of the soul in which he refers to as *anniyya* (ibid. 13). In the second version of the "floating man" and its relevant passages, he uses *anniyya* to mean something representing the identity and the core of what it is to be a human. Avicenna defines what he calls the persisting (*al-thābita*) *anniyya* by "that which if it is assumed to be existing and the other things which pertain to a human are assumed to be annihilated, then the core (*al-ḥāṣil*) and identity (*al-huwiyya*) of being a human continues to exist" (ibid.). The term *anniyya* denotes a specific aspect of the rational soul, namely that which represents the identity and the continuous mode of awareness of one's existence. See Alwishah 2006: 45.

is not yet thinking, but has the potentiality to come to be like this" and that "it is without qualification a potentiality for an actuality... capable of receiving forms and thoughts."[17] For Alexander, the passive intellect (*nous pathētikos*) is not an extant thing, but rather a disposition to perceive the intelligible forms. Avicenna takes Alexander to be interpreting (b) "the intellect before it thinks is nothing."[18] In his book *al-Taʿlīqāt ʿalā ḥawāshī kitāb al-Nafs*, Avicenna shares Theophrastus' concern that to think of the intellect as nothing before it thinks leads to absurdity, namely that: (a) if the intellect does not think, (b) then it is nothing and (c) if that is true, then when the intellect thinks another thing, "It (the intellect) will be another thing and not itself."[19]

In Avicenna's view, when Aristotle states that this faculty "'is not a thing like anything,' he does not mean that the rational soul has neither essential existence nor actual existence."[20] Rather, that which has no essential existence lacks the potentiality to be and to be actual.[21] Having established this claim, Avicenna takes (b) to mean first that the passive intellect is nothing like any of its acquired intelligible forms by referring to Aristotle's idea that in order for the intellect to think of all the forms it must be nothing definite, and "nothing definite" does not in itself mean a thing. Second, at this early stage, the intellect lacks activity, for it is not acting upon any of its intelligible forms (*ṣuwar al-maʿqūlāt*).[22] Beyond its existential setting, Avicenna rejects the idea that the passive intellect has no positive nature of its own. He insists that it has an attribute (*ṣifa*) and mode (*ḥāl*) and "nothing which has this attribute can be mixed."[23] Based on what we have discussed, it seems what Avicenna means by "mode" and "attribute" are "essential existent" and "self-awareness," respectively. The actualization of the passive intellect is a further affirmation of the presence of self-awareness and not a reason for it to be.

According to Avicenna's notion of the rational soul, if my intellect cognizes itself, I must be aware that I have an intellect and it is cognizing itself. In contrast, according to Aristotle's notion of the rational soul, if my intellect thinks itself, it is not clear whether I am aware that I have an intellect that is thinking itself since what I am thinking of at the moment of actualization is that my intellect is thinking of an object.

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[17] Alexander 2004: 106; 26–27, 107; 8–19.   [18] Avicenna 1947b: 100.
[19] See Priscian of Lydia 1997, 30, 1, 27–9 trans. Huby.   [20] Avicenna 1947b: 100.   [21] Ibid.
[22] Ibid.   [23] Ibid. 101.

III Self-cognition and the problem of identity

Another issue that invites Avicenna to draw a distinction between self-awareness and self-cognition pertains to the relation between the cognitive faculty and another faculty, the faculty of estimation. In *al-Mubāḥathāt*, this issue is presented with the following questions:

> Are we cognizing ourselves? It is not clear yet whether we are cognizing it or ourselves by a material faculty or not. Does my cognitive faculty exist in a body or not? And if it does, then why can this not be the case that my cognitive faculty operates within the faculty of estimation in such a way that my estimative faculty is aware of it in the same way that the cognitive faculty is aware of the estimative faculty? Hence, it will not be the case that the cognitive faculty is aware of itself but rather it is aware of it through another in the same manner that the faculty of estimation is not aware of itself through itself but aware of it through the intellect.[24]

It is not surprising that the faculty of estimation, in this context, is used as a parallel to the intellect. In Avicenna's view, there is a strong affinity between the intellect and the faculty of estimation. This faculty works directly with the intellect and the practical intellect benefits from its perceptual contents.[25] In addition, Avicenna considers this faculty in animals as equivalent to the faculty of the intellect. In the same text, Avicenna explicitly states that animals are aware of their existence in virtue of having the faculty of estimation.[26]

   In the passage above, the main question "are we cognizing ourselves?" is immediately followed by a hypothetical case designed to question the distinctiveness of the cognitive faculty as opposed to the estimative faculty. The hypothetical case proceeds in two steps. First, the faculty of the intellect is aware of the faculty of estimation and the faculty of estimation is aware of itself through the faculty of the intellect. Second, given that both faculties share a dynamic relation and influence each other, there is no reason why one is not to assume that estimation is aware of the intellect and that the intellect is aware of itself through this faculty. I take the last point to be an attempt to show that self-cognition of the intellect can be fulfilled by having an intermediary faculty, i.e. the faculty of estimation. Furthermore and in response to the main question above, Avicenna emphasizes the dynamic relation that the intellect has with the internal

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[24] Avicenna 1992: §438, 159.
[25] According to Avicenna "the estimative faculty serves the particular intellect" (Avicenna 1959: 50). On the faculty of estimation, see esp. Black 1993: 219–258.
[26] According to Avicenna "man is aware of itself and an animal aware of itself in virtues of its estimative faculty" (Avicenna 1992: §519, 179).

senses and the possibility of having it become aware of itself through an intermediary faculty makes it less likely to cognize the self in itself as a pure entity. At the end of this argument, Avicenna once again reminds us of his earlier point that the intellect is a faculty designed to grasp the universal and it is not qualified to cognize the individual self.

Having addressed the difficulty and complexity of having the intellect cognizing the self in itself as individual self, Avicenna stipulates that it is only through self-awareness that one can have direct access to one's self. He justifies this claim by arguing that "with respect to awareness, you are aware of your identity and without being aware of any of your faculties – for [if you are aware of a faculty] then this faculty becomes the thing in which you are aware of and not your self."[27] By "any of your faculties," Avicenna includes the intellect (given that he already excluded cognition from awareness). Thus, unlike self-awareness where identity becomes self-evident to the one who is aware, identity, in the case of self-cognition, is concomitant with one who thinks the thought. In other words, with self-cognition, my identity is confused with the act of cognition and it is not a pure identification of what I am. Avicenna even uses the term "cognitive confusion" (*al-khalṭ 'aqliyyan*) to signify the process in which one can attain an abstract concept of something other than itself.[28]

In addition, directness is not required in self-cognition since I must have an object of cognition in order to cognize my self. As Avicenna states "he who cognizes something other than himself cognizing must cognize himself."[29] This certainly corresponds to Aristotle's principle (A). Another potential source is Aristotle's claim in *Metaphysics* XII.9 that "knowledge and perception, and opinion and understanding have always something else as their object" (1074b36). Aristotle denies that there is direct access to the subject in all these functions. Klaus Oehler infers from this passage that Aristotle "allows for the reflexivity of these functions. It is a sort of self-reference which can come about only through reference to a distinct object."[30] For Avicenna, the intellect does not cognize itself directly, but rather concomitantly by having an object other than itself. This belief leads Avicenna to question the use of the term "cognition" in a reflexive sense. He states that "if it becomes evident to us that our essence is [present] to ourselves without the mediation of cognition, then what is the need to say that 'we cognize ourselves and through it (cognition), we realize that we have the essence of ourselves.'"[31] The awareness of the essence of one's self

[27] Avicenna 1992: §440, 159.   [28] Ibid. §515, 178.   [29] Ibid. §300, 122.   [30] Oehler 1974: 497.
[31] Avicenna 1992: §435, 158.

is intrinsic to the self and the act of cognition or any other act adds nothing to the presence of the self to itself.

Contrary to self-cognition, in the case of self-awareness, I am aware of nothing but my self and this awareness consists in a reference to my self. Such a reference can be described as reflexive in the sense that I am aware of my self as being my self and nothing more, i.e. "to be I as I" (*takūna anta anta*).[32] For Avicenna, the referential "I" is immune from any failure of reference for there is a direct reference between my awareness and the thing that I am aware of, my awareness of my 'I,' is the same as my awareness.[33]

In this sense, Avicenna's view seems to stand in stark contrast to Kant's view that the 'I' is known "only through the thoughts which are its predicates, and of it, apart from them, we cannot have any concept whatsoever."[34] For Avicenna, the 'I' is known to its subject independently from any predicate attached to it, "my awareness of my 'I' (*anā*) as the one who has this awareness" is not due to the belief that I have a heart, brain, or any other bodily organs, but rather it is in virtue of being aware of my 'I' in itself (*ashʿuru bihi annahū anā bi-l-dhāt*).[35] Self-awareness is the kind of awareness where no action (*fiʿl*), activity, or even thought mediates between the self and its awareness of itself. Avicenna claims that by apprehending certain activities one must presuppose the existence of the self without necessarily proving it, and this special knowledge is inherent in the self and not in the act of cognition:

> when I say 'I act,' I express my self-awareness [along with the act itself]; otherwise how do I know that I am the one who is doing the act, except that I consider [my awareness] to my self first, then I consider the act. All this without considering anything [external] to my awareness of my self.[36]

Self-awareness is the foundation for my belief that I am the one who is thinking of X, acting upon or receiving X. By seeing a tree in my garden or thinking of Euclid's fifth postulate, I become directly aware of the fact that I am the one who sees the tree or the one who thinks of the fifth postulate. With that in mind, there is no distinction between the self and the activity of being aware of my self. The objection to this view is that by being aware of my thoughts or my actions, I am not necessarily aware of a real entity such as the self or the persisting self that is the source of these thoughts. Rather, I am aware of the activity itself and nothing else. To borrow

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[32] Avicenna 1957–1960, 1971: II, 347. [33] See Alwishah 2006: 78–80. [34] Kant 1929: 331.
[35] Avicenna 1959: 256. [36] Avicenna 2002: §60, 122.

Hume's words, I am aware of a "bundle or collection of different perceptions."[37]

In *al-Taʿlīqāt*, Avicenna discusses this objection in great detail. He begins his discussion by arguing that if there is an impression (*athar*) from my self in my self, then I must be aware of two things (a) my self and (b) an impression from my self. He explains that "the impression by which I become aware of my self would not have an impression of my awareness of myself without the existence of my self."[38] But if the existence of my self is already established then there is no need to be aware of my self by having an impression other than the existence of my self. Hence, the existence of my self requires no impression to be self-evident to me simply because such an impression would fail to do that without, one way or another, assuming the existence of my self:

> If I become aware of my self, and this awareness comes as result of an impression from within my self, then, how do I know that this impression is an impression that emanates from my self except that I know my self prior to that (the act of awareness). Thus, I will infer from this impression – by having a sign (*ʿalāma*) among many signs – that this impression is an impression of my self. And if I have an impression "from my self" "in my self" and judge it to be the impression of my self, then I need to synthesize between that impression and my self.[39]

What we can derive from the passage above is that (a) there must be a feature or sign that indicates that the "awareness of a self" is an awareness of my self; and (b) given that the existence of the self and the awareness of the self are inseparable, the assumption that some activity has taken place in the self as an activity will be secondary to the "awareness of a self" and neither a primary nor a direct act of knowing it. Thus, in the case of the awareness of my self, I have direct access to my object, i.e. my self. The fact that there is nothing that mediates between my self and my awareness of my self suggests that this relation requires no inference or reasoning but rather the mere fact of my existence.[40] The intrinsic relation between the existence and awareness of the self is explored further when Avicenna discusses the sameness thesis.[41]

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[37] Hume 1978: 252.   [38] Avicenna 2002: §40, 113–114.   [39] Ibid. 114.

[40] The attribute of directness and the notion that no medium is required in order to become self-aware has been already discussed in Alwishah 2006: 69 and subsequently by Black 2008: 65.

[41] See Alwishah 2006: 69–78.

IV   The sameness thesis in human and divine intellects

Another important aspect that distinguishes self-awareness from self-cognition is that the former has an essential sameness between the subject and the object of its awareness, while the latter has an accidental relation. Avicenna expresses this sameness relation by employing three formulas: (a) "the identity between the subject and the object of this awareness" (*huwiyya bayna l-shāʿir wa-l-mashʿūr*), (b) "our awareness of ourselves is itself our existence" (*shuʿūranā bi-dhātinā huwa nafsu wujūdanā*), and (c) "intellect, intelligizer, and intelligible are one thing" (*ʿaql wa-l-ʿāqil wa-l-maʿqūl shayʾan wāḥidan*). Avicenna introduces the first formula in the following passage:

> There must be an identity (*huwiyya*) between the subject and the object of this awareness (*al-shāʿir wa-l-mashʿūr*) … The subject that is aware (*al-shāʿir*) of this awareness and the object of the awareness (*al-mashʿūr*), namely, the self, are the same. Thus, the relation between them is not an otherness relation (*ghayriyya*) in any possible way, rather it is an identity (*huwiyya*); for if you do not know yourself you will not know that the object of awareness of yourself is yourself.[42]

In being aware of my self I am aware of the identity relation between being an object and being a subject of this awareness:

1.   The self is aware of its object.
2.   The object of this awareness is the self ("object of awareness of yourself is yourself").
3.   The self is the same as its object.

Here Avicenna's justification of the sameness relation between the subject and the object of awareness is inspired by Aristotle's principle (B) – that "in the case of objects which involve no matter, what thinks and what is thought are identical" (*De Anima* III.4, 430a3–4). Elsewhere, Avicenna applies this principle to self-awareness by asserting that "my awareness of my self does not involve any material instrument and the subject and the object of the awareness must be one and the same."[43] Avicenna establishes this claim on a set of metaphysical assumptions:[44] (a) Existent things are divided into categories: that which exists for itself, and that which exists for an other. (b) The former must be aware of itself and not by means of an other, while the latter is aware of itself by means of an other. (c) Immaterial

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[42]   Avicenna 2002: §59, 120–121.   [43]   Ibid. §76, 127.   [44]   Ibid. §85, 130.

things belong to the former category and material things belong to the latter category. (d) The self is immaterial, thus it must be aware of itself.

However, Avicenna's *al-Ishārāt* draws our attention to the fact that one should not conclude from (c) and (d) that every immaterial thing has the ability to cognize.[45] Such a conclusion, in his view, may lead to the following objection:

> Perhaps you say that when the material form in its subsisting [object] is abstracted in the intellect, then that which prevents[46] it [from being immaterial], would be removed. [If that is the case] then why are we not ascribing to it the ability of cognizing (*taʿaqqul*)?[47]

The hidden premise in this objection is the assumption that every immaterial thing has the ability to cognize. Thus the objection can be simply formulated in the following:

1. If X is abstracted from its material attachments, X becomes an immaterial thing.
2. Every immaterial thing has the ability to cognize.
3. Then X has the ability to cognize.

In his response to this anticipated objection, Avicenna limits (2) only to the category of the immaterial things that adhere to two conditions: (a) being self-subsistent substance and (b) being susceptible (*qābila*) to intelligible concepts.[48] I assume that "intelligible concepts" include the concept of the subject itself. Hence it seems that (b) primarily prevents other immaterial things from cognizing other immaterial things or themselves. For immaterial things, such as celestial objects, meet (a), but they lack the ability to grasp intelligible concepts. The conditions are restricted only to the human intellect (i.e. divine intellect cognizes the principles of all existents but is not susceptible to intelligible concepts).

After Avicenna establishes the identity relation between the subject and the object of awareness, he proceeds to present a second formula of

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[45] Adamson extensively examines the connection between intellection and immateriality in Avicenna's *al-Ishārāt* and his commentators views, al-Rāzī in particular. See Adamson 2012a: 97–122.

[46] Al-Ṭusī rightfully explains "that which prevents it" (*al-maʿnā al-māniʿ*) to be "conjoining with matter." See his comments in Avicenna 1957–1960, 1971: II, 422.

[47] Ibid. Adamson presents a somewhat different translation of this passage: "Perhaps you will say that when the form that subsists materially is abstracted in the intellect, then the characteristic that prevents [it from itself engaging in intellection] is removed. So what stops us from ascribing intellection to it?" (2012a: 100). I disagree with him on the translation of key concepts, especially *qawām, al-maʿnā al-māniʿ*, and *taʿaqqul*.

[48] See Avicenna 1957–1960, 1971: II, 423.

sameness between the existence of the self and its awareness of itself. He makes it clear in this formula that to be a self is to be aware of itself. This inextricable relation between existence and the awareness of the self is expressed by Avicenna's perception that "the self-awareness of the essence of the self is intrinsic (*gharīzī*) to the self, and [it] is the same as its existence; thus there is no need for something external to the [self] for the self to be aware of itself."[49] This concomitant relation between self-awareness of a self and the existence of its essence (*anniyya*) is presented most strikingly in three places throughout *al-Ta ʿlīqāt*: (a) "When the self exists, self-awareness exists with it,"[50] (b) "For the existence of the self is the awareness of itself, and these concepts are both inextricable."[51] (c) "Our awareness of ourselves is itself our existence.[52] In (b) and (c), Avicenna invokes a robust and inextricable relation between "being a self" and "being aware of that which is a self":

1. The self-awareness of the essence of the self is the existence of the self.
2. The self-awareness of the self is intrinsic to the essence of the self.
3. It follows that (2) is true if one realizes that (1) is a necessary condition for knowing the existence of the self.

Having examined these two formulas of sameness, we may conclude that the sameness relation between the self and its awareness of itself is essential and intrinsic to the existence of the self.[53] In contrast, self-cognition consists of an accidental sameness between the intellect and its intelligibles. Avicenna explicitly states that "if the intellect [in act] cognizes something, it cognizes that it is cognizing and this is a cognition of itself."[54] In this sense, Avicenna restates Aristotle's principle (A) – "thought is itself think-able in exactly the same way as its objects are" (*De Anima* III.4, 430a3). For both philosophers, the sameness between the intellect and its intelligible is not direct or essential but rather an accidental sameness.[55] As Frank Lewis rightfully suggests with respect to Aristotle, the sameness thesis holds not between the intellect and its object, "but more elaborately between the actualization of the passive power in *nous* for being brought to think and the actualization in the object of thought of its active power for bringing

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[49] Avicenna 2002: §72, 125.   [50] Ibid. §34, 111.   [51] Ibid. §61, 122.   [52] Ibid. §70, 125.
[53] See Alwishah 2006: 70, 81; Black 2008: 65.   [54] Avicenna 1957–1960, 1971: II, 415–416.
[55] Alexander emphasizes this interpretation by stating that "by thinking it (the intellect) becomes the very thing which it is able to think. Primarily (*proêgoumenôs*) and in itself, it is thinking the intelligible from whenever it thinks, but incidentally (*kata sumbebêkos*) [it is thinking] itself, because it belongs to it incidentally that it becomes the thing it thinks whenever it thinks" (Alexander 2004: 86, 14–23). See Sorabji 2005: 136.

nous to think it."[56] Avicenna presents a third formula of sameness that captures the relation between what he refers to as the intellect, intelligizer,[57] and intelligible (ʿaql wa-l-ʿāqil wa-l-maʿaqqūl). While the early formulas are applicable to the human intellect, this formula is discussed primarily in relation to the divine intellect. While it is true that at one point in *al-Mubāḥathāt*, Avicenna applies this formula to the human intellect, he also categorically applies it to the divine intellect.[58] As a matter of fact, in *al-Taʿlīqāt*, Avicenna insists that this formula must be restricted to the First (God): "He who cognizes itself must be [at once] the intellect, intelligizer, and intelligible, and this stipulation (ḥukm) is true only with respect to the First (God)."[59] But, how do these three aspects apply to the divine essence and what does each aspect signify? In *al-Ilāhiyyāt*[60] and *al-Taʿlīqāt*,[61] Avicenna offers several remarks addressing this question. His remarks suggest that God is intellect, intelligizer, and intelligible in the following manner:

1. God's essence is an identity denuded of matter, and therefore it is an intellect.
2. God grasps his own essence, and so, by (1), his own intellect. To complicate this point further: God's grasping his own essence, which is an intellect, itself constitutes his essence, and its being an intellect.
3. God is both the agent and the patient of the act of intellectual grasping.

Prior to Avicenna, Aristotle presents three aspects of sameness by stating that the divine intellect "must be itself that thought thinks (since it is the most excellent of things), and its thinking is a thinking on thinking" (*Metaphysics* XII.9, 1074b33–35). For Aristotle, the divine intellect is the object of its thought and as explained earlier in *Metaphysics* XII.7, the divine intellect is the best possible object of thought. That is to say, the divine intellect is thinking of X and X is nothing but the divine intellect itself, therefore the divine intellect thinks itself. Avicenna rephrases Aristotle's formula "its thinking is a thinking on thinking" with "intellect, intelligizer, and intelligible." In both formulas, the divine intellect is identical with its activity and its object. The identity relation is essential and not accidental for both believe that the divine intellect is pure actuality and does not require an external object or content to think.

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[56] Lewis 1996: 45.   [57] By "intelligizer" I mean the one who grasps his own intellect.
[58] In *al-Mubāḥathāt*, Avicenna states that "the essence and the quiddity of the intellect in itself necessitates that it is to be an intellect, intelligizer and intelligible" (Avicenna 1992: §864, 308).
[59] Avicenna 2002: §276, 271.   [60] See Avicenna 2005: 285.
[61] See Avicenna 2002: §252, 259; §271, 267; §279, 273.

In addition, a careful examination of their views reveals that there is a striking similarity between Aristotle's notion of divine self-thinking and Avicenna's notion of self-awareness. Both notions have the attributes of directness, essential sameness, and (as we shall soon see) the continuity of thinking/awareness. With respect to the last point, Aristotle argues in *De Anima* III.5 that the active intellect "does not sometimes think and sometimes not think. When separated it alone is just what it is, and this alone is immortal and eternal . . . and without this nothing thinks" (*De Anima* III.5, 430a20–25). Avicenna, on the other hand, singles out the attribute of continuity as a key attribute in the notion of self-awareness. Avicenna's view logically entails that God is always thinking and that He is eternal. But to substantiate this point with textual evidence one may refer to *al-Taʿlīqāt* where Avicenna asserts that "the existence of the First is His cognition of his essence . . . His existence is His cognition of it (his essence). His existence is perpetual, hence, His cognition of His existence is perpetual."[62]

Having established this similarity, it is important to point out that there is a crucial difference between their notions of divine self-thinking. They disagree on how to define the object of divine self-thinking. For Aristotle, the content of the divine intellect's thinking of itself is not clear, especially whether it has the same object, i.e. Himself, over and over. A *prima facie* reading of the phrase of "its thinking is a thinking on thinking" suggests, and as some scholars have noted,[63] that the divine intellect thinks nothing but itself and that divine activity is pure self-contemplation or what Norman refers to as "a sort of heavenly Narcissus."[64] To avoid the judgment of self-contemplation, Avicenna denies that the object of God's thinking of Himself is only Himself. Instead, Avicenna argues that in cognizing His essence, God cognizes at once that He is the principle of every existent and to everything that "is posterior to His essence."[65] Therefore, "because God cognizes his essence and He is the principle of all things, He cognizes by His essence all things."[66] Furthermore and by being the principle of every existent, God causes the existence of all the existents and whatever God causes, God cognizes. Avicenna denies that God cognizes His essence first then cognizes that He is the principle of all

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[62] Avicenna 2002: §279, 273.
[63] According to De Koninck 1994: 472: "Self-contemplation in the anthropomorphic sense . . . is a plain absurdity to anyone. However, so is the Aristotelian God as read by Zeller, Ross, and, most recently, Oehler."
[64] Norman 1969: 63.
[65] See Avicenna 2005: 292, trans. Marmura and Avicenna, 1957–1960, 1971: III, 278.
[66] Avicenna 2005: 291, trans. Marmura, modified.

existences.[67] For Avicenna, the cognition of His essence and that He is the principle of all existents are one and the same cognition. We can conclude from above that while Aristotle's notion of self-thinking fails to communicate the key attributes of Avicenna's notion of self-awareness – the attributes of directness, essential sameness, and continuity – his notion of divine self-thinking decisively embodies these attributes.

V   The continuity of self-awareness

One of the logical conclusions that can be drawn from the sameness thesis, the second formula, in particular, is that the self is aware of itself continuously. But does this conclusion extend to self-cognition? Avicenna clearly affirms in *al-Mubāḥathāt* as mentioned earlier that "my intellect does not always cognize itself but my self is always aware of its existents. For if my self cognizes in actuality something other than itself, it is always aware that it is cognizing as long as it is cognizing."[68] Thus, the self is always aware of itself and it is aware of the act of its cognition, but its cognition of it as a self is not continuous. In addition to this argument, Avicenna presents a robust notion of the continuity of self-awareness. The self is aware of itself continuously and aware of others in virtue of being aware of itself. In *al-Taʿlīqāt*, Avicenna explicitly argues that "the self is aware of itself in an absolute state and without any condition at all. The self is aware of itself always and not intermittently."[69] Avicenna goes so far as to claim that one is aware of his self in states other than the state of consciousness by presenting the following case:

> Return to your self and reflect whether, being whole, or even in another state, where, however, you discern a thing correctly, you would be oblivious to the existence of your self and would not affirm your self. To my mind, this does not happen to an intelligent man, so much so that not even the sleeper in his sleep, and the drunk person in the state of his drunkenness will lack knowledge of his self. For a person [in all of these cases], his self would not be oblivious to himself, even if a representation of himself has not been established in his memory.[70]

In this passage Avicenna shows that the failure of representation results from having no interaction between the intellect – which always possesses the activity of awareness – and the corporeal memory. The failure of memory to capture this activity would not prevent one from being aware

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[67] Avicenna 2002: §252, 259.
[68] Avicenna 1992: §550, 185–186; see Alwishah 2006: 83; Black 2008: 65 and Kaukua 2007: 101–107.
[69] Avicenna 2002: 34, 111.
[70] Avicenna 1957–1960, 1971: II, 343–344; Marmura 1986: 391, trans. modified.

of oneself, for the knowledge of oneself is disembodied pure content and need not be imprinted in a corporeal faculty.

This is a good point to summarize our results so far. We have shown how Avicenna distinguishes between self-awareness and self-cognition. This distinction is recapitulated in Table 8.1.

Table 8.1 *Distinction between self-awareness and self-cognition*

Self-cognition	Self-awareness
1. It must have an object.	1. It does not necessarily have an object.
2. It has no direct access to an individual self.	2. It must have direct access to an individual self.
3. It has an accidental sameness relation between the subject and the object.	3. It has an essential sameness relation between the subject and the object.
4. It does not always cognize the self.	4. It has a continuous awareness of the self.

From this distinction we can see that self-awareness is basic for human cognition. It is the stage that connects our mental and perceptual activities to an authentic and individual self. Unlike self-cognition, self-awareness is a state where the self grasps itself with or without having cognitive or perceptual content. With that in mind, let us now shift our attention from the distinction between these two states of self-knowledge to examine how they relate to each other. After all, they belong to one rational soul or an individual self.

VI The link between self-cognition and self-awareness

In his writings, Avicenna identifies two epistemic moments in which these two states of self-knowledge are linked, namely the moments of reflexive attention (*tanbīh*) and awareness of awareness (*al-shuʿūr bi-l-shuʿūr*). With respect to the first moment, Avicenna is perhaps the first to demonstrate the inextricable relation between attention and self-awareness. In *al-Taʿlīqāt*, Avicenna expresses this relation by stating:

> When we know something we know that in knowing it we are becoming aware of ourselves. For we know that ourselves have become aware of it and thus our awareness of ourselves is prior to it. Otherwise, how do we know that we become aware of something or not except that we become aware of

ourselves first. And such a thing is *attention*, and not a demonstration; the self as being aware of itself.[71]

Attention is a state in which one attends to the awareness of oneself without being directly caused by any perceptual input or stimuli. It is an act of consciousness that is directed toward a specific subject, i.e. the self. In addition to the two moments in which one attends to oneself, thinking and perceiving, Avicenna adds the moment of being aware of oneself. Within the act of attention the awareness of the self becomes salient for one cognitive faculty. In his writings, Avicenna characterizes attention:

1. A voluntary instant that follows the realization of one being oblivious to the existence of oneself (this will be explained further below). He writes "when one is oblivious to the awareness of the self, then he would attend to it, and in doing so he would not be aware of himself twice."[72] Attention as a mechanism of consciousness aims toward making the self know when one's cognitive faculty becomes fully occupied with perceptible awareness. In attending to the self one would not become aware of the self twice, for attention is not a realization of the existence of the self itself, but rather it is an act that affirms the self being aware of itself.
2. The object and the content of this type of attention are incorrigible.[73]

With that in mind, and provided that self-awareness is a continuous state, the question that needs to be answered is why one needs to attend to one's self-awareness.

In *al-Nafs*, Avicenna indirectly posits two points concerning this question. First, Avicenna categorically rejects those who define attention as "the returning of the self [to itself]."[74] Avicenna insists that there is no time in which the self is oblivious to its awareness.[75] One may be oblivious to certain actions that one attributes to oneself, but never be oblivious to the self itself. Second, Avicenna establishes that while self-knowledge (*ma'rifat al-nafs*) is an intimate knowledge of oneself, one may lose his attention to this kind of knowledge as result of having a weakness within the understanding, and thus one needs to regain this attention indirectly, i.e. through a perceptual object.[76] By "a weakness within the understanding," Avicenna means

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[71] Avicenna 2002: §71, 125.   [72] Ibid. §55, 119.   [73] See Avicenna 2002: §71, 251.
[74] Avicenna 1959: 251.   [75] Ibid. 259.   [76] Ibid. 257.

that one is not conscious enough to retain one's attention to oneself. This may be due to the fact that one is fully occupied with either intelligible or perceptual contents. To make the awareness of the self salient to the mind as an awareness that presupposes the other mental activities, a voluntary instant of attention is needed. In this sense, attention is a moment that brings forth the awareness of the self in relation to the perceptual object. It plays a vital role in bridging between two types of awareness, immediate and cognitive awareness. For Avicenna, cognition without the awareness of the self is impossible. The self needs to be affirmed or present to itself in every aspect of perception. In perceiving a color of a paint or sound of music, one is not only formulating an idea of a color and sound but also formulating an idea of that which sees the color or hears the sound. On the other hand, the attributes of self-awareness as being direct, intrinsic, and self-contained are meaningless without being linked or contrasted to cognitive awareness. To bridge the lacuna between these two different moments of awareness, Avicenna suggests that attention to the self needs to be drawn, specifically attention that affirms the presence of the self at the moment of cognition.

The second way to bridge self-awareness and self-cognition is through the moment of the "awareness of awareness." One is not only aware of something but one is aware of being aware of something. In *al-Taʿlīqāt*, Avicenna links the process of knowing the self to the awareness of awareness:

> The human soul could be oblivious to the awareness of itself, and thus it needs to be alerted to it in the same manner as when it is oblivious to other intrinsic properties. And it cannot attain this awareness by something else except itself, because if that happens, then there must be an "otherness" between it and itself, and that is impossible. Furthermore, if a thing does not know itself, how can an "otherness" make the self know itself? Therefore, it follows that something else cannot make the self know itself. With regard to the awareness of the awareness of [I will say that] this is something grasped by the intellect.[77]

Thus, Avicenna distinguishes between the concept of awareness of the self and the awareness of awareness by showing that unlike the former,

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[77] Avicenna 2002: §36, 112. Elsewhere in same text Avicenna argues that "the awareness of awareness is acquired and not natural" (ibid. §55, 119).

the latter which equates to self-cognition, is not intrinsic to the existence of the self, rather it is something that is apprehended by the acquisition of the intellect. In addition, unlike the states of self-awareness "which is actual and continuous," the state of the awareness of awareness is in "potentiality and it takes place from time to another."[78]

We can infer from Avicenna's remarks above that there are two stages of awareness: (a) direct awareness of the self that is experiential and a privilege of the first person and (b) awareness of awareness, a form of self-cognition, that can be obtained by an acquisition of the intellect without knowing the content of first-order awareness – such a content is unavailable. With that in mind, second-order awareness is qualified to be an epistemic claim that can be utilized in the process of reasoning or inference. To put it differently, in second-order awareness, the intellect intends first-order awareness, and first-order awareness becomes the object of the intellect. Thus, second-order awareness necessarily precludes the existence of first-order awareness.[79]

Now an objection that may naturally arise is that to be aware of direct self-awareness is itself an awareness, and so would require a further awareness of first-order awareness and so on, *ad infinitum*. In *al-Mubāḥathāt*, Avicenna attempts to offer a way out of the problem of infinite regress by comparing the different orders of awareness to the different stages of perception. In his view, by apprehending a perception of an object, one does not create a new perception, but rather one merely cognizes his perception, and the object of the cognition is no different than the perception itself.[80] Similarly, Avicenna asserts that one does not create a new self-awareness by reflecting upon an immediate (first-order) awareness, but rather one merely cognizes this continuous and primary self-awareness. Hence, the cognition of first-order awareness itself is not a new awareness but rather it is merely a cognition of the same awareness. To block the infinite regress sequence of awareness, Avicenna suggests that we ought to consider first-order awareness as something no different than the cognition of it. In both orders of awareness, one is aware of the same object, i.e. the persisting self, the difference between them lies in their epistemic values. While first-order awareness has no epistemic content, it is an awareness which occurs without being about anything that can be recognized by the intellect, the content of second order awareness is the

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[78] Ibid. §48, 117.   [79] See Alwishah 2006: 80–83.   [80] See Avicenna 1992: §436 and §437, 158.

experience that one acquires from drawing attention to one's direct aware-
ness. In this sense, Avicenna seems to adopt a similar strategy that Aristotle
employs in dealing with the problem of the infinite that is generated from
the notion of "perceiving that we perceive."[81] Both block the infinite
assumption by positing that the first perception (Aristotle) or immediate
awareness (Avicenna) to be a perception or an awareness of itself and
therefore there is no need to posit a new awareness.

VII   Conclusion

We have seen how Avicenna systematically distinguishes between self-
cognition and self-awareness demonstrating that the latter is a primitive
and necessary state for all subsequent cognitions, specifically self-
cognition. The distinction entails that it is impossible for one to grasp
that one has an intellect and thinks without presupposing the awareness of
the identity and individuation of oneself. By being direct, intrinsic, and
continuous, self-awareness affirms the centrality and the unicity of oneself.
Unlike Aristotle, Avicenna applies three attributes of self-awareness not
only to the divine intellect but also to the human self. Moreover, Avicenna
redefines Aristotle's notion of divine self-thinking by expanding the think-
ing of the divine intellect of its essence to being the principle of every
existent. Finally, we see how this important distinction between these two
states helps us to identify the two epistemic moments that link them with
human self-knowledge as a whole.

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[81] According to Aristotle "if the sense which perceives sight were different from sight, we must either
fall into an infinite regress, or we must somewhere assume a sense which is aware of itself. If so, we
ought to do this in the first case" (*De Anima* III.2, 425b15–17).

Averroes on intentionality and the human experience of the natural world

Yehuda Halper

Like Aristotle's psychology, Averroes' psychology aims to explain how human beings experience the world outside of the soul or the world that is independent of the soul. From the perspective of the soul, this world, the natural world, is divided into two parts: that which can be sensed and that which can be apprehended by the intellect. Certainly there are things that are beyond human comprehension, but whatever can be apprehended must be perceived sensorially or grasped intellectually. Like other Islamic philosophers before him, most notably Avicenna and Ibn Bājja, Averroes develops accounts of intentionality to distinguish between apprehended forms, which are present in the soul of the apprehender, and forms that are actually present in the natural world. Much, if not all of human knowledge of the world, it turns out, is attained through intentions. Accordingly, the foundations of science lie, at least to some extent, in intentionality. To understand Averroes' account of Aristotelian science and knowledge of the world, one must first understand Averroes' account of intentionality.

The English word intention is derived from the Latin *intentio*, which medieval translators of Arabic used to translate the Arabic *maʿnā*. While *intentio* was also used to translate a number of other Arabic terms,[1] here I shall use the term exclusively for *maʿnā* in an effort to elucidate some aspects of what Averroes means by this term. *Maʿnā* is one of the most complicated and multifaceted Arabic philosophical terms and it is not always clear how to translate it, or even whether a single English term could suffice to render it unambiguously. Arabic translators of Aristotle used *maʿnā* to translate such conceptually broad terms as πρᾶγμα[2],

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[1] Especially *qaṣd*, *maqṣūd*, and even *maʿqūl*. See Gyekye 1971.

[2] E.g. in Isḥāq ibn Ḥunayn's translation of the *De Interpretatione*, see Pollak 1913: 1–34 (available online at http://folk.uio.no/amundbjo/grar/interpretatio/arab.php). For another edition, generally considered less reliable, see Aristotle 1948: 97–133.

λόγος, and σημαίνει[3] as well as other terms expressing the meaning of things or of words.[4] In these cases, the term seems primarily to express things and their meanings. By Averroes' time, the term had been greatly influenced by the *mutakallimūn*, who used it to refer *inter alia* to attributes (broadly understood), cause, and thing,[5] as well as by Avicenna and Ibn Bājja, who incorporated the term into their accounts of psychology.[6]

Given the complexity of its various meanings, it seems best to consider Averroes' use of the term independently and use Averroes' own language to discover how he understands the term in his psychological works and how he locates the term in Aristotelian psychology. Yet Averroes has three commentaries on the centerpiece of Aristotelian psychology, Aristotle's *De Anima* and develops his account of intention differently in each of them. Here I shall examine two of those accounts of intentionality and knowledge found in Averroes' *Short* and *Middle Commentaries on the De Anima*. The *Long Commentary* account, which is Averroes' final answer, as it were, deserves a separate study.

In both the *Short* and *Middle Commentaries on the De Anima*, Averroes introduces intention in his account of apprehension (*idrāk*). Although it is a central component of Averroes' commentaries on the *De Anima*, apprehension is not actually found in Aristotle's *De Anima*. It appears to have been introduced by the medieval Islamic commentators to treat the connection between sensation and intellection, one of the central problems of the *De Anima*. While Aristotle discusses the two concepts of sensation and intellection independently using different words (e.g. αἴσθησις and αἰσθάνομαι for sensation and νόησις and νοέω for intellection), Averroes, like a number of Aristotelians in the Islamic world before him, often discusses sensation (*iḥsās*) and intellection (*ʿaql*) under a rubric of the more encompassing concept of apprehension (*idrāk*). The use of apprehension for both of these concepts assumes a kind of connection between them. The connection between them turns out to involve intention (*maʿnā*) in that apprehension is apprehension of intentions or of intentions of things. Let us now turn to more detailed examinations of apprehension and intention in the *Short* and *Middle Commentaries on the De Anima*.

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[3] See *Glossarium Græco-Arabicum: A lexicon of the medieval Arabic translations from the Greek* at http://telota.bbaw.de/glossga.

[4] E.g. as part of συνώνυμος at *Metaphysics* II.1, 993b25.   [5] See Frank 1967.

[6] See Hasse 2000 and Wirmer 2004.

I   The *Short Commentary on the De Anima*

In the *Short Commentary on the De Anima*,[7] Averroes repeatedly explains sensory apprehension as the reception of the intentions of individual physical things that exist outside of the soul, which come into the soul stripped, in some sense, of their material, their *hyle*. Thus, e.g. seeing is "that power whose function it is to receive the intentions of the colors stripped from their material inasmuch as these are individual intentions."[8] Similarly, hearing apprehends the intentions of sounds,[9] smell apprehends the intention of aromas,[10] taste, the intention of flavors,[11] and touch, the intention of what is touched.[12]

Averroes' explanation of sensorially apprehended intention as individual intention stripped of *hyle* implies that intention is a kind of form. This apparently echoes Aristotle's statement opening *De Anima* II.12, "In general concerning all sensation, it is necessary to grasp that sensation is that which is receptive of sensed forms without their *hyle*."[13] Yet compelling as Aristotle's statement here is, it is by no means clear that forms of perceptible objects *can* be grasped entirely without material. Indeed, the example Aristotle uses to support this statement does not escape materiality: "wax receives [the shape of] the ring without the iron and the gold."[14] While wax can take on many shapes without the *hyle* of the original shape, the shape it takes on is still a *hylic* shape; it still retains a kind of materiality and is never completely immaterial.

For Averroes, the materiality of sensorially apprehended intention lies in the individual character of that intention: the senses apprehend individual things. And individual things, i.e. particular things, are necessarily material. Each sensorially apprehended intention is not, then, completely without *hyle*, "rather it exists as something having an individual relation (*nisba*) to the *hyle* through which an individual intention occurs."[15] Intention, or at least sensorially apprehended intention, is a kind of form with a relation (*nisba*) to *hyle*. Sensorially

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[7] References to the *Short Commentary on the De Anima* are to Averroes 1985. Occasionally, I have corrected this text with Averroes 1999.

[8] Averroes 1985: 43.

[9] Ibid. 49: hearing is "that power whose function it is to be perfected through the intentions of impressions (*al-āthār*) generated in the air ... which are called sounds."

[10] Ibid. 53: smell is "that power whose function it is to receive the intentions of smelled things."

[11] Ibid. 56: taste is that "by means of which one apprehends the intention of flavors."

[12] Ibid. 61: touch is "that power whose function it is to be perfected through the intentions of touched things."

[13] *De Anima* II.12 , 424a17–19. Translation my own.   [14] Ibid. 424a19–20.   [15] Averroes 1985: 39.

apprehended intention thus appears to have two components: *form* and a *relation* to matter.

Later in the *Short Commentary* Averroes implies that sensorially apprehended intention is necessarily *hylic*, i.e. not truly formal:

> Apprehended intentions are of two kinds: universal and individual. These two intentions are entirely distinct. This is because the universal is the apprehension of the general intention stripped of its *hyle* and individual apprehension is the apprehension of intention in *hyle* ... Sense and imagination, indeed, apprehend the intentions in *hyle*, but they do not receive them *hylically* in accordance with what we mentioned earlier. Thus we do not consider ourselves to imagine color without magnitude and shape, especially when we perceive it. In general, we do not consider that we imagine sensibles removed from their *hyle*. Indeed, we perceive them in *hyle*, and this is how they are individual. But apprehension of universal intention and quiddity is different from this, since we strip it entirely from its *hyle*.[16]

Here Averroes describes sensorially perceived intentions as being actually *in* the *hyle*. What was earlier described as a relation to *hyle* is now described as *hyle* itself, at least when compared to universal intentions. Here it is not perceived intentions that are stripped of their *hyle*, but universal intentions. *Hyle* is apparently inescapable in sensation and imagination. Sensed things, such as colors, cannot be perceived without those things, such as magnitude and shape, that accompany their material manifestation. This is similarly true of imagination, at least imagination of sensorially perceived objects, which, Averroes tells us, can occur in the absence of those objects. Since the things that are sensed are only sensed with their material concomitants, they are still in a sense *in matter* and cannot be completely removed from *hyle*, even in the imagination:

> Objects of intellectual apprehension, however, *are* entirely removed from their *hyle*. For in the case of intellection, the apprehension is the apprehended and thus it is said that the intellect is essentially that which is intellected. The cause for this is that whenever the intellect strips the forms of things that are intellected from their *hyle* and receives them without *hyle*, it happens to be intellecting itself. [However] this is not so in the case of sense. For it is not possible for it to sense itself with the result that the sense is the thing sensed, since its apprehension is of the sensed intention, indeed, in so far as it is received in *hyle*. Accordingly, the abstracted intention occurs in the power of sensation as something distinct in existence from its existence in the thing sensed.[17]

[16] Ibid. 93.   [17] Ibid. 112–113.

Intention is necessary for the apprehension of sensed things precisely because sense and the thing sensed are not the same. Unlike some of the Presocratics who thought that sensing bodies meant having those bodies be somehow present in the soul, Averroes sees intention as in some sense mediating between the things in the outside world and the soul's sensory powers. According to Averroes, "some of the forms of the sensed things remain in the sense after their separation from it as affections that are like (*shabīha*) the *hylic* forms."[18] The likeness of such affections to *hylic* forms is explicitly said by Averroes to be equivalent to the relation of an individual intention to an individual object in the natural world outside of the soul. Intention's relation to matter then is based on the potential of intention's form to be affected by and thereby become like an individual material object.

Ideally, the intellect works without the mediation of intention. Intellectual subjects and objects form a continuity (*itiṣāl*), even a unity (*itiḥād*), whereby the intellect (*'aql*), the intellectual subject (*'āqil*), and the intellectual object (*ma'qūl*) are one. Yet it is not clear to what extent this understanding of intellect extends beyond the one, universal active intellect. This active intellect is removed from *hyle* in every way and consequently is in no way connected to any kind of individuality, since individuality necessarily implies materiality. Indeed its nature is completely independent of any individual person and it remains unaffected "whether we intellect it or not."[19]

The *Short Commentary* argues that we *can potentially* intellect the active intellect, even while this intellect is free from all potentiality. To make this leap, Averroes adopts what Alexander of Aphrodisias calls the "acquired intellect": an intellect that is somehow added to an individual person's intellect, which is necessarily somewhat material, to make the latter intellect continuous with the former.[20] When we intellect, according to Averroes in the *Short Commentary*, we acquire this continuity, often called the "acquired intellect," and somehow link in to active intellect, linking in to the intellectual unity and intellecting in a way that is completely abstract from all *hyle*.

Averroes makes no mention of intention in connection with the active intellect. This is probably because the active intellect cannot have intention, in the sense in which Averroes has been using the term *ma'nā*.

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[18] Ibid. 113–114. Averroes 1999: 78.   [19] Averroes 1985: 127.

[20] Alexander 1887: 82. Davidson 1992: 11–12 notes that the prominence given to the acquired intellect in the Arabic translation of Alexander's *De Anima* was likely far greater than Alexander intended.

The complete lack of *hyle* in the active intellect means that the active intellect contains no intentions. For if intention has some kind of relation (*nisba*) or likeness to *hyle* or things in *hyle*, then it cannot be present in pure intellect, which does not have any relation or likeness to *hyle*. Thus, while intention is associated with the lower functions of the soul, such as sensation and imagination, it plays no part in the highest activity of the soul, the active intellect.

However, the active intellect and the acquisition of continuity with it occupy a very minor place in the *Short Commentary*.[21] Much more prominence and space is given to the discussion of the so-called *hylic* intellect, an intellect that *does* somehow involve intention.

The *Short Commentary* is built around a hierarchical structure of powers of the soul, according to which each lower power of the soul is a disposition (*istiʿdād*) for a higher power of the soul. Thus the nutritive power of the soul provides a disposition for the power of sensation and the power of sensation provides a disposition for the imagination. The nutritive power of the animal soul ensures that the soul has the conditions whereby it can sense and the sensory capabilities provide the conditions whereby animals can imagine, i.e. consider the intentions of sensed things in their absence.[22] Of course, not everything with a nutritive power can sense – plants are the clearest example here – and not everything with the power of sensation can imagine – Averroes claims that sponges and worms have no imagination.[23] In a sense, the imagination is a kind of disposition for the *hylic* intellect. Averroes refers to "the disposition that is in the imaginative forms for receiving the intelligibles."[24] He calls this disposition "the first *hylic* intellect."[25] Furthermore, Averroes says, "the imaginative intention is the same as the intelligible intention in its essence, thus clearly potential intellect is necessarily something else – I wish I knew what it is."[26]

Averroes highlights his uncertainty here about how the *hylic* intellect is somehow both imaginative and purely intelligible. In fact, Averroes' views of how far the human intellect becomes intelligible is part of his famous revisions to the *Short Commentary*, written some years after the original distribution of the *Short Commentary*, probably even after the distribution

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[21] Averroes 1985: 126–128.   [22] Ibid. 82.   [23] Ibid. 83.   [24] Ibid. 124.
[25] Gomez Nogalez (Averroes 1985) has: العقلالهيولانيالاول. Richard Taylor tells me that this is probably a typographical error and that the text should read اولالهيولانيالعقل, as al-Ahwānī (Averroes 1999). If Gomez Nogalez's reading is, in fact, correct, it emphasizes the paradoxical condition of the *hylic* intellect – both *hylic* and active, both form and material.
[26] Averroes 1985: 124. Cf. 101.

of the *Long Commentary*.[27] Initially, Averroes claims that the *hylic* intellect is itself a disposition for the active intellect, which is completely attainable through the complete removal of all *hyle*. Later he apparently doubted that all individuality could be removed, claiming that the individual self cannot fully transcend his or her individuality. Consequently, Averroes holds that our knowledge of separate intellectual forms only comes about through relation (*al-munāsaba*) and comparison (*al-muqāyasa*) with what he calls *hylic* intelligibles. Averroes further associates these *hylic* intelligibles with intention (*ma ʿnā*).[28]

According to the *Short Commentary*, then, human knowledge of the natural world is entirely dependent on relation and comparison through intention. Furthermore, even the act of stripping away matter to understand universals is itself done only through relation and comparison. Accordingly, scientific knowledge comes about through apprehending intentions, combining them and deducing things from them to discover the world outside of the soul.[29] The resulting knowledge then is intentions which are never entirely removed from materiality, i.e. from particularity. While they are more universal than sensorially apprehended intentions, it is not clear that they ever obtain a true universality. Universality itself appears to be beyond human comprehension, accessible only by relation and comparison between intentions and true intelligibles.

II The *Middle Commentary on the De Anima*

The *Middle Commentary on the De Anima*[30] develops the notion of the relation between intention and intelligible by explaining it in terms of the unity of apprehender and apprehended. Averroes begins with the unity of

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[27] The purpose of Averroes' revisions remains a difficult question. Davidson 1992: 265–275 has suggested the most comprehensive explanation of the revisions. However, there is no critical edition that shows all the revisions and it is difficult to say too much about the revisions before such an edition is made. Here I address comments made as part of Averroes' revisions found in Averroes 1999, but absent in Averroes 1985.

[28] Averroes 1999: 94.

[29] Averroes 1985: 96: "Then too the existence of one animal, namely man, is not possible through [sensation and imagination] alone, but through his having a power by which he apprehends intentions stripped of their *hyle*, composes some intentions with others and deduces some intentions from others until he thereby puts together arts which are useful for his existence, whether from necessity or from excellence. It is compulsory that this power, i.e. the rational power, be present in man. But nature was not limited to this alone, i.e., to granting man the principles of intentional thought for acting, but it is clear that it gave him other principles not fundamentally suited for acting, which is to say useful in his sensible existence, not necessarily useful, except for the sake of excellence. These are the principles of the theoretical sciences."

[30] References to Averroes' *Middle Commentary on the De Anima* are to Averroes 2002a.

sense and what is sensed and then extends that account to the imagination and the intelligible realm. According to the *Middle Commentary*, sense is unlike (*ghayr shabīh*) what is sensed, but becomes like it (*tatashbahu*) by becoming its intention (*maʿnā*).[31] Sensibly perceived forms have different ways of being: they are "intentions in the soul and corporeal things outside it."[32] When the organ "receives" the intention of a sensed thing, in some way it becomes the intention of the sensed thing so that "they become one thing, though they are two different things in existence." Averroes follows Aristotle in calling sense a "ratio" or "harmony,"[33] though here the Arabic word for this is *nisba*,[34] the same word used for intention's relation to the sensed object in the *Short Commentary*. Further this "ratio" reflects a kind of likeness (*shabīha*) between the sensed object and the organ of sensation. Here it seems that Averroes interprets Aristotle's ratio between the sense and the thing sensed as a relation and likeness between the intention of the sensed object and the organ of sensation. The sense organ and the intention of the sensed object become one, but that oneness is a oneness through relation (*nisba*).

This kind of oneness, in fact, is what is identified in Averroes' commentaries to *Metaphysics* Γ as *pros hen* and becomes throughout Averroes' *Long Commentary on the Metaphysics* a *pros hen* analogy. In terms derived from the *Metaphysics*, then, the unity of sense and the intention sensed is an analogical unity.

Regarding intellectual apprehension in the *Middle Commentary*, Averroes tells us, "Aristotle's statement concerning the identity (*shayʾan wāḥdan*) in every respect of intellect and intelligible obtains fully [only] with respect to separate objects," i.e. with respect to separate intellects, "whereas this identity is incidental, as it were, in our intellect."[35] This is because our intellect, which is embedded in material, thinks only "objects which are external to itself."[36] A truly intellectual, separate intellect is one, an intellect intellecting intellect, while man's intellect is not one in the same sense since it apprehends intelligibles that are outside of itself. Thus

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[31] Ibid. 64: "The senses are potentially the intentions of the perceived objects, not the objects themselves; and the sense is affected by the perceived object by virtue of being unlike it, becoming the intention of the perceived object (or like the perceived object) by virtue of resembling it" (trans. modified).

[32] Ibid. 87.

[33] See *De Anima* III.2, 426a27–b7. Aristotle's speaks of a λόγος between sense and the thing sensed. This λόγος is usually understood to mean ratio.

[34] Averroes 2002a: 97–98.

[35] Ibid. 115. Square-bracketed word is added by Ivry, but clear from context.   [36] Ibid.

while a separate intellect need not have any relation to anything outside of it, human intellect is dependent on such a relation.

Nevertheless, man's intellect, man's power of reasoning, is not like sense whose relation to material objects implies that sense "contain[s] a measure of change."[37] Rather, man's power of reasoning "must be completely unaffected; that is, it must be unreceptive to the change that occurs to faculties which are affected by virtue of their commingling with the subject in which they are found."[38] It must be unchanging, but yet it must have some relation to the objects which it intellects. Averroes says: its relation (*nisba*) to intelligible objects is like that of the sensory faculty toward sensible objects, except that the faculty which receives sensible objects is mixed, to a degree, with the subject in which it is found, whereas this faculty must be completely unmixed with any material form. For, this faculty, which is called the *hylic* intellect, if it is to think all things – that is, receive the forms of all things – cannot be mixed with any one form; that is, it cannot be mixed with the subject in which it is found, as the other material faculties are.[39] How the human intellect is to be able to think all forms while at the same time not be mixed with any one form is not entirely clear.

Averroes appeals to Aristotle's famous comparison of intellect to a writing tablet. The human intellect is a disposition (*istiʿdād*),[40] i.e. a potential for receiving forms, in the way that the surface of a writing tablet is a disposition for receiving writing. "The disposition for receiving writing which is found in a tablet – that is . . . the disposition found on the surface of the tablet is not mixed with the tablet"[41] The human intellect apprehends the universals of the natural world without their material. In fact, Averroes takes this comparison one step further, claiming that it applies to "the situation of the intellect with the intelligible."[42] That is, insofar as the human intellect is a disposition it is not mixed with any intelligibles. It is, as it were, an empty slate. As such it is on a kind of middle ground: it is unmixed with material, but at the same time unmixed with intelligibles.

The question, then, is: how does the human intellect both receive forms corresponding to things that exist in the natural world and actively intellect, that is think about intelligibles? Averroes' answer begins by appealing to an activating intellect (*ʿaqlan fiʿlan*) responsible for activating the human intellect and an affected intellect (*ʿaqlan munfaʿilan*) that is affected by the forms of objects in the natural world. This is based on

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[37] Ibid. 108.   [38] Ibid.   [39] Averroes 2002a: 109.   [40] Ibid. 115; cf. 112.   [41] Ibid.   [42] Ibid.

Aristotle's description of intellect which can become (γίνεσθαι) all things and intellect which makes (ποιεῖν) all things. Aristotle compares the latter intellect to light which activates the colors so that they can be seen.[43] Averroes elaborates on this as follows:

> As it is light which renders colors actual after their having been potential, and which gives the pupil of the eye the intention through which it can receive colors – namely transparency – so this intellect is that which actualizes intelligibles and brings them forth, and it is that which gives the *hylic* intellect the intention through which it receives intelligibles (that is, something which resembles the transparency of sight).[44]

Averroes' changes to Aristotle's account chiefly concern intention (*maʿnā*). Just as light allows the eye to see the intention of colors, the intellect allows the *hylic* intellect to have the intention through which it can receive colors. It is striking that there are two accounts of intellection given here: 1. intellect actualizes intelligibles and brings them forth; and 2. intellect gives the *hylic* intellect an intention through which it receives intelligibles. The first account does not necessarily have any need for intention or even the *hylic* intellect. It could refer to a separate intellect. The second account can be viewed as a specific case of the first; it, too, describes actualizing intelligibles and bringing them forth. Only, the second account involves the *hylic* intellect, that is the human intellect, and it involves intention. Intention, I have been arguing, always involves some kind of relation and thus, like the *hyle* of the *hylic* intellect implies something outside of the intellect, something that is perhaps not intelligible.

Averroes goes on to tell us that the intentions given by this Agent Intellect to the *hylic* intellect are, in fact, found in the imagination. They are potential intelligibles. Indeed, the intellect "renders them actual intelligibles after their having been intelligible in potentiality."[45] The association of these intentions with the imagination is probably derived from Aristotle's famous statement:

> For the soul that intellects, imaginings are present in the way perceptible things are . . . Hence the soul never intellects without an imagining. This is just as the air acts on an eyeball in a certain way and this acts on something else, and so too with hearing. The last thing acted upon is a one with a single mean, although it has being in many ways.[46]

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[43] *De Anima* III.5, 430a10ff.
[44] Averroes 2002a: 116 trans. modified. For some reason, Ivry did not translate the instances of *maʿnā*.
[45] Ibid. 116.   [46] *De Anima* III.7, 431a14–20.

This short, intriguing statement is one of the most commented upon in the Aristotelian corpus. Yet the statement itself is quite vague and we are limited in what we can attribute to Aristotle's views on this subject. The intellect is somehow dependent on imagination. The workings of the imagination, imaginings or *phantasmata* act on the intellect leading to intellection. This is compared to the way that air acts on a sensory organ (an eye or an ear) which acts on "something else," presumably the sense itself, leading, presumably again, to sensation (seeing or hearing). Air acts on the eye or ear as a medium conveying the sensible form from the object in the natural world via the organ of sensation to the sense. Thus imaginings also play the role of a kind of medium for intellection, an activity for which there is no organ. Averroes' explanation of this passage gives imagination an even greater role, "Images in the soul are related (*tatanazalu*) to the intellect as sensible objects are related to the sense – that is just as sense judges sensibles, so intellect judges images, and, therefore, neither thinking nor judgment is possible without imagination."[47]

Imaginings are not the medium for intellection; they are in a sense the subject of human intellection. That is, human intellection operates on the imagination. Averroes even goes so far as to describe "imaginative intelligibles" (*maʿqūlāt al-khayālāt*) which are in a relation (*nisba*) to the intellect in the way that sensibles are in a relation to sense. In light of my description of intention, I think it is not a stretch to identify these imaginative intelligibles with Averroes' earlier description of the intention, found in the imagination, through which the *hylic* intellect receives the intelligibles. That these imaginative intelligibles bear a relation (*nisba*) to the intellect (*al-ʿaql*) strengthens the case for this identification: these intentions are not intelligibles, but have a relation to intellect.

The intellect that actualizes this process is Averroes' famous separate, eternal Agent Intellect (*ʿaql faʿāl*). This intellect is entirely one. "The intelligent and intelligible aspects of this intellect are one thing in essence (*shayʾ wāḥid bi-dhātihi*) since it does not think anything external to its essence."[48] As a perfect one, this Agent Intellect does not think anything external to it and consequently does not think the *hylic* intellect, the imaginative intelligibles, or any intentions. What kind of relation, then, can obtain between the imaginative intentions and the intellect? The eternal Agent Intellect is, Averroes tells us, "our final form."[49] It thinks unceasingly, but the objects of its thoughts, the intelligibles, only make it

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[47] Averroes 2002a: 120.   [48] Averroes 2002a: 116 trans. modified.   [49] Ibid.

to the *hylic* world through the *hylic* intellect. The terms *hylic* intellect and Agent Intellect imply that the former is the potential of the latter or that the latter is the activity of the former. Averroes calls this connection (*indimām*), joining or conjoining. The *hylic* and agent intellects join together. The imaginative intentions (*al-maʿānī al-khayāla*) join with the intelligibles. Averroes also refers to this joining as a continuity (*itiṣāl*) which renders the intellect and the intention one (*wāḥidan*). Just as the sense and the sensed object become one through relation (*nisba*), the imaginative intention and the intelligible become one through relation (*nisba*). In the latter case, though, the one by relation is also a one by conjoining and a one by continuity.

In the *Metaphysics*, as I have mentioned, Averroes identifies this kind of relation (*nisba*) with analogy. This kind of relation is a *pros hen* relation and is thus distinct from the category of relation, in reference to which Averroes uses the term, *iḍāf*. Applied here, we can state that apprehension involves a *pros hen* analogy between the apprehender and that which is apprehended. Further, any intention that can be apprehended also involves some kind of analogy between the intention and that which is meant. In a sense, we can describe Averroes' teaching about apprehension as an attempt to explain the analogy between what is in our minds and what exists outside of our minds, be it in the natural world or in the Active Intellect.

III   Conclusion

This account of intention and its relation to the natural world provides a basis for an account of science. The goal of natural science is understanding the natural world. Human access to the natural world begins with intentions that are apprehended through sensation. The apprehension of such intentions is basically automatic and as such these intentions reliably correspond to the outside world. Nevertheless, they are related to *hyle* which is inherently not understandable. Something in sensorially apprehended intention defies comprehension. Yet the imagination also has intentions which are related to the natural world, perhaps by being related to sensorially apprehended intentions. The goal of natural science appears to be to make those imaginative intentions be imaginative intelligibles, with a relation both to the natural world and to the intellect. Through such a process we use the intellect to tell us about the natural world, thus acquiring a kind of intellectual knowledge about nature.

This account of natural science centers around intention and relation or analogy. Theoretical science that is based on any kind of relation to the natural world must necessarily treat intention; indeed its subject must primarily be intention. It is through relations found in intentions that the human soul can bridge the divide between the natural world and the intellect. The bridge, though, that the human soul forms is one of analogy and relation.

Metaphysics in the orbit of Islam

Calvin Normore

Metaphysics takes its name from a collection of Aristotle's treatises bundled together around the first century BCE. The treatises collected as Aristotle's "Metaphysics" are complexly related and it is far from clear whether they have a common subject and if so what that might be. The two candidates most often put forward are (1) being (or beings) and (2) the first and highest being. Aristotle had also identified another science, physics, as dealing with beings capable of change so it seems that to distinguish the two, one would have to suppose it at least possible that there be beings not capable of change. Aristotle himself thought there were such, the movers of the celestial spheres, but as debate about this and related issues has developed over the more than two millennia which separate him from us, the boundary between physics and metaphysics and that between metaphysics and theology has shifted frequently. What has remained constant is the thought that if there is a branch of philosophy that treats fundamental questions, metaphysics is that branch.

Anyone setting out to study the history of metaphysics has to make a fundamental choice between studying the history of Aristotle's texts collectively called "Metaphysics" and the traditions they spawn, and studying the history of fundamental philosophical problems whether or not they were considered in those texts or traditions. Neither is really tractable (the literature is too vast), but the first promises to be less intractable and is typically taken in discussions of "Islamic/Arabic metaphysics."[1] The second, though, offers an opportunity to set the first in a wider context. It is this approach that is, as far as possible, taken here.[2]

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[1] See for example, Thèrese A. Druart's article on al-Fārābī's metaphysics in the online *Encyclopedia Iranica* at http://iranicaonline.org/articles/farabi-iii. For discussion of the subject of metaphysics in the Aristotelian tradition, see Frede 1987a: 81–95.

[2] Within the Latin tradition, the fundamental philosophy of figures, like Aquinas, who practiced what within the Islamic tradition would certainly be called *kalām* is taken without question to be

Anyone attempting a historically informed study of metaphysics within the orbit of Islam has another task – that of determining the scope of the enterprise. The orbit of Islam is very wide, encompassing not only a large geographical area but a large number of philosophical and religious traditions with which Islamic theorists fruitfully interact over a period which now extends almost fifteen hundred years. Study of the history of Islamic philosophy has grown up in a milieu in which the focus has been on its impact on Latin Christian (and to a lesser extent Jewish) philosophy and has tended to downplay developments with no impact on the translation of Arabic texts into Latin – thus effectively ending with Averroes. This chapter will have the same limitation.[3]

I   Background

There are, broadly speaking, two disciplinary matrices within which the issues we would now identify as metaphysical emerge within the orbit of Islam. By the early second century AH/eighth century BCE, there had grown up within the Islamic world a recognizable discipline, *kalām*, devoted to the reasoned defense of the Islamic faith. By the middle of the third century AH/ninth century BCE, there had emerged another discipline, *falsafa*, devoted to the interpretation and articulation of what I will call the Peri-Platonic traditions – the body of texts and doctrines emerging from Plato's Academy and carried on not only by so-called Platonists but by Aristotle and his followers. These two disciplinary matrices frequently, but not always, saw themselves and were seen by others as providing incompatible paths to genuine understanding. From our perspective, both deal with metaphysical issues in recognizably philosophical ways.

Christianity had grown up within the Greco-Roman world and Christian theology wed itself early to philosophical terminology and doctrine that originated in the Peri-Platonic traditions. It embraced the idea that there were spirits without spatial (and perhaps temporal) location, but with influence in place and time. Both God and human souls were, in

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metaphysics whether or not the issues it treats are to be found in commentary on Aristotle's text. I am proposing we take the same attitude to the Islamic tradition. Al-Ghazālī is as much a metaphysician as Avicenna – he merely has a different metaphysics! This approach conflicts with that taken by writers within the *falsafa* tradition who were concerned to distinguish what they often took to be the demonstrative science of metaphysics from *kalām* which they took to be 'dialectical.'

[3] This limitation reflects mostly my own ignorance of later developments, but it reflects too both the state of the field and limitations of space.

some sense, among them. It embraced form/matter and substance/accident terminology and used it freely to explain its central doctrines. Thus, despite the struggles between Christianity and late Platonism, an integration of Christianity and the Peri-Platonic traditions could be and was achieved. This meant that as long as there were significant Christian minorities within the Islamic world there would be a presence of those strands of Greek metaphysical thought.

Islamic theology did not follow Christian theology in these commitments. To the best of our knowledge the formulation of the Qurʾān was not influenced by Peri-Platonic philosophy in the way (say) John's Gospel seems to have been and there were no very early attempts to interpret it in Peri-Platonic terms. By the time there were, alternative interpretive traditions were already in place. Moreover, there are significant connections between the grammatical structure of Greek and Latin and the metaphysical categories and distinctions speakers of those languages (and their descendents) seem inclined to make. Arabic grammar differs significantly and insofar as philosophical speculation was (and is) formed by reflection on the Qurʾān one might expect it will differ to some extent. These issues emerge in the translation of Greek philosophical texts into Arabic and they emerge in efforts to translate early Arabic philosophical terminology into contemporary English.

Kalām emerged before *falsafa* and the metaphysical issues with which it was first concerned differ from those central to the Peri-Platonic traditions. The first significant discussions among Muslims of what we would now consider a metaphysical issue seem to have been over issues of predestination and moral responsibility. Islam, like other Abrahamic religions, teaches that God knows and in some sense decrees everything that happens. This issue is, as we shall see below, closely aligned with how to understand agency and causality.

A second issue that seems to emerge quite early among thinkers in Islam is how to understand creation. That God had created the world was a basic tenet of Islam – again a tenet it shares with the other Abrahamic religions. But whether this entailed that there was a first time and if so whether there had been nothing but God before the world was made was more controversial. The intellectual matrix within which these issues arose in Islam was already complex. Jewish thinkers, like Philo of Alexandria, had argued that creation need not involve a first moment. The Christian Church Fathers had debated what it meant to say that God created out of nothing. With the possible exception of Plato, Greek thinkers were unanimous that something of the physical world had always existed although there was some debate about whether it had always formed a cosmos. Aristotle and

Proclus had set out to prove that the world had always existed much as we find it now. These arguments played a role in the late antique intellectual struggle between the religion created by the Neo-Platonists and a Christianity which by the late antique period had more or less settled on a temporal understanding of creation. John Philoponus, in particular, had set out to refute the neo-Platonic consensus and to argue that the world we find around us must have been created in time.

A third issue soon occupying the attention of thinkers within Islam was the existence and nature of God. The existence of something they were prepared to call 'God' was common among the Abrahamic religions and the Peri-Platonic traditions. However, the Peri-Platonic traditions had claimed demonstrative knowledge of the existence and nature of that something and their conceptions of it differed greatly from orthodox Judaism and Christianity. The question, whether such demonstrative knowledge of the existence and nature of God as conceived by orthodox Christians was possible, had already arisen within Christianity. The Islamic conception of God differed again. Like Judaism and unlike Christianity, which from early on had to struggle with the metaphysics of the Trinity, Islam is fully committed to the unicity and uniqueness of Allāh. The issues of the unicity and nature of God, the eternity of the world, and the character of agency and causality were all discussed within both the *kalām* and *falsafa* disciplinary matrices. They are taken up below. First, though, something should be said about being and existence.

II Being and existence

A great deal of ancient Greek philosophy can be seen as a meditation upon Parmenides' doctrine that non-being cannot be thought and hence that what can be thought must in some sense be. For those like Aristotle, the atomists and the Stoics, for whom thought reflects being, the priority runs one way – that only what is can be thought. For those like Plotinus and Proclus, for whom thought is creative, it runs the other – that whatever can be thought thereby is. What being, so understood, has to do with existence as we ordinarily understand that is less clear. There are prime numbers: do they exist?

Among the major schools of Greek philosophy it seems only the Stoics countenanced things which do not exist.[4] Within the Peri-Platonic

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[4] The widest Stoic category is not beings (*onta*) but 'something' (*ti*) and the Stoics grant that a number of items – place, *lekta*, the void, and time do not have existence but subsistence (*hypostasis*).

traditions, and within the Epicurean tradition, it does not seem that a distinction between being and existence was drawn. How the Stoics understand subsistence is controversial but one plausible suggestion is that something subsists just in case it can be (consistently) thought about.[5] Within the Peri-Platonic and Epicurean traditions, anything that can be thought about exists. The Stoics, on the other hand, reserve existence for what can causally interact.

This debate is a philosophical perennial and it emerges within the earliest philosophical thought within Islam of which we have any record. One core doctrine of Islam is that God is a Creator. When things are created they exist and very natural questions include whether God could have not created those very things and whether there are or could be other things which were not created? Such questions raise issues about the ontological status of possibles and about whether the category of thing (*shayʾ*) is wider than the category of existent (*mawjūd*).

The ontology of the early *kalām* traditions appears to have been structured around two concepts: 'subject' (*jawhar*) and 'what accrues' (*ʿarḍ*). The distinction seems to have been in the first instance a grammatical one – perhaps roughly that between 'what is spoken of' and 'what is said about it.' Within the *kalām* tradition, '*jawhar*' was taken for 'substance' and '*ʿarḍ*' for 'accident.'[6] Debates among the *mutakallimūn* centered on whether: (1) there were both substances and accidents or just one or the other (2) if there were subjects whether they were infinitely divisible or made up of indivisibles (atoms) (3) if there were accidents whether they required a substratum or could exist independently (4) whether all subjects were bodies or parts of bodies. Thinkers were divided on all of these issues and there is not space here to trace out their disagreements.[7] Instead, I will introduce briefly one of the most striking – and most studied positions – that of Abū al-Huḍayl al-ʿAllāf.

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[5] This idea has been explored by Jacques Brunschweig and Vanessa de Herven. See de Herven, "How nothing can be something: the Stoic theory of void," unpublished manuscript.

[6] See al-Baghdādī 1928: 33, 13, 1984: 39, trans. Frank. Some scholars, e.g. Richard Frank 1984: 39–53, have argued that in early *kalām* contexts '*jawhar*' means 'atom.' This seems to me unlikely. Even those who thought that all substances were atoms were prepared to admit that the debate about this was not a debate about the word. It may be that certain authors think that all and only bodies are substances but again this is a substantive philosophical issue.

[7] Some of the doctrines developed were highly detailed. For example, the Basra school of the Muʿtazila argued that the universe is consisted of God, atoms, and twenty-two types of accidents – precisely the same number later calculated by Ibn Haytham as the number of visible 'intentions' (*maʿānī*).

Abū-al-Huḍayl is the standard bearer of what has become known as *kalām* atomism. He apparently claimed that the world is composed of a body (*jism*) and each body is made up of indivisibles (*juzʾ* / *ajzāʾ*). Each *juzʾ* is surrounded by six others, two in each of the three orthogonal directions. An individual *juzʾ* has only two accidents – existence (*kawn*) and the feature of abutting (*mumāssa*) six others.[8] The minimal body (*jism*) consists of seven of these *ajzāʾ* and at that point one has a subject which can bear accidents, like color and location. Each *juzʾ* is, of course, a *jawhar* but so is each *jism*. The indivisibles can bear the accidents of existence and abutting and larger bodies can bear others. In particular, larger bodies can move and when they do move they bear a motion which is an accident distributed among their parts.[9]

Why might a philosopher hold such a view? One of the earliest and most basic metaphysical questions is the relative priority of the parts and whole of a composite object. On the one hand, it seems that a genuine object can hardly just be a set of relations among others. On the other hand, it seems that everything with which we are familiar is composed of parts many of which do not depend on the whole for their existence. Abū al-Huḍayl embraces the second horn of this dilemma and it was one of the issues on which he was opposed by his nephew, Ibrāhīm al-Nazzām.

Many of the metaphysical debates among the early *mutakallimūn* center upon whether there is anything incorporeal, whether what is corporeal is infinitely divisible, whether there are both substances (*jawhar*) as well as accidents, and if so, whether they are themselves bodies (*jism*) or components of bodies. There is much here that remains to be understood but it is clear enough that Aristotle and Plato are not the major figures in this development.

All that changes with the massive translation program of Greek work into Arabic supported by the Abbasid caliphs. We can see the early result in the thinking of al-Kindī. It seems to be with al-Kindī that we find the first mention in the orbit of Islam of a distinct subject which was conceived as metaphysics or first philosophy. In his work, *On the Quantity of Aristotle's Books*, al-Kindī writes:

> His purpose in his book called *Metaphysics* is an explanation of things that subsist without matter and, though they may exist together with what does have matter, are neither connected with nor united to matter; and the oneness [*tawḥīd*] of God, the great and exalted, and an explanation of His

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[8] *Kawn* has the connotation of what has been produced or generated. It is thus likely better translated by 'existence' than 'being.'

[9] See Frank 1984: 39–53.

beautiful names, and that He is the complete agent cause of the universe, the God of the universe and its governor through His perfect providence and complete wisdom.[10]

Here al-Kindī expressly connects two thoughts – that there is a science of beings with no connection to matter and that this science is concerned with the unity, creativity, and providence of God. For al-Kindī, metaphysics is both the science of immaterial things and the science of God.[11] These are connected because al-Kindī claims that God is that of which one can say that it (its '*dhāt*') is its 'thatness' (*anniyya*). God is one (*wāḥīd*) and this oneness just is God's '*anniyya*' or '*huwiyya*.' '*Anniyya*' and '*huwiyya*' are (with *anna*) among the most mysterious terms in Islamic metaphysics. They were used by the earliest translators of Greek philosophical texts to translate both '*on/onta*' and '*einai*' and so are naturally and usually translated into English as 'being' (and sometimes as 'existence'). However, neither has the connotations one would expect from such translations into English because 'being' is a participle formed from a verb and so suggests a descriptive term in a way that neither '*anniyya*' nor '*huwiyya*' does. '*Huwiyya*' is pretty obviously an abstract noun formed for the pronoun '*hūwa*' (it/that) perhaps in its use to indicate the difference between an Arabic sentence not in the past or future and a simple noun phrase. The etymology of '*anniyya*' is less clear. If one thing is clear it is that both are technical terms and that neither means 'existent' in the way that '*kawn*' might be understood to.[12]

By the time of al-Fārābī, the *falsafa* tradition, which in al-Kindī's time seemed to focus on *Metaphysics* Lambda, had assimilated a larger part of Aristotle's metaphysical texts and had come to more clearly distinguish different directions within the Peri-Platonic movement. Al-Fārābī himself undertook to clarify and extend what he took to be Aristotle's own thinking about being. The Peri-Platonic traditions conflated being and existence but different strands of those traditions did so for different reasons. Unlike Plotinus and much of the Platonic tradition, which had insisted on the creative fertility of thought and held that whatever could be consistently thought was therefore what there was, Aristotle had emphasized the other direction insisting that only what existed or complexes made up of items that existed could be thought. The Stoics, much of the *kalām* tradition, the Arabic Plotinus, and al-Kindī had all taken a different

[10] See al-Kindī 1950–1953: 584, trans. Adamson 2007a: 32.
[11] I suggest this with some trepidation. Ivry (al-Kindī 1974: 17ff.) suggests al-Kindī is concerned with metaphysics only as a general science of being.
[12] Menn 2008 points to al-Fārābī's remark in the *Kitāb al-Ḥurūf* that translators chose '*huwiyya*' because '*huwa*' can be used in Arabic as a pronoun or separation mimicking some aspects of a copula.

view again, distinguishing between what had being (what could be consistently thought) and what existed. Al-Fārābī returned to Aristotle's way of conceiving matters – though with some novel developments of his own. Beginning it would seem from *Metaphysics* Delta 7 where Aristotle distinguishes four senses of being, al-Fārābī emphasizes two – being as true (into which he collapses being as thought) and a sense of being in which to be is to have an essence (*māhiyya*) describable by a proper scientific demonstration.[13] In the first of these senses for something to exist (*mawjūd*) is for there to be a true affirmative predication with it as subject. In this sense, existence is a second-order concept, X exists iff there is a concept P such that X falls under P. Thus existence in this sense 'is not a property.' In the second of these two senses, X exists iff X has an essence and so for X to exist is not merely for something else to be qualified in some way or another.[14] To put the matter in al-Fārābī's terminology, for anything that is *mawjūd* in this sense it is so in virtue of a *wujūd* that is its *māhiyya*.

Avicenna can be seen as taking up both a Farabian and a Kindian heritage. He credits al-Fārābī's treatise, *On the Aims of Metaphysics*, with showing him how to approach Aristotle's text but he comments on *The Theology of Aristotle*, as well. Avicenna's terminological heritage is complex. In his discussions of existence, he favors the family of words with the *w-j-d* root that had been favored by al-Fārābī but he also deploys the *huwa* and *annal/inna* rooted terminology introduced by the Kindian circle. Avicenna draws a fundamental distinction between 'possible (*mumkin*) existence' and 'necessary (*wājib*) existence.' Something has possible existence if from a description of its essence (*māhiyya*) and either the supposition of its existing or the supposition of its non-existing, no contradiction can be derived. Something has necessary existence if considering it alone there is a contradiction in supposing it not to exist. Avicenna draws a further distinction. Everything that actually exists *exists* either because it is necessary of itself (*wājib al-wujūd bi-dhātihi*) or because although it is merely possible of itself (*mumkin al-wujūd bi-dhātihi*) its causes exist and act and it necessarily follows from them and so '*exists*' necessarily through 'another' (*wājib al-wujūd bi-ghayrihi*).[15] What exactly are the items to which Avicenna attributes these modal states? In the first instance, at least, they are existing things. Are there also non-existing things? Despite a long tradition which

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[13] My discussion of al-Fārābī's conception of being closely follows Menn's remarkable article (Menn 2008).

[14] Thus, to use a recently popular example, a wrinkle in a carpet is in al-Fārābī's first sense ("That wrinkle is larger than it was yesterday" may be true) but not in his second sense – since a wrinkle is just a way some part of a carpet is configured.

[15] See Avicenna 2005: 29–33, also Menn 2003: 150–151.

seems to think so it does not seem that he really thinks there are. Avicenna does think that one can consider essences absolutely, prescinding from issues about whether they have possible or necessary existence, but these essences fall into two classes. Either they are, in the case of material objects, general items like 'horseness' which Avicenna seems to think all have some instances, or they are, in the case of immaterial things, all items which eternally exist. There are, no doubt, consistent descriptions which are not instantiated but these are not descriptions of essences. They would thus not pick out beings in the second of al-Fārābī's senses. Moreover, it is not clear that there would be true genuinely affirmative predications with these descriptions in a subject position and so it is not clear that these would pick out beings in his first sense either. In short, we have no reason to think Avicenna thinks there are, in any sense of 'are,' non-existent possibles.

What Avicenna does seem to think is that if we consider some non-divine existing object, accounting for its existence will require us to consider things other than itself, while accounting for the *possibility* of its existence will not. Whereas al-Kindī thinks that the *wujūd* whereby a non-divine thing is *mawjūd* is God, the True One, and al-Fārābī thinks that there is no *wujūd* outside a non-divine thing whereby it is *mawjūd*, Avicenna thinks that there is a distinction within a non-divine thing between what it is, its *māhiyya* (perhaps even what it is in particular, its *anniyya*) and its existing (*mawjūd*). The former ordinary things have of themselves, the latter the owe to God.

It is this distinction between two ways of a thing being what it is that later writers find puzzling. Al-Ghazālī claims that the only distinction that can correctly be drawn here is between things whose existence are caused and things whose existence are uncaused. He claims not to understand what something requiring a cause for its existence could, in my words, 'have of itself.' Neither does Averroes.[16] Both al-Ghazālī and Averroes, though for different reasons, deny the Farabian distinction between two senses of 'being' adumbrated above.

Al-Ghazālī's attack is pointed. Avicenna insists that God is absolutely simple but also claims that God is (the) Necessary Existent. Al-Ghazālī asks whether God's being necessary is identical with God's being existent.

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[16] See Al-Ghazālī 2002 and Averroes 1992. See Averroes 1954: 163–166 and also Menn 2003: 150–154. On this issue, Menn 2003: esp. 154–160 points to the semantic difference between denominative/paronymous terms and 'absolute' terms. The former involve a relation to some other thing ("Peter is Italian" is true only if Peter bears some relation or other to Italy), the latter simply locate things in a class (as "Peter is human" (on some theories at least) simply locates Peter among the humans).

If not, there is a plurality in God after all. If so why, in the case of a possible existent, is not being possible identical with being existent? If it is, Avicenna loses his distinction between what the possible existent has of itself (its essence) and what it receives from God and, moreover, as al-Ghazālī argues, loses his only means of explaining multiplicity in the world. Al-Ghazālī's conclusion is that only God has existence of itself while everything else is of itself nothing (*bāṭilun bi-dhātihi*).[17]

Averroes' defense of 'the philosophers' against al-Ghazālī's attack is in many ways a retrenchment. Avicenna had attempted a unification of central strands of thought about being and existence in several different Peri-Platonic traditions. By distinguishing existence (*wujūd*) from possible (*mumkin*) existence, he had been able to distinguish the roles played by a ground of existence from that played by a cause of existence. He was thus able to account for the different senses in which substances and accidents are (where substances have their possible existence from themselves while accidents have it from the substances in which they inhere) while at the same time leaving the bestowal of existence entirely to God. Averroes implicitly conceded that al-Ghazālī's attack showed this to be indefensible. He took a different tack, one centered on denying a distinction between combining the form and matter of a composite object and bringing it into existence. Averroes insisted that these were the same operation. To make something is also to make it what it is. In doing so, he also denied that there could be anything more than a conceptual distinction between essence and existence.

III   God and cosmos

While the Abrahamic religions and the Peri-Platonic traditions agree (against Epicureans, Manichees, Zoroastrians, and others active in the orbit of Islam) that there is one First item which they are (usually) happy to call God, they do not agree about what it is or about its role in the cosmos.

Within Islam, an issue that arose early was how to reconcile the unity and simplicity of God with the various roles as Creator, Providential Overseer, and Judge, that a natural interpretation of the Qurʾān would have God play. Among the *mutakallimūn*, the Muʿtazila tradition insisted (as most Christian tradition has also insisted) that God creating, overseeing, and judging are nothing but God. The Ashāʿira tradition, on the other hand, has argued that these attributes of God are in some sense distinct from God.

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[17] See al-Ghazālī 2002: 118, trans. Marmura.

The Ashāʿira analysis of the attributes of God is intimately inter-twined with an account of predication derived from an earlier Arabic grammatical tradition. On this account, the verbal form of a term is derived from (*mushtaqq*) a nominal form so that e.g. "God is creating" has the deeper logical form, "A creating(ness) is in God." Thus every act presupposes an attribute. This is precisely the analysis that, as we saw above, al-Fārābī rejects in denying that things exist (*mawjūd*) in virtue of an existence (*wujūd*).

The early *falsafa* tradition began in a milieu in which such a debate about the relation of grammatical and logical form was central and al-Kindī is working in a milieu in which the issues the *mutakallimūn* raise are in the air. His own approach borrows technical terminology (and so concepts) and methods from that tradition as well as styles of argument but is clearly also indebted to the Greek literature with the translation of which he was involved.[18] The issue of how to understand predication of the First was as central in later Greek thought as in the *kalām* tradition. Plotinus had claimed that nothing could be affirmatively said of the One and the Pseudo-Dionysius had argued that God could only be spoken of through a *via negativa*. This approach was congenial to the Muʿtazila analysis of the divine attributes but in open conflict with the Ashāʿira approach. Thus, al-Fārābī's analysis of existence was the throwing down of a gauntlet.

One of the most important attributes of God is as Creator (*al-khāliq*). The *mutakallimūn* seem to have been unanimous in understanding this creation in time and creation out of nothing (*ʿadam*). No Greek school seems to have understood things quite this way. Although there was some ancient disagreement about whether Plato thought the universe to have had a temporal beginning (and perhaps some early effort to understand Aristotle this way), the overwhelming Greek consensus was that there had neither been a first time nor a state of things in which there were (for example) no planets or stars.

This, of course, was quite compatible with their being a hierarchy of ontological dependence in the universe. At the pinnacle of this hierarchy stood the First, variously identified as the Good, the One, Being Itself, etc. Near the bottom stood plants and inanimate objects. In *Metaphysics*

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[18] We see both at work in al-Kindī 1974. There the style of argument he uses is one very familiar from the *kalām* literature. It proceeds by division. The conclusion to be established is one horn of a disjunction. The other is in turn divided into two disjuncts. One of these is closed by refutation, the other in turn divided and this process proceeds until all the branches save the original conclusion are closed. By this method, al-Kindī sets out to prove that there is a God.

Lambda, Aristotle had suggested that the Prime Mover (and perhaps other celestial items) might be involved in accounts (*logoi*) of what ordinary objects were and he had suggested that the Prime Mover might be or be involved in the final cause of other things. Plotinus had gone further, maintaining that in some fashion, the One accounted for everything else. Somewhere in the tradition this picture became intertwined with astronomy.

A central metaphysical question is the ultimate explanation for there being a universe of the sort we seem to find around us. The best astronomy until the seventeenth century BCE was one whose rudiments were Platonic and full development Ptolemaic. The universe is conceived as an organized whole. At the center of the universe we find the earth and then in concentric rings around it the moon, the sun, the five planets observable by the naked eye, and the 'fixed' stars. What was salient about these was their regular motion and their apparent stability. Both were thought to require explanation. For Plato, the ultimate source of motion was a soul and after Alexander of Aphrodisias the consensus held that the heavenly bodies were ensouled. The consensus held too that the cause of the movement of a soul was what Aristotle would have called a final cause. Souls, particularly the elevated souls heavenly bodies would have, were agents and acted for ends. This naturally raised the question for which ends?

Metaphysics Lambda, the central book of the *Metaphysics*, for the early *falsafa* tradition provided an answer. The souls of the heavenly bodies strive to be as much like the Prime Mover as is possible for them. Unlike the Prime Mover, which is an unmoved Mover, the souls of the heavenly bodies are moved but their motion is the most perfect – circular locomotion – and it is the only change which they undergo. So far Aristotle, but there is a question Aristotle did not face – why is it that there are heavenly bodies at all?

The entire Peri-Platonic tradition maintained that unity was more fundamental than multiplicity. The tradition also held that unity was as, or more, fundamental than Being. Hence, there was a genuine puzzle about how multiplicity could arise. The proposal of the Plotinian wing of the tradition is that it arose from the nature of thought itself. Aristotle had maintained that in thought the intellect (which was merely potential of itself) became the object of thought. For him, the Prime Mover was Thinking Thinking Thinking and thus the unity of the Prime Mover was preserved. However, Aristotle took the multiplicity of the heavens for granted and did not attempt to explain it. For Plotinus, unity itself was beyond both Being and Thought. Unity gave rise to the thought of *Nous*

and Plotinus concluded that the object of thought was not in every way identical to the subject of thought. In the hands of the *falsafa* tradition, this picture was radically extended and the central figure in this extension seems to have been al-Fārābī.[19]

One issue with which the Peri-Platonic tradition grappled was the status of mathematical objects. In some of his works, Plato had assigned them a status as intermediates between that of the Forms and the objects of sense experience. Aristotle, on the other hand, claimed that while they differed from physical objects in account they did not differ from them in being. Proclus in his *Commentary on Euclid's Elements* sided with Plato here and al-Kindī seems to have followed him. Al-Fārābī, on the other hand, sided with Aristotle and the *falsafa* tradition after al-Fārābī seems to have for the most part followed him. Perhaps for this reason theorists working in Arabic sought accounts of the cosmos which were at the same time mathematically and physically respectable – and so had to face metaphysical issues about the nature of the heavens and the causes of celestial motion that in the medieval Latin tradition (where astronomy and physics developed as separate sciences) were largely ignored.[20]

Central to the picture was a conception of the structure of the cosmos. Aristotle had argued that certain kinds of causal chains could not be infinite but also argued that the cosmos had always existed and that there had always been the species there now are (with members having roughly the life-span as they now have). Exactly how these claims were to be reconciled was not entirely clear and Philoponus had argued that they could not be, insisting instead that the cosmos must have had a beginning in time, and must have been created by an eternal being. This immediately raises issues about how an eternal being can act in time and why the cosmos is the particular age it actually is – issues which connect with issues about predestination and will since they seem to involve God's will to create.

Aristotle had argued in *De Caelo* that to account for the heavenly phenomena one needed to posit either forty-seven (or fifty-five – scholars disagree) separate motions and, because each natural mover moves with a single uniform motion, the same number of unmoved movers. There is some evidence that by late antiquity this picture had been simplified to one in which there were eight heavenly spheres – one for each planet and one

[19] See Janos 2009a.
[20] For the sharp separation of astronomy and both physics and metaphysics in the Latin tradition, see McMenomy 1984.

for the fixed stars. Within each sphere, there would have to be several distinct motions if they were to be circular. The Ptolemaic advances in astronomy made natural the addition of a further outer sphere which provided a single motion to the whole contained system. We thus have the nine spheres which make up the Farabian and Avicennian system.

Al-Fārābī began with the principle that something completely one could produce only one effect. Hence from the First, an intellect thinking of itself, as Aristotle had proposed, there could arise only one Second, its Thought, itself an intellect. This Second, however, could have two objects of thought – itself and the First and so at this level multiplicity could appear. From then on, the best available astronomy showed us how things were to go and al-Fārābī seems to have proposed that there were ten such intellects in total – God, a mover for the whole ecliptic, a mover for each of the seven celestial bodies (counting the fixed stars as one), and the Active Intellect. As al-Fārābī develops this system, there is an intellect for each celestial sphere which produces it as a by-product of its thinking. In addition, each sphere carrying a heavenly body is itself ensouled so that for each sphere there are three items – the Intellect, the celestial body, and the soul of the sphere.[21]

In Avicenna, we find the fullest working out of this tradition. Beginning with the Prime Mover, which we can identify with God, he too proposes a scheme of ten emanated intellects, one corresponding to each of the celestial spheres. The Prime Mover is, as Aristotle says, a thought – and in thinking of itself it gives rise to the first emanated intellect. Each of the other emanated intellects is then produced by the thought of the previous one. Each of these intellects thinks both of itself and of the First and so has two effects, the second being a celestial sphere which is a living being with a body (for Avicenna apparently a material body) and a soul. There are nine such spheres. For Avicenna, a basic metaphysical distinction is that between substance and accident. Anything which counts as accident is in something else as in a subject. Anything which counts as substance is not. In this sense, certain forms (substantial forms), matter(s) and composites of them all count as substances. God is absolutely simple and if it is correct to speak at all of God as having an essence, existence and essence coincide – God is its own existence. Whereas God is Necessary Being, everything else is Possible Being in that what it is neither includes nor excludes existence. The emanated intellects exist necessarily but not of themselves. They owe their existence to God and in all cases except the first emanated intellect to other emanated intellects. In virtue of depending on

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[21] See Janos 2009a, esp. ch. 3.

something outside themselves they include potentiality, the principle of which is matter, and so give rise to ensouled bodies.[22]

Al-Fārābī and Avicenna differ somewhat on how these intellects operate but they agree that they produce their effects by thinking. At the core of the cosmology, the *falsafa* tradition develops from its Peri-Platonic heritage the view that thoughts are things and that at the higher levels they are self-subsistent things ultimately responsible for what else there is. Within the Peri-Platonic traditions, these thoughts had a good claim to be divinities and the heavenly bodies themselves inherited this claim.

Aristotle had argued that the heavenly bodies were material. Proclus had claimed that they were immaterial (*ahylon*). The *falsafa* tradition had to adjudicate and different thinkers went different ways. The divinity of the heavenly bodies was an important feature of late Neo-Platonism.[23] Aristotle had already argued that they must be composed of better stuff than the things of the sublunary world. On the other hand, there are several verses of the Qur'ān which speak of the creation of seven heavens.[24] The Qur'ān speaks also of God's footstool (*kursī*) and throne (*'arsh*). If one includes God himself this makes ten cosmological items. The reconciliation of these two pictures may have been an important element in both later *kalām* and later *falsafa*. Obviously no Muslim, no matter how heterodox, could worship the planets as the late Platonists and their successors in Harran did, and the *falsafa* tradition does not. For al-Fārābī, the moon, sun, planets, and stars occupy an intermediary position between the generable and corruptible things of earth and completely immaterial things. They can thus be studied partly in physics and partly in metaphysics. He sometimes speaks of them as a third realm (*'ālam*).

Within the Aristotelian division of the sciences, it is metaphysics which studies immaterial things. Physics can establish the existence of such things but not their nature. Because the heavenly bodies are bodies they can be studied in physics, albeit a special branch of physics, and their motions can be studied in astronomy, a special branch of applied mathematics. They are, however, not merely matter and both what else constitutes them and how they come to move are properly studied in metaphysics.[25]

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[22] See Avicenna 2005: 326–330.
[23] See the story of Proclus worshipping the moon in Marinus 1925 and Simplicius' criticism of Philoponus as a *tikkun* for not doing so in Philoponus 1987.
[24] E.g. Qur'ān 2:29, 17:44, 23:86, and 65:12.
[25] Al-Fārābī 1968: 129: "He [Aristotle] had to investigate also whether the substances of the heavenly bodies consist of a nature or a soul or an intellect, or something else more perfect than these. These matters are beyond the scope of natural theory. For natural theory includes only what is included in the categories; and it has become evident that there are here other instances of being not

Within the Farabian and the Avicennian schemata, the last of the Emanated Intellects, that which governs the sphere of the moon, occupies a special place. It is identified with the Active Intellect hinted at in Aristotle's *De Anima* and elaborated in the *De Intellectu* attributed to Alexander of Aphrodisias and especially in Themistius' *Paraphrase of the De Anima*. While prior Intellects are each capable of producing one other immaterial Intellect, the Active Intellect cannot produce any immaterial substance but does play two crucial roles. On the one hand, it is the 'Giver of Forms' responsible for each *material* thing being of the kind it is. On the other hand, it is the repository of forms union with which accounts for the human capacity to think. The celestial bodies and all the objects in the sublunar world are composites of matter and form. For Avicenna, substantial forms are powers to produce qualities. Matter, on the other hand, is that in substances which accounts for their capacity to be otherwise or not be at all.

There is a close connection for Avicenna between materiality and corporeality. Unlike, for example, his Andalusian contemporary, Solomon Ibn Gabirol, Avicenna thinks it impossible that there be incorporeal matter. He thinks this because he thinks that matter is always informed and that the kind of form which can be the form of matter is one which is potentially divisible into parts. To be corporeal just is to be a single thing which is divisible into parts. In the case of the celestial bodies the element of which they are made has no contrary and so no substantial change is possible in them. Since division would amount to a substantial change – making two out of one – this entails that while celestial bodies are such that we can conceive of divisions in them and so are extended, they cannot be physically divided and so are ungenerable and incorruptible.

With sublunary substances, things are otherwise. They are composed of elements all of which do have contraries and so they are physically divisible and both generable and corruptible. Moreover, although Avicenna is certainly not an atomist, he does seem to think that each composite body is made up of many simple bodies. The interaction of the many simple substances which are the elemental bodies out of which a composite substance is made produce a uniform composite substance.[26]

For Avicenna, material objects are composites of matter and form and he supposes that individuation of material substances of the same species is

encompassed by the categories: that is, the Active Intellect and the thing that supplies the heavenly bodies with perpetual circular motion," (trans. Janos 2009a: 58).
[26] See Stone 2001.

due to the matter. This naturally raises the question of how matter is itself individuated. The key to the individuation of matter lies in its three-dimensionality. What accounts for this? Avicenna argues that matter can be understood in two ways, as that which underlies substantial change and as that which is utterly indeterminate. The two conceptions are distinct because all substantial change (as contrasted with creation *ex nihilo* and annihilation) is of bodies and bodies share a common feature; they are all three-dimensional. Hence no substantial change will replace a three-dimensional object with one that is not (or vice versa).[27] If there were matter that was not three-dimensional then since matter is of itself completely indeterminate it should be possible for the same matter to be that of a body at one time and a non-body at another and so there would be substantial change of non-bodies after all. Thus, even though it is not part of the concept of matter that it is three-dimensional, it is so necessarily.

Avicenna uses this feature of matter to explain how there can be distinct material substances of the same species. He seems to think that because matter is necessarily three-dimensional, whenever a material substance is generated, it is generated in a unique location. Since no two material substances (at least of the same species) share a location, substantial form(s) of the same species in matter differently located are distinct.[28] Even though these very general features of the sublunar world bring us to the very edge of metaphysics, a more detailed discussion is best left to the physicist.

Al-Fārābī and Avicenna share at least the skeleton of a cosmology. They agree that the Movers of the Celestial spheres and the stars and planets themselves proceed in series from the First and that the tenth Mover, the Active Intellect is the 'Giver of Forms.' However, this was not the unanimous view of the *falsafa* tradition. In particular, in his *Long Commentaries* on the *Physics* and the *Metaphysics* and in his *Tahāfut al-Tahāfut* Averroes rejects it. Averroes' rejection of this model seems to correspond with his acceptance of the view that the First moves the universe as a final and not an efficient cause. The heavens move because they 'desire'

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[27] See Avicenna 2009, esp. 1.2.
[28] Exactly how this feature of Avicenna's thought works I confess I do not understand. Within the Aristotelian scheme, location is an accident and accidents are individuated by the substances of which they are accidents. To suppose that these substances are individuated by those very accidents would involve a vicious circle. The thought that substances might be individuated by accidents is not unique to Avicenna. It seems a feature of Stoic thought and is found in Boethius and many early medieval Latin thinkers.

the First and substances here below the moon are generated because their causes are moved by 'desire' for the First.[29]

IV   Causation

Perhaps the most famous part of the dispute between al-Ghazālī and the *falāsifa* (philosophers) is that over whether the universe could (and did) have a beginning in time. Philoponus and the *kalām* traditions had claimed that it could, did, and even must have and al-Kindī agreed. The over-whelming consensus of the Peri-Platonic traditions, joined by al-Fārābī and Avicenna, argued that it could not. Al-Ghazālī joins this debate on the side of the *kalām* traditions and Averroes replies for the *falāsifa*.

   At the root of this debate lie a number of issues, including the correct understanding of the infinite, which are beyond the scope of our discussion. However, one issue which is metaphysically significant and crucial for the debate is how to understand the related notions of agency and cause. The *kalām* traditions were unanimous that only intelligent beings could be agents, properly speaking, and that being an agent (*fāʿil*) was a necessary condition for being a cause (*sabab*), properly speaking. Al-Ghazālī is speaking for that consensus when he writes that "we say 'agent' is an expression [referring] to one from whom the act proceeds, together with the will to act by way of choice and the knowledge of what is willed."[30] The disagreement between the Muʿtazila and Ashāʿira on this score seems to have been entirely over whether there could, even in principle, be *finite* agents. The Ashāʿira claimed that only God was properly an agent while the Muʿtazila allowed that humans could be the agents of our own choices. Central both to what united and what divided the *mutakallimūn* seems to have been the thought that one cannot *act* unknowingly – that, as we might put it, acting is an intentional context so that to *do* A rather than B requires being aware of what distinguishes A and B. The Ashāʿira seem to have emphasized that only an omniscient being could be fully aware of what would distinguish some action A from everything else and so only an omniscient being could properly act. The Muʿtazila, on the other hand, while agreeing that to act one needs be fully aware of what one does seem to have thought that in the *choice* between A and B one is aware of the difference between A and B and that this is sufficient for being the agent of the choice. To the best of my

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[29] The development of Averroes' thought on this issue is rather complex, but the sketch given here seems to characterize every phase of it. See Davidson 1992, ch. 6 and esp. 226, n. 33.

[30] Al-Ghazālī 2002: 56, trans. Marmura.

knowledge the Muʿtazila did not think that finite agents could perform actions other than choices.[31]

The *falāsifa* were unanimous that non-intelligent beings and even inanimate beings could be causes and, in the relevant sense, agents. They insisted that the world contained many substances with natures and that it was central to the conception of anything with a nature that it could act and (in the sublunar world at least) be acted upon. This picture is essential to the cosmological scheme outlined in the last section, both grounding the doctrine that a single cause can produce only a single effect and explaining how nonetheless there can be multiplicity in the world.

Aristotle's account of causality was central to the *falsafa* picture. On that account, there are four types of causes, two of them, the formal and material causes, being constituents of the typical effect, the efficient (or agent) cause being always distinct from the effect, and the final cause, being a more complicated matter. Two distinctive features of Aristotle's picture taken up by al-Fārābī and developed by Avicenna after him are (1) that there is an internal, perhaps even a conceptual, connection between the efficient cause and its effect and (2) that a cause and its effect are simultaneous, the priority of cause to effect being not temporal but, as Aristotle put it, a priority of nature.

For Aristotle and for Avicenna, the paradigmatic cases of efficient causes are healings of patients, buildings of buildings and (for Aristotle himself) sculpting of sculptures. They are all cases of art, not nature, and they all raise issues about what exactly is the cause – and for that matter what exactly is the effect. Aristotle often talks as though the efficient cause of an effect is a substance, perhaps one as characterized by an accident – a doctor or a builder.[32] Properly speaking then doctors heal and builders build. Moreover, the products of these activities are properly characterized as healed (patients) or as built (buildings). Thus while in some sense a bout of laughter may result from a doctor's activity (say if she administers a drug which causes hilarity as a side effect) it is not 'qua doctor' that she produces the laughter while it is 'qua doctor' that she produces the healing. In the central cases, there are conceptual connections among the efficient cause, the activity of the cause, and the effect. The efficient cause (the doctor) is characterized as it is (as doctor) because as such it acts (heals) to produce an effect (the healed patient) which itself may be characterized as the typical result of just that sort of acting. Moreover in such paradigm cases as doctoring the process (of

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[31] This is also the conclusion reached by H. Nasution in Martin, Woodward, and Atmaja 1997: 188–190.
[32] Though sometimes he suggests it is properly speaking something more abstract – the art of medicine as found in the doctor or that of building as found in the builder.

healing/doctoring) itself is guided by the effect. The doctor's doctoring is so-called because it is to produce that effect. Thus, we could say that it is essential to the doctor qua doctor that she doctor (and so heal) to the activity of doctoring that it be done by doctors and to healed patients that they have been produced by doctors doctoring.

   Given these conceptual connections – and the thesis that all cases of accidental causing are parasitic upon such cases of per se causing – the *falāsifa* can plausibly maintain that the central cases of causation are ones in which things act naturally to bring about effects which are the natural products of such acting. Moreover since the causes (e.g. doctors) are characterized in terms of the effects they produce (healed patients) and the processes by which they produce them (healings) per se, one kind of per se cause could only produce one kind of effect and one particular cause in one particular set of circumstances only one effect per se. Thus, where effects differ either the cause or the circumstances must differ. Hence, as al-Fārābī and Avicenna conclude, something as unified as the One/Being/First Cause acting in an environment in which its activity is not conditioned by anything else would produce one being/effect. To get multiplicity we need either a distinction within the cause or a distinction within the circumstances in which the cause acts. The unique effect of the First Cause thinks two thoughts because there are two objects to be thought about – itself and the First Cause – and so produces two effects. Thus, multiplicity is born.

   A second crucial feature of the *falsafa* account of causality is that per se causes are always simultaneous with their effects. Al-Ghazālī attributes to the *falāsifa* before him the physical example of a hand stirring water in a bowl. Assuming no void (as the *falāsifa* do), the water must move simultaneously with the hand (since otherwise two bodies would occupy the same place at the same time.[33] The example is physical but the point is metaphysical: effects are *effects* inasmuch as they are being caused. Once the cause ceases to operate the thing which was effected may persist but not inasmuch as it is an effect. The *falsafa* tradition uses this feature of causality to reconcile the apparent tension between Aristotle's commitment to the eternity of the world and his proof in *Physics* VIII for the existence of a First

[33] "They claim that whoever asserts that the world is posterior to God and God prior to it can mean by it [only one of two things]: [He can mean] that He is prior in essence, not in time, in the way that one is prior to two (which is [a priority] by nature, although it can temporally coexist with it); and like the priority of cause to effect, as with the priority of a person's movement to the movement of [his] shadow that follows him, the hand's movement and the movement of the ring, and the hand's movement in the water and the movement of the water – for all these are simultaneous, some being a cause, some an effect" (al-Ghazālī 2002: 30), trans. Marmura.

Cause of motion. Whereas Philoponus and the *kalām* traditions claimed that no series could be actually infinite and so there must have been a first moment of the existence of the world (and al-Kindī agreed), at least Avicenna and the *falsafa* distinguished series of accidentally ordered causes, which they claimed did not produce genuine ordered unities (*jumla*) and so might exceed any number from per se ordered causes which did and so must be finite. In a per se ordered sequence each member of the series involves in its causing all those 'prior' to it and these must form a totality if the conditions are to be present for that member to act.

From the point of view of the *mutakallimūn*, this entire picture is a chimera depending upon the metaphorical extension of the concepts of agency and cause from their natural home among intelligent choosing beings. As a number of recent writers have emphasized there is reason to think that our concepts of cause and agent are intimately connected with our own sense of ourselves as agents.[34] Even Aristotle, when he seeks to make his conception of nature intuitive, remarks that for something to act naturally is to act *as if* it were the product of art.[35] Considerations of this sort structure al-Ghazālī's critique of the *falsafa* conception of causation and it is to them that Averroes replies in the 17th Disputation of his *Tahāfut al-Tahāfut*.[36] At the center of al-Ghazālī's critique lies the claim identified above – that an agent (*fāʿil*) properly speaking is one who chooses what it knows for a reason. In so restricting the notion of agent al-Ghazālī is respecting the original Greek as well as his native Arabic. An *aition* was originally someone who could be held responsible for something and an *aitia* the reason or explanation of why he was responsible.[37] We only metaphorically hold inanimate things like the weather responsible and yet, argues al-Ghazālī, if we extended the notion of agency as the *falāsifa* would wish we would have to do so literally. The paradigm cases of the responsible are those who chose to do what they do, knowing 'what' they are doing. Al-Ghazālī's definition of an agent also makes reference to acting for a reason. Like the *falāsifa*, al-Ghazālī thinks that doings are for an end. Aristotle himself had stressed that genuine agents act for ends and had claimed that acting for an end does not require knowing

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[34] E.g. von Wright 1971.
[35] See *Physics* II.8 199b28–31: "It is absurd to suppose that purpose is not present because we do not observe the agent deliberating. Art does not deliberate. If the ship-building art were in the wood, it would produce the same results by nature. If, therefore, purpose is present in art, it is present also in nature. The best illustration is a doctor doctoring himself: nature is like that."
[36] Al-Ghazālī 2002 develops his critique of what he takes to be an illegitimate extension of the notion of agency in Discussion 3; trans. Marmura, 56 and Averroes' replies. The issue is taken up again in the 17th Discussion, trans. Marmura, 169ff
[37] See Frede 1987b: esp. 129–130.

the end for which one acts. Al-Ghazālī finds this claim of an immanent teleology in inanimate things preposterous.[38] Al-Ghazālī insists on the intuitive distinction between acts and states. While states might be permanent, acts involve change.[39] God's creating the world is His act and so an event. It therefore could not be permanent and indeed perhaps could only be momentary thereby suggesting the Ashāʿira doctrine of continuous creation.

So far I have argued as if the *falsafa* tradition were homogeneous on issues about causality but this is far from being the case. Avicenna follows Aristotle in insisting that everything that is, *when it is*, 'is' necessarily. Among other things this is the ground of his explanation of Divine Providence. God, the Necessary Existent, in being aware of all the causal chains there are is aware of all of their products and so aware of each singular thing and event. This does not of course entail that everything that exists will exist forever. The Intellects that proceed in series from the Necessary Existent (and exist in the timeless state he calls the '*dahr*') will not perish nor will the celestial bodies, but the ordinary things of the sublunary world come and go. Nonetheless, like the Intellects and celestial bodies, they are necessary through their causes – in the sense, that it is necessarily given that if those causes exist, they also do.

The *falāsifa* also disagree about the upshot of Aristotle's 'strong' doctrine of per se causes. As Avicenna understands the view, the per se causes of a thing are partially constitutive of what that thing is, its *māhiyya*. It is because the hierarchy of causes 'above' a thing, leading back to the Necessary Existent, is partially constitutive of the thing that by understanding what those causes 'are' the necessary Existent can understand the effects. Given then that the Necessary Existent gives existence to those chains of causes it completely understands the world.

Averroes disagrees on both counts. For him to be necessary is to have no potentiality and existing necessarily entails existing eternally. Thus, he rejects Avicenna's category of things possible in themselves but necessary through another. God and the Movers of the celestial spheres are necessary beings, everything else is merely contingent (*mumkin*). This, he argues is compatible with God being the cause of the universe because God is the ultimate final cause and a final cause is the cause of the operation of those efficient causes it regulates. The celestial bodies, which Averroes insists to be simple bodies, move as they do because they are motivated by desire

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[38] The subsequent history of science has vindicated him on this score. Despite repeated efforts to find a teleology in nature without positing intelligent design none has achieved much traction.

[39] There could not be an eternal *hitting* of a baseball precisely because such hitting involves a change from one state to another, see Parsons 1990.

ultimately for God and their moving as they do is the necessary expression of their essences. They could not be *without* moving as they do. There is a sense in which the fact that they 'are' is due to God. Below the moon, causes operate as they do and so produce the effects they do because motivated by desire for God. While the efficient cause of an animal being generated may be its male parent, the parent's activity can be traced back to God as a final cause and the ultimate explanation of that generation will require reference to God.

Averroes also disagrees with Avicenna's reading of Aristotle's doctrine of per se causality. As Averroes understands matters to cause a composite sublunar thing (the only kind of thing that can be *brought* into existence) is to inform particular matter. This is in general done by changing things – altering them or moving them around locally. What does this is, in general, no *part* of the resulting thing and no reference need be made to it in defining the thing.

Averroes response to al-Ghazālī's critique of the earlier *falsafa* doctrine of causality is nuanced. On the one hand, Averroes grants that to understand per se causation as a matter of nature in the way Avicenna did is to eliminate agency. On the other hand, he insists that to reject that there are substances with causal powers of their own is to deny that there are genuine distinct things in the world at all. He insists that it is precisely because there are such genuinely powerful things that God can as a final cause create a providential order and make this the best of all possible worlds.[40]

IV Conclusion

Metaphysics within the orbit of Islam, which at the time of Averroes' death in 1198 BCE was the most sophisticated in the world, did not die with him. While Averroes had only a modest influence within that orbit, both Avicenna and al-Ghazālī became and to a large extent remain towering figures around whom there has grown up enormous commentary literature and from whom there have developed significant new strands of metaphysics. In that sense, both the *kalām* and the *falsafa* traditions remained (and remain) alive. However, the study of those subsequent developments as part of the history of philosophy has hardly begun and will here be passed over in a silence it does not deserve.

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[40] For a discussion of Averroes' defense of the claim that the best of all possible worlds requires powerful non-divine particulars, see esp. Kogan 1985.

The Arabic reception of the Nicomachean Ethics

Josh Hayes

1   The reception tradition

Aristotle's *Nicomachean Ethics* (henceforth *N.E.*) remains a foundational text in the history of Western philosophy. It is among the most widely disseminated and influential treatises in the Aristotelian corpus and constitutes the first systematic source for all subsequent ethical inquiry. However, if we are to restrict our evaluation of the *N.E.* to the local and regional tradition of the Western canon, we risk severely invalidating its most significant purpose and function to disclose the essence of the human being qua rational animal. While Aristotle does not speak about the alleged value of ethics as a domain of inquiry that purportedly transcends the historical and cultural boundaries of the Greek city state (*polis*), we shall consider how we might extend his investigation of virtue and happiness into a universal, indeed, global domain. For what is indicated and at least approximated by those Arabic philosophers who receive the *N.E.* is the possibility that Aristotle's ethics and its dependence upon the historical character of the *polis* might in fact transcend its regional locality so that we might begin to envision how ethics could function globally on a planetary and even on a cosmic level. Aristotle's ethics functions as an overture and provides an orientation toward grounding those principles which constitute the human being qua political animal in such a way that politics or the domain of ethico-political thinking marks the height of all philosophical inquiry and the absolute perfection of the human being *tout court*. Here, Aristotle's ethico-political inquiry would thereby exceed metaphysics as the most crowning achievement of human investigation. As al-Fārābī states in his *Attainment of Happiness* (*al-Tanbīh ʿalā sabīl al-saʿāda*), the science and inquiry of ethics would be oriented by the task to "investigate those intellectual principles and the acts and states of character with which the human being labors toward this perfection.

From this in turn emerges, the science of the human being and political science."[1] Within the Arabic tradition this view is perhaps most widely espoused by al-Fārābī and his treatises dedicated to the philosophies of Plato and Aristotle. As we trace the history of the Arabic transmission and reception of the *N.E.*, we must begin by reflecting upon how this tradition of Platonic and Aristotelian ethico-political inquiry came to constitute the foundation for a uniquely Arabic conception of political science. Al-Fārābī is the first philosopher to concretely elaborate the global necessity of such a conception:

> It consists of knowing the things by which the citizens of cities attain happiness through political association in the measure that innate disposition equips each of them for it. It will become evident to him that political association and the totality that results from the association of citizens in cities correspond to the association of the bodies that constitute the totality of the world. He will come to see in what are included in the totality constituted by the city and the nation the likenesses of what are included in the total world … This, then, is theoretical perfection.[2]

In what follows, I will attempt to reconstruct the historical narrative of the transmission of the *N.E.* into the Arabic-speaking world in the ninth and tenth centuries. This brief historical reconstruction is by no means exhaustive but merely intends to trace quite broadly the degree to which its transmission and reception transformed the Arabic tradition of Aristotelian commentary. For what is at stake in such a reading is not merely intellectually rehearsing Aristotle's arguments, but coming to understand how the probing and restless nature of Greek philosophical inquiry comes to be embodied in the Arabic commentators themselves. By continuous reference to the longstanding unity between ethics and politics in the Aristotelian tradition, this essay seeks to present the historical foundation for the transmission of Aristotle's ethical treatises, specifically the *N.E.* Following the masterful survey provided of this transmission by Douglas M. Dunlop, I will begin with a historical synopsis of the Arabic reception of the *N.E.* before turning to those philosophers who were most influential in appropriating and integrating the *N.E.* into their respective works, namely al-Kindī, al-Fārābī, and Averroes.[3]

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[1] Al-Fārābī 1962: 23. trans. Mahdī.   [2] Ibid. 24–25.
[3] See Dunlop 2005 (Akasoy and Fidora 2005). See also Akasoy 2013: 85–106 for an excellent summary of the Arabic and Islamic reception of the *N.E.*

As previously noted by Dunlop, the Arabic interest in the *N.E.* dates back more than a thousand years. The Arabic commentary on this seminal text is largely attributed to Christian subjects of the caliphate during the early Abbasid period (750–900). The transmission of the *N.E.* throughout the centuries is preserved in one single manuscript first discovered in 1951–1952 by the Cambridge scholar, Arthur Arberry, during a visit to the Qarawiyyin library in Fez. The manuscript contains the majority of the *N.E.* in Arabic.[4] This is a crucial text given the numerous references made to the *N.E.* by al-Kindī, al-Fārābī, al-ʿĀmirī, Miskawayh, Ibn Bājja, Averroes, and others. Although the *N.E., Eudemian Ethics*, and *Magna Moralia* are mentioned in their respective biographies of Aristotle, there is insufficient historical evidence to prove that any of these treatises except the *N.E.* was translated into Arabic. In fact there is only one reference to the translation of the *N. E.* in a commentary, the *Fihrist*, by Ibn al-Nadīm in the tenth century:

> And among the books of Aristotle – copied from the handwritings of Yaḥyā ibn ʿAdī from the catalogue of his books – was the *Book of Ethics* explained by Porphyry, twelve Books, translated by Isḥāq ibn Ḥunayn. And there was with Abū Zakariyah'(sc. Yaḥyā ibn ʿAdī) in the handwriting of Isḥāq ibn Ḥunayn a number of books with the Commentary of Themistius. They came out in Syriac.[5]

However, with the inclusion of the Fez manuscript dated Shaʿbān 619 AH; i.e. October 1222, the translation can conceivably be dated much earlier to the ninth or at least tenth century. The accuracy of this translation, specifically its capacity for retranslation, is quite impressive and presents the most reliable philological basis for the predominant relevance of the *N.E.* to the Arabic tradition, specifically for al-Kindī, al-Fārābī, al-ʿĀmirī, Miskawayh, and Averroes, who among others are most responsible for its historical transmission throughout the centuries.

II   The first philosopher of the Arabs

Al-Kindī (801–866), the "first philosopher of the Arabs," speaks only in a precursory manner about Aristotle's ethical treatises. Al-Kindī does not engage in a systematic investigation of the *N.E.* However, al-Kindī does

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[4] The manuscript was first discovered in two parts; in the winter of 1951–1952 by Arthur Arberry and the summer of 1959 by Douglas Dunlop in the Qarawiyyin library in Fez. For a critical overview of the reception history, see Dunlop 2005 (Akasoy and Fidora 2005); and Akasoy 2013: 86–87.

[5] See al-Nadīm 1871–1872: vol. 1, 252; 1970: 606, trans. Dodge; Dunlop 2005 (Akasoy and Fidora 2005: 26); Akasoy 2013: 89.

provide an initial glimpse into how Aristotle's ethics first came to be appropriated. According to Dunlop's account, the earliest mention of the *N.E.* appears in his *Letter on the Number of Aristotle's Books and What Is Needed to Acquire Philosophy* (*Risāla fī kammiyyat kutub Arisṭūṭālīs wa-mā yuḥtāju ilayhi fī taḥṣīl al-falsafa*). The date of the composition of the *Risāla* is estimated to be during the caliphate of al-Maʾmūn (813–833) and appears to be composed earlier than the *Theology of Aristotle* (*Uthūlūjiyyā Arisṭūṭālīs*) and later than the *Greatest Book on Harmony* (*al-Kitāb al-aʿẓam fī l-taʾlīf*).[6] The historical evidence indicating the authenticity of its composition rests upon the dating provided by Ibn Nāʿima, who translated the *Theology of Aristotle* from Syriac in 835 BCE for al-Maʾmūn's successor and student of al-Kindī, al-Muʿtaṣim. The text is divided into five parts beginning with al-Kindī's introductory remarks before proceeding to enumerate the necessary books one must study to become a philosopher. Al-Kindī begins with the *Categories* and then turns to the ethical treatises before treating mathematics, psychology, and metaphysics as those fields that do not concern physical bodies. After enumerating those works contained in the *Organon*, al-Kindī first discusses the order of ethics as following from the study of the soul (psychology) and metaphysics:

> They are his books on ethics, I mean the ethical qualities and government of the soul, that it may preserve in human virtue and be one with it, which is the aim of the man of balanced nature in his present life and his means of salvation in the world to come, for which there is no substitute, no equivalent for its benefit and no wellness with its loss.[7]

Al-Kindī's conspicuous placement of ethics after metaphysics indicates that ethics is to be comprehended as the highest mode of human perfection as proceeding from if not exceeding metaphysics. Indeed, ethics also exceeds the study of the soul (psychology) although the two disciplines are by no means separate in their function and purpose as Aristotle reminds us at the conclusion of the first book of the *N.E.*[8]

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[6] Dunlop 2005 (Akasoy and Fidora 2005: 6–7).

[7] Al-Kindī 1950–1953: 363–384, trans. Dunlop 2005 (Akasoy and Fidora 2005: 7).

[8] "Clearly, it is human virtue that we should be examining, for what we are seeking, too, is the good and happiness for man; and by 'human virtue,' we mean not that of the body but that of the soul, for it is of the soul too, that happiness is stated by us to be an activity. If such be the case, it is clear that the statesman should understand in some way the attributes of the soul, like the doctor who attends to the eyes or the whole body, and to the degree that the politics is more honorable and better than medical science. Now the cultivated among the doctors take the trouble to learn many things about the body. So the statesman, too, should be investigating attributes of the soul, both for the sake of these and as much as is adequate to what is sought, for greater precision is perhaps rather burdensome in view of what he is aiming at" (Aristotle 1984c: 1102a14–26, trans. Apostle).

Throughout the *Risāla*, al-Kindī refers to the large book on ethics (*Nīqūmakhiyā*) written to his son, Nicomachus, containing eleven books and another without name, "And among them is another book, less than the number of these discourses (*maqālāt*) [and] resembling the meanings of his book [written] to Nicomachus. He wrote it to one of his brethren."[9] The reference to this lesser known work might indicate al-Kindī's acquaintance with the *Eudemian Ethics*, dedicated to Aristotle's student, Eudemus. Al-Kindī also mentions a third treatise by Aristotle on ethics, "Apart from these three treatises, there are many books by him on minor matters, and letters on various minor matters also."[10] The most distinct possibility might be that al-Kindī is referring to the *Magna Moralia*, since the Arabic tradition consistently speaks of three ethical works of Aristotle, and a lesser version of the *N.E.* Al Kindī concludes the *Risāla* by expanding his list to include a summary of the aim of the ethical–political books (*fī kutubihi al-khulqiyya al-siyāsiyya*) and mentioning a second book, "As for the aim in his second book, and it is that which is called *Būlīṭīqī*, i.e. the Statesman (*al-Madanī*), which he wrote to one of his brethren, it deals with the like of what he said in the first [book]. He spoke in it more of political government. Some of its discourses are exactly the same as some of the discourses of the first book."[11] While this might appear to be an oblique reference to a purported lost treatise by Aristotle of Platonic influence, the scholarly consensus of Dunlop and González Palencia confirms that al-Kindī is most likely referring to Aristotle's *Politics.* However, there remains a longstanding debate about the historical plausibility of the transmission of this text into Arabic.[12]

III   The Second Teacher

Similar to al-Kindī, al-Fārābī (*c.*874–950) enumerates the books of Aristotle in his *Letter on the Necessary Preliminaries before the Study of Philosophy* (*Risāla fīmā yanbaghī an yuqaddama qabl taʿallum al-falsafa*), "As for the books from which there are learned the things which are put into operation in philosophy, from some of them is learned improvement of morals, from others, the rule of cities, and from the others, the rule of

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[9] Al-Kindī 1950–1953: 363–384; trans. Dunlop 2005 (Akasoy and Fidora 2005: 7).   [10] Ibid.
[11] Ibid. 8–9.
[12] The scholarly debate entertains the possibility that al-Kindī is referring to either Aristotle's *Politics* or Plato's *Politicus*. Dunlop 2005 (Akasoy and Fidora 2005: 8–11) suggests that al-Kindī identifies the second book with the *Politicus*, Plato's *Statesman*, as supported by the identification of *Būlīṭīqī* with *al-Madanī*. See al-Fārābī 1961b: 17–18. The *Kitāb Būlīṭīqī* is identified with *Kitāb al-Siyāsa* of Aristotle, i.e. the *Politics*.

the household."[13] In a rather peculiar manner, al-Fārābī does not explicitly cite the *N.E.* One would expect al-Fārābī to provide an explicit reference to the text in his works, especially his *Philosophy of Aristotle (Falsafat Arisṭūṭālīs)*. However, the *Philosophy of Aristotle* does not stand independently on its own but constitutes a trilogy alongside the *Attainment of Happiness (Taḥṣīl al-saʿāda)* and the *Philosophy of Plato (Falsafat Aflāṭūn)*. In the *Philosophy of Aristotle*, al-Fārābī enumerates the order of Aristotle's treatises, but neglects to mention Aristotle's ethico-political treatises, to include the *N.E. (Kitāb Niqūmākhiyā)* also known as the *Book of Ethics (Kitāb al-Akhlāq)*. This omission is especially relevant given the fact that al-Kindī and others during his period, especially al-Yaʿqūbī and Ibn al-Nadīm, commonly refer to the *N.E.* as following after the *Metaphysics*. Although a lesser known commentator of the same period, Ibn Abī Uṣaybiʿa, cites al-Fārābī's *Philosophy of Aristotle* as being incomplete at the end (*makhrūm al-ākhir*), the account provided by Qāḍī Ṣāʿid (1912) indicates that the Philosophy of Aristotle concludes with the first part of the *Metaphysics*.[14] If this is the case, why did al-Fārābī neglect to consider Aristotle's ethico-political treatises as belonging to philosophical inquiry? In his *Philosophy of Aristotle*, theoretical philosophy, including logic and metaphysics, remains paramount while ethics remains distinct from first philosophy. However, it remains quite historically plausible that al-Fārābī was not yet acquainted with Aristotle's ethical writings. While al-Fārābī wrote either a complete commentary on the *N.E.* or at least a partial commentary on the first part, the work as a whole remains lost. The evidence indicating the existence of such a work first appears in his *Harmony of Plato and Aristotle (Kitāb al-Jamʿ bayna raʾyay al-ḥakīmayn Aflāṭūn al-ilāhī wa-Arisṭūṭālīs)*. After dismissing those commentators who claim that there is a relevant difference between Plato and Aristotle on the issue of moral habits, al-Fārābī concludes:

> In truth, the matter is not as they presume because in his book known as *Nīqūmākhiyā*,' Aristotle speaks only about political laws, as we have explained in several places of our commentary on that book. Even had he also discussed moral habits, as Porphyry and many commentators after him said, then his discussion would have been about moral laws – and a legal discussion is always general and absolute, without reference to anything else.[15]

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[13] See al-Fārābī 1892: 51; trans. 86; Dunlop 2005 (Akasoy and Fidora 2005: 16).
[14] See Dunlop 2005 (Akasoy and Fidora 2005: 17).
[15] See al-Fārābī 2001: 147–148; trans. Butterworth modified; Dunlop 2005 (Akasoy and Fidora 2005: 12). As Butterworth notes in al-Fārābī 2001: 148, there are several references to this commentary, including al-Qifṭī 1903: 279; Uṣaybiʿa 1884: 138; and Ibn al-Nadīm 1871–1872: 382.

We can only surmise that al-Fārābī is defending Aristotle's discussion of the moral habits in *N.E.* II.1 by indirectly referring to *Republic* VII 518d–e, where Socrates argues that ordinary virtues are produced by habituation. The acquisition of moral virtues by habituation implies that they are liable to change and transformation and thereby can only be judged from a higher standard of moral laws that are always universal and unconditional. Subsequent references to the lost commentary are provided by Ibn Bājja, Ibn Ṭufayl, Averroes, and Maimonides.[16]

Al-Fārābī's appropriation of the *N.E.* is most apparent in his *Harmony of Plato and Aristotle* divided into thirteen chapters that respectively consider the proof of the existence of the First Creator, the causes existing due to the First Creator, the existence of soul and intellect, and recompense for good and evil actions. The treatise is also indebted to the influence of Porphyry who also wrote a manuscript of the same title.[17] Al-Fārābī begins the treatise in typical Aristotelian fashion by beginning with the opinions of those commentators who claim that there is a disagreement between Plato and Aristotle regarding whether or not the world is generated or eternal. After invoking the cosmological argument, al-Fārābī shifts the debate about their disagreement away from the arguments of Plato and Aristotle and onto the commentators themselves. Al-Fārābī's most sustained account of the *N.E.* is conspicuously situated between a chapter on vision and a chapter on learning and recollection perhaps to reflect upon those commentators who pretend to be philosophers. Al-Fārābī indicts those commentators who literally fail to see the apparent agreement between Plato and Aristotle since they remain so intractably mired in the authority of their own arguments that they often fall prey to equivocation. Therefore, it is necessary that the true or genuine philosopher be virtuously disposed to correctly discern the beliefs and arguments of his predecessors without falsification, prejudice, or contention. Here, al-Fārābī's rhetorical strategy deserves careful investigation since the indictment of his detractors functions as the cause for turning to the *N.E.* as a moral lesson. At the outset of chapter 9, al-Fārābī discusses Aristotle's treatment of the moral habits of the soul (*akhlāq al-nafs*) and their universal acquisition according to the capacities of the human being, "Aristotle in the *Nicomachean Ethics*

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[16] See Maimonides, 1856–1866: III, 43, 96a; 1963: 571–572. trans. Pines Dunlop 2005 (Akasoy and Fidora 2005: 50); and Neira 2013: 77–80.

[17] With the exception of Ibn al-Nadīm and al-Qifṭī, minor attention is devoted to the Arabic sources of Porphyry's commentary. Only al-Fārābī directly cites the influence of Porphyry and many others before him as commenting on the *N.E.* See al-Fārābī 2001: 147–148, trans. Butterworth; and Akasoy 2013: 101–102 for Miskawayh's reliance on Porphyry's commentary.

(*Kitāb Nīqūmākhiyā*) makes clear that all moral habits are habits, that they undergo change, that none of them is by nature, and that a human being is capable of moving from one to another by habituation."[18] However, while al-Fārābī considers the interconnection between ethics and politics by retrieving Plato's discussion of the constitution of various political regimes, al-Fārābī also turns to an account of Aristotle's moral habits necessary for those who are to bring about and found such regimes by explicitly focusing upon those best suited to acquire the requisite moral habits:

> Aristotle does not deny that for some people and some individuals it is easier to transfer from one moral habit to another and for others it is harder, as he has explicitly declared in his book known as the 'little *Nīqūmākhiyā.*' He enumerated the reasons for the difficulty and ease of transferring from one moral habit to another – how many there are, what they are, how each of them reasons [functions], and what facilitates or impedes them.[19]

While al-Fārābī clearly interprets Aristotle's *N.E.* as a prolegomena to the *Republic*, a manual for the training of the founders and rulers of these regimes, the most relevant difference between both passages obviously concerns al-Fārābī's reference to the *Nīqūmākhiyā* and *little Nīqūmākhiyā* since al-Fārābī also refers to the '*little Nīqūmākhiyā*' at a later point in the same treatise, "And Aristotle has mentioned in his "Book to Young Nicomachus about Politics" (*little Nīqūmākhiyā*) something similar to what is explained by Plato."[20] The historical possibility supported by the Neo-Platonists and al-Kindī is to treat the little '*Nicomachean Ethics*' as addressed to Nicomachus, the son, the greater *Nicomachean Ethics* as addressed to Nicomachus, the father, and the *Eudemian Ethics* addressed to Aristotle's student, Eudemus. Clearly, all three of Aristotle's ethical treatises, the *N.E., Eudemian Ethics*, and *Magna Moralia* are implicated here. However, some scholars identify the little '*Nicomachean Ethics*' with the *Magna Moralia*, given that the *Magna Moralia* is a smaller book than the *N.E.*, while other scholars claim that the 'little *Nīqūmākhiyā*' indeed stands for the *N.E.*[21] Nevertheless, why should the larger *N.E.* be referred to as the smaller? Here, I shall concur with the most practical conclusion

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[18] Al-Fārābī 1892: 16; trans. Dunlop 2005 (Akasoy and Fidora 2005: 11); and al-Fārābī 2001: 147; trans. Butterworth. Both translations are modified.

[19] Al-Fārābī 2001: 148–149. trans. Butterworth.

[20] Ibid. 142–143. In al-Fārābī 2001: 142–143, Butterworth notes that the language is 'admittedly strange' (*Kitābuh ilā Nīqūmākhus al-ṣaghīr fī al-siyāsa*). Both Butterworth and Dieterici (al-Fārābī 1892) indicate this reference corresponds to *Nicomachean Ethics* v. 1–9, esp. 1131b16–17, 1132b18–19, 1136b15–29, and 1137b27–30.

[21] See Smith 1844: 317–344, esp. 330 and Mansfeld 1998: 18 (n. 54), 20, and 124–125 (n. 67) as cited in Dunlop 2005 (Akasoy and Fidora 2005: 14, n. 60).

reached by Henry Jackson that "the *Magna Moralia* is less than half the length of the *Nicomachean Ethics* (some 32 folios compared with 87 folios), each of the two books of the *Magna Moralia* is considerably larger than any of the ten books of the *N.E.*, and assuming that in both works each book formed a single roll, the two rolls of the *Magna Moralia* would evidently have been the larger, whence the name. We thus have good ground to identify the 'little *Nīqūmākhiyā*' with the *Nicomachean Ethics*"[22] Jackson's claim to identify both texts is also corroborated by al-Fārābī in the *Harmony of Plato and Aristotle* that some people are to pass from one moral habit to another moral habit more easily than others as stated in the '*little Nīqūmākhiyā*,' and Maimonides who cites a similar passage from al-Fārābī's own commentary on the *N.E.*[23]

As Dunlop notes, al-Fārābī also speaks quite extensively of the *N.E.* in his work, *On the Meanings of Intellect* (*Maqāla fi maʿānī al-ʿaql*) where the sixth treatise of the *Book of Ethics* (*Kitāb al-Akhlāq*) is mentioned, especially with regard to the role of intellect/ʿaql (*nous*) and practical wisdom/ *mutaʿaqqil* (*phronēsis*).[24] However, since a large part of the Fez manuscript including Book VI of the *N.E.* is missing, a reliable textual comparison cannot be provided. While we are unfortunately limited by the extant historical sources available to us from al-Fārābī, we might conclude our brief survey of al-Fārābī's interpretation of the *N.E.* by emphasizing the often neglected prominence of his hermeneutical method. As the 'Second Teacher' (*secundus magister*), al-Fārābī marks a decisive turning point for the inauguration of a uniquely Arabic political philosophy.[25] Al-Fārābī presents us with the most robust kind of scholarly syncretism when inter- preting the *N.E.* as informed by his own commentaries devoted to Plato, particularly the *Republic* and *Laws*.[26] The lack of availability of Aristotle's

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[22] See Aristotle 1958: 427–428 as cited in Dunlop 2005 (Akasoy and Fidora 2005: 15, n. 61).

[23] See Maimonides 1856–1866: 43, 96a. 1963: 571–572, trans. Pines.

[24] Al-Fārābī 1892: 39–41; and 61, 64, 65; Dunlop 2005 (Akasoy and Fidora 2005: 15, n.64).

[25] Dunlop 2005 (Akasoy and Fidora 2005: 33–34) claims that the influence of al-Fārābī's *Letter* extends to Ibn Ṣāʿid's *Book of the Categories of the Nations* since both present the same account of the seven schools of philosophy among the Greeks. The common source for their translations of Aristotle appears to be Ḥunayn ibn Isḥāq, see esp. Westernik 1962, XXVff.

[26] Akasoy 2013: 103 cites the possible influence of al-Fārābī's commentary on the *N.E.* upon Ibn Bājja 1968: 41–42. Although various excerpts from Ibn Bājja correspond with the *Eudemian Ethics*, no evidence of an Arabic translation of the *Eudemian Ethics* or the *Magna Moralia* exists. Perhaps these works were known to the Arabs through the influence of al-Fārābī or Porphyry. Both Ibn Ṭufayl (Ibn Ṭufayl 1708: 12, trans. Ockley) and Maimonides (Maimonides 1856–1866: iii, 43, 96a; 1963: 571–572, trans. Pines) also appear to be aware of the Fez manuscript by reading al-Fārābī's commentary on the *N.E.*

Politics to the Arabic world necessitates that al-Fārābī read Plato's *Republic* as conclusion to Aristotle's ethics.[27] This inversion is presented most extensively in al-Fārābī's commentary on Plato's *Republic* and *Laws* as a rejoinder to his commentary on the *N.E.* Al-Fārābī's insight into this conjunction between Platonic political philosophy and Aristotle's ethics becomes even more pronounced in his *Selected Aphorisms* (*Fuṣūl muntaza'a*), *Attainment of Happiness*, and *Harmony of Plato and Aristotle* where the pagan philosophers are presented with such a degree of convergence that an explicit rhetorical strategy emerges for the sake of reaching a legislative consensus regarding the best political regime guided by the realization of human excellence (*arête*). The best and happiest regime first requires a reorientation of the faculties of the soul if the philosopher-king is to assume the role of the prophet-legislator responsible for uniting the divine law above with the citizens below. Interestingly enough, Al-ʿĀmirī, a younger contemporary of al-Fārābī (and perhaps his student) develops an account of Aristotle's definition of happiness (*eudaimonia/saʿāda*) in accordance with Islamic law (*sharīʿa*).[28] By reference to Porphyry's commentary on the *N.E.*, al-ʿĀmirī's account of happiness clearly displays his Neoplatonic inheritance with regard to the intellectual and spiritual comparison of a human with an angel (*malak*):

> Porphyry said: Happiness is simply a man's perfecting his form, and man's perfection, in so far as he is a man, is in voluntary actions, and his perfection, in so far as he is an angel (*malak*) and an intelligence, is in speculation, and each of the two perfections is complete in each of the two subjects, and if one be compared with the other, it is the human perfection which is defective.[29]

As the author of the *Book of Happiness and Making Happy* (*Kitāb al-Saʿāda wa l-isʿād*), al-ʿĀmirī departs from al-Fārābī's attempt at harmonization by instead providing an anthology of the themes treated throughout the *N.E.*[30] While al-ʿĀmirī's *Kitāb* is primarily a commentary, its relevance should not be underestimated since al-Fārābī appeared to be conversant enough with al-ʿĀmirī to refer to his writings as what "one of the recent philosophers says" (*qāla baʿḍ al-ḥuddath min al-mutafalsifīn*).[31] If we

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[27] With regard to al-Fārābī's argument for the irreducible harmony between Plato and Aristotle, especially the discussion of moral habits and moral virtues as a propadeutic to the constitution of political regimes in Plato's *Republic*, see al-Fārābī' 1962: 13–50; and Claudia Baracchi's treatment of this theme in the present volume.

[28] See Akasoy 2013: 101.

[29] See al-ʿĀmirī 1957: 5–6; trans. Dunlop 2005 (Akasoy and Fidora 2005: 24).

[30] See al-ʿĀmirī 1957: 200–201 as cited in Dunlop 2005 (Akasoy and Fidora 2005: 20). For Porphyry's commentary on the *N.E.*, see Porphyry 1993.

[31] See Dunlop 2005 (Akasoy and Fidora 2005: 19).

conclude that al-ʿĀmirī possessed the *N.E.* and Porphyry's commentary, another Arabic commentator Abū ʿAlī-Aḥmad also presents a similar account of Aristotle purportedly via Porphyry's influence. Abū ʿAlī-Aḥmad (Miskawayh) refers to the *N.E.,* the *Magna Moralia*, and the commentary by Porphyry in his *Tahdhīb al-akhlāq*.[32] Unlike al-ʿĀmirī, Miskawayh was actively involved in political life and his skills as a mediator or diplomat to the Buyids actively reflect his own ethos as a scholar, especially since he provides the earliest testimony to the *Summa Alexandrinorum*, the Latin summary of the *N.E.*[33] The regional influence of Miskawayh also extends to the Persian scholar, Naṣīr al-Dīn al-Ṭusī (1201–1274), and his *Nasirean Ethics* (*Akhlāq al-Naṣīrī*), who like al-ʿĀmirī develops an account of virtue according to the divine law (*sharīʿa*): "The determiner in every case of the middle point in every case, so that by knowledge thereof the repulsion of (other) things may be effected in equilibrium, is the Divine Law. Thus, in reality, the positor of equality and justice is the Divine Law, for God (exalted be mention of Him!) is the source of unity."[34] In this regional context, Miskawayh might also be attributed with influencing the appropriation of the *N.E.* by the Jewish philosopher, Moses Maimonides, throughout his *Guide of the Perplexed* (*Dalālatu al-ḥāʾirīn*). However, Maimonides does not espouse Miskawayh but instead retrieves al-Fārābī's commentary on the *N.E.* now widely disseminated among his successors.[35]

IV   Averroes and the commentary tradition

Averroes' (1126–1198) *Middle Commentary on the N.E.* is lost in Arabic but survives in Hebrew and Latin translations. While Averroes remarks in his ten books of the *Middle Commentary*, that he had only four books but later received the complete work from his friend Abū ʿAmr, the Latin translation of the *Middle Commentary* is ten books as opposed to the eleven books

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[32] Miskawayh presents a similar account of Porphyry's critical influence. See Miskawayh 1966: 76 as cited in Dunlop 2005 (Akasoy and Fidora 2005: 28–29); Akasoy 2013: 101–103; and Wakelnig 2013.

[33] The *Summa Alexandrinorum* was translated from the Arabic by Hermannus Alemannus (Hermann the German) and completed in 1243–1244.

[34] See Akasoy 2013: 103.

[35] Akasoy 2013: 102 and n. 19 remarks that "the Jewish philosopher may not have been so convinced of it as to recommend it to his students ... Miskawayh's text may have struck Maimonides as too eclectic." See also Maimonides 1964: III, 18, 38b–39a, trans. Pines: "i.e. Abū Naṣr [al-Fārābī] said in the first part of his *Commentary on the Nicomachean Ethics*: As regards those who have the power to make their souls pass from ethical quality to ethical quality, they are those of whom Plato said that God's care for them is greater."

of the Fez manuscript.[36] The reason why the Latin translation of Averroes' *Middle Commentary* survives in ten books is open to speculation. Dunlop conjectures that since none of the quotations from the original Arabic of the *Middle Commentary* found in the margins came from the seventh book of the Fez manuscript, Averroes decided to drop this book from the *Middle Commentary*. However, Averroes quite problematically attributes to al-Fārābī the claim that the original Arabic version of the *Middle Commentary*[37] is ten books but al-Fārābī's commentary on the *N.E.* disseminated into the hands of the predecessors and contemporaries of Averroes (Ibn Bājja, Ibn Ṭufayl, and Maimonides) is said to include eleven books. Why did his predecessors and contemporaries not accept this claim? Perhaps Averroes was not the first to reject the seventh book but was following al-Fārābī. For al-Fārābī claims in the Hebrew translation of the *Middle Commentary* that the number of books is shown to be ten since each book ends with the beginning of the next book.[38] However, this is not the case with the seventh book which lacks connecting words at the beginning and the end and therefore does not rightfully belong in the *N.E.* Yet, the manuscripts from succeeding generations were not aware of this discovery since they did not always show the connecting words between the books repeatedly emphasized by al-Fārābī. The eleven book version of the *N.E.* is used by Averroes and his successors.

There remains a considerable debate about the inclusion of the seventh book into the Arabic version of the *N.E.*[39] Why would such a book be included and transmitted down through the centuries? The subject matter of the seventh book is the ethical virtues and vices namely courage, temperance, liberality, friendship, magnanimity, and justice. The text is not written by Aristotle since it contains numerous Arabic references to Ibn ʿAus (1, 3) Sāʾūs (6, 9), Banū ʿUdhra, and the Arabic poets (3, 5) as well as occasional references to the Christians (*al-Masīḥiyya*).[40] Perhaps these oblique and mysterious references provide sufficient evidence to conclude that it was written at a later date:

> i.e. the legislator in all this wished to rectify and to equalize between the man who falls short and the man who has an excess by what the one exceeds and is defective [respectively]. It seems that the Christians in this do not do well and that is ludicrous, for they assert that he who is beaten with whips has

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[36] See Dunlop 2005 (Akasoy and Fidora 2005: 51); and Neria 2013: 77–80.   [37] Ibid.

[38] See Dunlop 2005 (Akasoy and Fidora: 54); Berman 1978 and Salman 1939.

[39] See Jaeger 1967; Aristotle (trans. Gauthier and Jolif) 1970b; and Berti 1997. For further confirmation that the seventh book is evidently Aristotelian, see Dunlop 2005 (Akasoy and Fidora 2005: 57).

[40] Al-Sijistānī 1979: 20, §24 as cited in Dunlop 2005 (Akasoy and Fidora 2005: 57).

more good. It does not appear so to the legislator, because the man has more evil, which means that he has less [good].[41]

One possibility is that this passage is attributed to Porphyry who displayed some animus against the Christians in a treatise now lost. Dunlop confirms his authorship based on a notice in the *Fihrist* of an Arabic translation of the *N.E.* with a commentary by Porphyry in twelve books.[42] This commentary is the most likely candidate for the Greek source of the seventh book in the Fez manuscript. Porphyry as the probable author might indicate why the text sounds clearly Aristotelian as reference is made to the exoteric works of Aristotle:

> as to the rest of the virtues, we have already spoken of them in the exoteric discourses, where [what is] sufficient has been said. For these being common doctrines applying to ethics in general, there are contained in them many excellent doctrines. But perhaps we seek special things more than concealed things. Someone may say that the reason for that is that we are loved because of honor more than because of philosophy.[43]

Here we are left with a rather vexing question regarding the potential distinction between the exoteric and the esoteric discourses of Aristotle. How are we to confirm the view that these exoteric discourses were in fact the works of Aristotle? The reference in the seventh book of the Fez manuscript to seeking "special things more than concealed things" for "we are loved because of honor more than because of philosophy" is at once reminiscent of *N.E.* 1096a15–16 where Aristotle cites his love of truth more than his love of friends. This veiled reference to his predecessor and teacher, Plato, is perhaps also reflected in the relationship between al-Fārābī and Averroes, specifically al-Fārābī's unacknowledged influence upon Averroes with regard to the composition of the *Middle Commentary*. While Averroes might have openly acknowledged his debt to Porphyry's commentary on the *N.E.* to address the relationship between the citizen and the divine legislator, Averroes quite implicitly retrieves al-Fārābī's understanding of the divine legislator in Plato's *Laws* in order to present a more comprehensive account of the virtues of theoretical and practical wisdom, particularly throughout his commentaries on the *Rhetoric*.[44] If this is in fact the case, why does Averroes not acknowledge his debt to al-Fārābī as the first philosopher to rigorously defend a conception of politics that is admittedly Platonic? It might even be postulated that Averroes' reception and interpretation of the

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[41] Trans. Dunlop 2005 (Akasoy and Fidora 2005: 57–58).   [42] Ibid.   [43] Ibid. 57.
[44] See Averroes 2002b and especially the contributions of Woerther and Vagelpohl to the present volume.

N.E. subscribes to a Platonic vision whereby the theoretical virtues always reign supreme. Perhaps this vision becomes most explicit in his *Middle Commentary on the Rhetoric* (*Talkhīṣ al-khiṭāba*) as a substitute for the absence of Aristotle's *Politics* in the Arabic world. Here, one must take into account the rhetorical strategy that is always at work within Averroes' appropriation of al-Fārābī. This rhetorical strategy at once valorizes the necessary correspondence between the practical sciences of ethics and politics, namely the opinions of the citizens and the actions of the divine legislator, and the theoretical science of metaphysics. Just as Averroes questions the distinction between theory and practice throughout his interpretation of the *N.E.*, Averroes' distinction between the kinds of speech encountered in the realm of public debate and the kinds of speech employed in philosophical inquiry retrieves a paradigm of politics already adumbrated throughout the *Republic*, namely the role of the divine legislator or philosopher-king as inhabiting both domains of metaphysical and ethico-political inquiry. With the figure of the philosopher king or *imām*, we are confronted with the apparent erasure of the distinction between metaphysics and ethics and hence a reminder of their irreducible unity. Such a unity presents both promising opportunities and necessary challenges for the legacy of Arabic philosophy within the Western political tradition.[45]

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[45] See Claudia Baracchi's contribution to the present volume with regard to al-Fārābī's systematization and syncretization of the Greek and Arabic philosophical and political traditions.

The shining and the hidden: notes on politics and solitude from the "Greek Prophets" to al-Fārābī

Claudia Baracchi

I

In the *Attainment of Happiness* (*Taḥṣīl al-Saʿāda*), al-Fārābī draws the course of studies leading from physics to metaphysics, psychology, and politics:

> At this point the inquirer will have sighted another genus of things, different from the metaphysical. It is incumbent on man to investigate what is included in this genus: that is, the things that realize for man his objective through the intellectual principles that are in him, and by which he achieves that perfection that became known in natural science. It will become evident concomitantly that these rational principles are not mere *causes* by which man attains the perfection for which he is made. Moreover, he will know that these rational principles also supply many things to natural beings other than those supplied by nature. Indeed man arrives at the ultimate perfection (whereby he attains that which renders him truly substantial) only when he labors with these principles towards achieving this perfection.[1]

At stake, then, is the order of inquiry concerning human potentiality, and how it may be actualized to the degree of perfection thanks to "rational" or "intellectual principles" belonging "in" the human. Through the process of perfection, completion, and actualization, the human becomes who/what it is to be, becomes itself. In this sense, the human reaches its own "objective," that is, reaches itself as an objective, the objective that it itself is. Such a development oriented to perfection, that is, the complete activation of potential, is crucially sustained through principles exceeding

[1] Al-Fārābī 1962: 22–23.

"those supplied by nature," for "the natural principles in man and the world are not sufficient."[2] A human being comes into her own, realizes and actualizes herself, in a development irreducible to causal concatenation and to the mechanicity characteristic of physical or elemental phenomena. With respect to human becoming, nature (at any rate, nature understood as inexorable causality) remains vastly silent, extends no all-encompassing orders. The human phenomenon exceeds natural jurisdiction even as it remains implicated in it: from within nature, the human is not merely the fruit of natural determination.

We may notice, already, that being human is neither given nor a gift. It may be given, at the limit, in the sense in which an assignment is: being human is a task. Indeed, it is "incumbent on man" to explore the meaning and confines of being human, the potentiality and limits, the possible configurations of such a mode of life. It is "incumbent" on the human to pursue its research past the study of nature, and even of metaphysical matters, and come back to itself, to consider its own inherent "principles." Such principles are operative in the carrying out of physical and metaphysical inquiries, indeed, they constitute the essential condition for such inquiries, yet are not thematically acknowledged in those discourses. From the start of the human absorption in questions regarding *phusis* and the causes sustaining physical phenomena, the intellectual principles "in" the human are operative but not manifest. Yet, they are that in virtue of which human self-realization is at all attainable. Becoming human, then, unfolds in the figure of a return to oneself, after the traversal of the sciences oriented outwardly. Such a self-reflective turn involves the analysis of the composite animation in which the intellectual principles inhere (psychology) and, at once, of their enactment (ethics, politics).

It should be underscored that the rational principles themselves inhabiting the human are not to be reduced to the order of natural causation. They do not operate automatically, but must be set to work, require deliberate solicitude and "labor" on part of the human. Thus, they exceed, and even complement, the causes by nature. The work of human perfection (of perfecting the human) appears as a supplement to natural determination. The thrust here is characteristically Aristotelian (suffice it to think of *Nicomachean Ethics* Alpha, but the entire trajectory of the ethical discussions confirms this orientation). Al-Fārābī continues:

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[2] Ibid. 22.

> Furthermore, it will become evident to him in this science that each man achieves only a portion of that perfection, and what he achieves of this portion varies in its extent, for an isolated individual cannot achieve all the perfections by himself and without the aid of many other individuals. It is the innate disposition of every man to join another human being or other men in the labor he ought to perform: this is the condition of every single man. Therefore to achieve what he can of that perfection, every man needs to stay in the neighborhood of others and associate with them. It is also the innate nature of this animal to seek shelter and to dwell in the neighborhood of those who belong to the same species, which is why he is called the *social* and *political* animal. There emerges now another science and another inquiry that investigates these intellectual principles and the acts and states of character with which man labors toward this perfection. From this, in turn, emerges the science of man and political science.[3]

The perfection that can be achieved individually always exhibits a partial, aspectual character. This is so not by accident, let alone because of contingent deficiency. Rather, it constitutes a structural, anthropological condition. This means, at once, that perfection remains elusive, always fugitive in the experience of the individual, and that human perfection is not one, but demands to be understood in light of the indefinite multiplicity and com-position (syn-thesis) of differing, ever singular attainments. As Aristotle notes in the *Nicomachean Ethics*, political inquiry regards "beautiful and just things," which "have many differences and fluctuations" (1094b14–16). Indeed, the life of an individual allows only for a finite perspective on human perfection and realizes it in unique ongoing variations. Furthermore, it is only in her interplay with others that the individual may at all strive for perfection and in deed asymptotically tend to it. The human, then, is not unconditional, and its finitude should be understood in terms of both partiality and communal bond, uniqueness and interdependence, individual quest for self-realization and the chorality supporting it. Mortality and community, thus, designate the twofold condition of the political animal, and it is in light of this that human perfection can at all be conceived.

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[3] Ibid. 23. We find analogous formulations elsewhere in al-Fārābī 1927: 38–39 and al-Fārābī 1996: chapter XXVI. The dual edition of M. Campanini (al-Fārābī 1996) includes an introductory essay by the translator and the Arabic text established by A. Nādir (al-Fārābī 1985a). Campanini's Introduction is noteworthy for its receptivity to the resonances between al-Fārābī's thinking and the manifold Islamic tradition, in particular the Shīʿa developments and, in this context, the Ismāʿīlī lineage. Calling into question the strictly Greek/rationalistic interpretation of al-Fārābī, means assessing critically both the paradigmatic approach by R. Walzer (al-Fārābī 1985b) and the Straussian articulation of the esoteric problem. It is barely appropriate to recall that the rationalistic lens can be no less blinding and distorting in the approach to things Greek.

Thus – and this is of the utmost importance – political aggregation is involved in the disclosure and attainment of the highest end. Irreducible to matters of mere instrumentality and survival, communal life bespeaks orientation to happiness (to the fullest realization of human kind) in its entire spectrum. As the togetherness of the limited and one-sided, the political association displays the com-position of human manifold finality.[4] Here al-Fārābī does not specify *what kind* of community, but only *that* community is necessary in that regard. Far from a binding constraint on human nature, community *as such* constitutes the essential condition allowing human nature fully to unfold its potential and flourish.[5] Far from the tradition of the social contract in any of its variants (i.e. far from the view of culture/civilization as the fruit of contractual repression and concomitant sublimation/spiritualization), in al-Fārābī political life nurtures that which is most sublime in the human, frees the human in its luminosity and fosters its organic growth. This means, among other things, that the sublime manifestation of the human is no cultural construct, let alone device or fabrication, but a human possibility unfolding if finding the appropriate conditions, or even if not impeded by circumstances.

Already from such premises we gather a characteristic emphasis on union, a holistic vision compelling the thrust toward integration and connectedness. Such a view of the whole, whether politically or metaphysically inflected,[6] discloses at the heart of each discrete phenomenon a choral belonging that inscribes it in the vertiginous perspective of oneness and calls for progressive unification.

In this way al-Fārābī casts political science as the crowning moment of the theoretical progression, concerned as it is with matters at first least

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[4] Consider Aristotle's remarks on the completeness of political finality (*Nicomachean Ethics* 1094b1–11) and the statement that political finality, far from limited to expediency, concerns "life as a whole" (1160a19–23). The Aristotelian conjunction of politics and happiness is a cherished motif in Dante (particularly in the *Convivio* and *Monarchia*), absorbed by the Latin West through the Arabic-Islamic formulations from al-Fārābī to Ibn Rushd.

[5] In this light, Leo Strauss's claim that "[p]hilosophy is *the* necessary and sufficient condition of happiness" strikes one as altogether extravagant (Strauss 1945: 381). This impression is not mitigated even if considered in context, namely, with reference to al-Fārābī's reading of Plato.

[6] But, in fact, at stake is precisely the status of metaphysics and its unstable demarcation. We shall return to this. For the moment let us simply note that, at this stage, the only conspicuous excess vis-à-vis *phusis* seems to be constituted by ethics/politics – in the literal sense that ethical formation is not by nature and demands the activation of principles beyond natural causation. Rigorously speaking, then, metaphysics, the beyond-*phusis*, would be politics. This is consistent with the Aristotelian view of ethics/politics as the most encompassing ("architectonic") discipline, constituting the context that envelops and regulates even the exercise of the sciences/first philosophy. I develop these systematic issues in Baracchi 2008.

perspicuous to us – apparently familiar, always already underway, and yet remaining mostly below the threshold of consciousness and explicit analysis. He further elaborates on political science as the study of ethical structures, illuminating excellent habits and everything that fosters perfection:

> Then he should set out next upon the science of man and investigate the *what* and *how* of the purpose for which man is made, that is, the perfection that man must achieve. Then he should investigate all the things by which man achieves this perfection or that are useful to him in achieving it. These are the good, virtuous, and noble things. He should distinguish them from things that obstruct his achieving this perfection . . . This is political science. It consists of knowing the things by which the citizens of cities attain happiness through political association in the measure that innate disposition equips each of them for it.[7]

We should observe, moreover, that the political association is no disparate collection, but rather exhibits the lineaments of an organic order, ultimately inscribed within the encompassing organism of the cosmos as a totality within the totality. Order here names nothing arbitrary or conventional. Instead, it designates the organization reflecting the scansions and partitions of the world:

> It will become evident to him that political association and the totality that results from the association of citizens in cities correspond to the associations of the bodies that constitute the totality of the world. He will come to see in what are included in the totality constituted by the city and the nation the likenesses of what are included in the total world. Just as in the world there is a first principle, then other principles subordinate to it, beings that proceed from these principles, other beings subordinate to these beings, until they terminate in the beings with the lowest rank in the order of being, the nation or the city includes a supreme commander [first principle], followed by other commanders [principles], followed by other citizens, who in turn are followed by other citizens, until they terminate in the citizens with the lowest rank as citizens and as human beings. Thus the city includes the likenesses of the things included in the total world.[8]

A vision of the totality of the world reveals its concatenation: cities and constellations of cities, wholes within wholes, articulated in consonance with the structures and hierarchies of the cosmos. Especially outstanding is the similarity yoking together the city and the sky, in fact, the ruler of the community (in his most accomplished expression) and god. Such a likeness reveals the self-propagation of the principle, permeating the whole in waves

[7] Al-Fārābī 1962: 24. [8] Ibid. 24–25.

of increasing dilution or privation. Even if not explicitly laid out, the movement of procession out of the one, the exorbitantly archaic origin, is adumbrated here.[9]

Here, however, we limit ourselves to noting how this passage comes to a close. "This, then, is theoretical perfection," al-Fārābī states. "As you see," he continues, "it comprises knowledge of the four kinds of things by which the citizens of cities and nations attain supreme happiness. What still remains is that these four be realized and have actual existence in nations and cities while conforming to the account of them given by the theoretical sciences."[10] Again, the supreme enactment of happiness manifests itself through communal belonging, in fact, regards the members of communities, in the plural – that is, in the plurality and variety of "cities and nations."[11] In such contexts, "the four kinds of things" earlier identified as the "theoretical virtues, deliberative virtues, moral virtues, and practical arts"[12] must not only be intellectually discerned but also, essentially, brought into being, practiced. We note the mutual implication of theoretical apprehension and political life: on the one hand, contemplation provides the insightful knowledge informing and steering ethical-political life from within; on the other hand, the collective organism constitutes the theater necessary to the full enactment of human potential.[13]

That no isolated individual can comprehensively attain happiness highlights, indeed, the relevance of the material conditions necessary

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[9] In al-Fārābī 1927, one finds parallel statements involving the series of analogies spanning the whole cosmos: just as the individual human being is homologous to the political organism, so the political organism in its excellence reflects the sublime perfection of the sky. Ethical and political formation entails looking at the sky, and the sky appears as a city celestial. Implicated in this progression from the highest and most comprehensive perfection to the minute perfection of the individual organism, and even its organs, is the emanative structure connecting the cause of the whole, the ineffable one god, to the hierarchy of beings stemming from it. Al-Fārābī's formalization of the emanative structure and the problems of the intellect will extend its influence through Ibn Sīnā to Ibn Rushd, and inform the cosmological framework of Western medieval thought (such a legacy is radiantly perspicuous in Dante's *Comedy*). In this regard, al-Fārābī originally integrates Aristotelian motifs within the broad Platonic and neo-Platonic (especially Plotinian) vision; and yet, we should also note that the elements of a hierarchical chain emanating from the unknowable god are present also in the Isma'ili vision. In this connection, see Walker 1976; Morewedge 1992; and Corbin 1964. Al-Fārābī 1968 again posits the correspondence between above and below, the celestial maker and the earthly ruler, establishing the latter's action as a genuine *imitatio dei*. In its excellence, politics echoes the cosmic paradigm: the creative and supportive act of the one "ordering the cosmos" (*mudabbir al-ʿālam*) is mirrored in the constitutive and analogously supportive act of the one "ordering the virtuous community" (*mudabbir al-ʾumma al-fāḍila*).

[10] Al-Fārābī 1962: 25.

[11] Al-Fārābī is consistently attentive to the multiplicity at the level of peoples, political organisms, groups, and even individuals. Political space comes to embrace "the inhabited part of the earth" (1962: 27), the *oikoumene* of Greek descent.

[12] Ibid. 13.   [13] See Fakhry 1987: 110–117; Najjār 1958: 94–103; and Galston 1990.

for such an enterprise. The attainment of happiness can be no matter of mere contemplative retreat, insular and separate. The realization and enactment of perfection as far as humanly possible, of the good as far as humans can conceive and experience it, rests on worldly and practical requirements. And even the principles that political thinking comes to discern in the human, and to contemplate in act, are embedded in the living world to begin with, woven into the fabric of our quotidian vicissitudes, at first unthematic, unconscious. The philosophical progression has to do with letting that emerge to consciousness, with becoming aware of what is taking place always already, if unnoticed. This is the highest accomplishment. Such an acquisition of consciousness, alone, allows for a critical approach to living, for the genuine possibility of choice, for the incisive exercise of deliberation and intervention in the theater of the world, and ultimately for change – beyond natural causality and its automatisms.

II

The suspended remarks, by which al-Fārābī summarizes and concludes the argumentative trajectory of the *Philosophy of Aristotle*, reflect the same set of concerns. First of all, they present the indissoluble intertwinement of physical and metaphysical studies, where the latter are not understood as exceeding physics, as if concerning an altogether discontinuous region of being. Rather, physics and the science thrusting beyond it regard the same beings, but in different ways: al-Fārābī says that when Aristotle turns to consider matters such as the active intellect, he inquires "into the beings in a way more inclusive than natural theory."[14] What will have been called "metaphysics" investigates "the beings," in the plural, "in a manner different than natural inquiry"[15] that is to say, more comprehensively, according to what traverses beings and is common to them. Thus, "metaphysics" extends physics, takes it beyond itself, without however leaving *phusis* behind: whatever excess to physics may be signaled in this gesture, it remains an excess inherent *in the beings of physics*, an excess becoming manifest when beings are disclosed according to the whole. Strictly speaking, then, "we do not possess metaphysical science."[16]

Second, "metaphysics" (at this point the quotation marks are a cautious as well as necessary reminder) does not merely continue the task of physics, there where "natural theory terminates in the active intellect and the mover

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[14] Al-Fārābī 1962: 129.   [15] Ibid. 130.   [16] Ibid.

of the heavenly bodies, and then stands still."[17] Indeed, the discussion of matters "metaphysical," and most notably of the active intellect, marks the culmination, i.e. the perfection, of human achievement. For in the contemplation of the active intellect the human realizes itself: "in some manner," the human being "becomes united with it [the active intellect] when it is intellected by him."[18] Or even, says al-Fārābī more starkly, "the soul of man itself becomes this intellect."[19] Thus, he concludes by laying out the twofold purposiveness of this discipline: it is pursued, first of all, "to render perfect the human intellect for the sake of which man is made, and second, to perfect our defective natural science."[20] Nature and human nature, phenomena human and otherwise, cannot be accounted for merely by reference to mechanics and causal determination.[21]

Thirdly, and consequently, the ethical–political conditions are essentially woven into the fabric of physical/"metaphysical" investigations. The inquiry that will have been called "metaphysics" is involved in both "natural philosophy" and "the political and human philosophy" to the point of serving and perfecting them.[22] This is probably why al-Fārābī ends by juxtaposing the "more human" "understanding of the causes of visible things, which the soul desired," to the "knowledge" that is "merely *necessary*." The latter, essential as it may be to intellectual acquisition, was "of old" supposed to be "excellent" but it "is not,"[23] and indeed cannot be understood for its own sake, aside from the task of "rendering man substantial or making him reach his final perfection." The formulation here is incisive: "It has become evident that that necessary knowledge is for the sake of this understanding," this exquisitely human understanding assisting in the labor of becoming.[24]

Quite punctually, then, the *magister secundus* (second only to Aristotle) ends with a reminder of philosophy at the heart of human vicissitudes, both inflecting and inflected by individual volition and contingent variation: not a purely intellectual exercise but the labor of intelligence drawing a course of action, desirously bringing forth the being(s) it thinks.[25] The injunction is that philosophy be enacted and embodied: "philosophy must necessarily come into being in every man in the way possible for him."[26] Whether politically or otherwise modulated, the thinking of unity in no

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[17] Ibid. 129.   [18] Ibid. 127.   [19] Ibid.   [20] Ibid. 130.
[21] See al-Fārābī 1962: 22, "[N]atural principles in man and in the world are not sufficient."
[22] Ibid. 130.   [23] Ibid.   [24] Ibid.
[25] See al-Fārābī 1962, the "voluntary intelligibles" (26), brought forth by "practical philosophy" and "embodied in laws" (45).
[26] Ibid. 130

way involves indifferentiation and abstraction: it is the singular as such that converges with others into one, the differing as such that coheres in an organic whole. As al-Fārābī the musician knows well, harmony involves precisely this: the articulation of difference as such, the different sounding together from a distance that must be maintained, divergence and discrepancy brought into consonance. This is precisely what the chord indicates: an accord that, far from dissolving and resolving differences, magnifies and preserves them as that which is joined. Difference need not entail separation. Unity is composite, and only through such a layered mediation, only in the passage across irreducible complexity, may the thinking of simplicity, of the "uncompounded",[27] become at all available.[28]

III

The preceding notes, however fragmentary and limited in scope, allow for a glimpse of the systematic rigor and, simultaneously, the uninhibited originality with which al-Fārābī inherits the Greek discourses. The exploration of human *dunamis*, the ongoing task of being (becoming) human, happiness as full self-activation and realization, the ethico-political environment in which philosophical reflection develops, the interpenetration of ethics and politics and, in turn, their architectonic (encompassing and ruling) function – these broad-ranging themes are certainly drawn from the Platonic as well as Aristotelian elaboration, and in this respect reference to the *Republic* and *Nicomachean Ethics* (texts that al-Fārābī knows closely) would suffice.

   Let this also be said in passing: with respect to such basic concerns and overall posture, al-Fārābī's view of the harmony of Plato and Aristotle seems far from a form of naïveté (whether due to philological inadequacy, superficial analysis of the argumentation, or strategic, defensive preoccupations). This is why they are juxtaposed as peers, and not identified as teacher and epigone. "Both," al-Fārābī affirms, "have given us an account of philosophy."[29] Indeed, they are so far from philosophy as a scholastic exercise (as the routine of discipleship) that

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[27] Ibid. 126–127.
[28] The thinking of simplicity, of the uncompounded, indicates the nearing of and to the agent intellect – the tenth intellect, the angel of Ibn Sīnā, the luminous messenger at the heart of composite life: "there is here a certain intellect, uncompounded and in act, that has engendered the primary intelligibles in the potential intellect . . . Hence, it is a principle in three respects: as an agent, as an end, and as the perfection that man attempts to approach. It is therefore a separate form of man, a separate end and a prior end, and a separate agent" (ibid.).
[29] Ibid. 49.

they also give us "an account . . . of the ways to re-establish it [philosophy] when it becomes confused or extinct."[30] The differences between Plato and Aristotle are not overshadowed (they are, in fact, highlighted in the two separate presentations al-Fārābī provides). But their concordance, however hidden, invites the work of harmonization, bringing them together in a unitary arrangement.[31] It invites the unveiling of friendship beyond the discrepancies in the ways of conducting the investigation, in the discursive turns, in the emphases and imagery characterizing the exposition.[32] "So let it be clear to you that, in what they presented, their purpose is the same, and that they intended to offer one and the same philosophy."[33]

Equally rooted in the Greek precedents, albeit taken in quite novel directions and articulated with singular refinement, are the questions regarding the relation of the creative principle (one, god, intellect) and nature, the organization of the cosmos in terms of progressive distancing from the first cause and, concomitantly, the first cause propagating, emanating the world as if by dehiscence, overflowing out of superabundance, in a movement that at once sends forth, hierarchically organizes, and harmonically holds together. While these questions are inconspicuous in the *Attainment of Happiness*, they constitute the essential core of al-Fārābī's systematization and will bear momentous consequences in the Arabic environment and beyond. Plato's *Timaeus* alone, even aside from neo-Platonic constructs, could fruitfully frame these themes. But of course, haunting this scene are various intersecting figures: Proclus' tripartite

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[30] Ibid. 50. In connection with this passage and with al-Fārābī's philosophical genealogy, from the Chaldeans to the Syrians and the Arabs (ibid. 43), consider Aristotle's meditation on the temporality of philosophy in *Metaphysics* xii.1074b1–14.

[31] We cannot here possibly begin to address al-Fārābī's treatise *The Harmonization of the Two Opinions of the Two Sages: Plato the Divine and Aristotle*, in al-Fārābī 2001: 115–167. On the concordance of Plato and Aristotle, and even on a certain prominence accorded to the latter in neo-Platonism after Plotinus, see Hadot 1974: 31–47.

[32] Here al-Fārābī displays a profound understanding of the Aristotelian view and experience of friendship. It is between or among philosophers that friendship perspicuously emerges as harmony – as that which joins those who differ. Consider *Nicomachean Ethics* 1.1096a12–16, where Aristotle, in stating that we should love the truth above our friends, is in fact quoting Plato, who, in turn, attributes such a sentence to Socrates (*Phaed.* 91c, *Rep.* x 595b–c). Precisely there where he seems to be setting friendship (with Plato and the Platonists) aside for the love of truth, Aristotle is in effect recognizing that he and they share a common venture. At stake in the privileging of truth is the recognition that others pursue and love it as well, in their own way. And it is crucially because of this commonality that they are our friends. On this ground we can realize our coming together in a broader com-position, even as our positions may seem to diverge. Pursuing wisdom together, as friends, does not mean coming to the same results, but rather cultivating together a certain *ethos*, the life of (self-) examination. Friendship is a bond across difference. See Aquinas 1993: 1.6.5.

[33] Al-Fārābī 1962: 50.

henology, the Hellenistic assimilation of Plato and Aristotle in a discourse weaving together noetic investigation, cosmological architectonics, ethico-political formation, and the meditation on the divine – not to mention Islamic motifs such as the *imām* of Shīʿa provenance, as we shall see shortly.

In this way, al-Fārābī's restitution of the Greek texts returns them to us in a quite enigmatic light. His assimilation and interpretation of the Greeks, and most notably of Aristotle, cannot not strike us (the farthest offshoot of a tradition that has systematized the Greek inheritance according to rigid disciplinary partitions, severing metaphysics from physics, and above all the scientific endeavor from its ethico-political roots) as unfamiliar and strange. After all, the Western tradition, in its dominant aspects, has consistently privileged the discipline of metaphysics understood as the highest and unassailable knowledge, whether in the theological or scientific mode – the knowledge (at once allegedly and absolutely) emancipated from material conditions. Accordingly, it has marginalized practical reflection, whether ethics or politics, obscuring its role as primordial and all-encompassing condition of possibility, and reducing it to a secondary philosophical field, at the limit a matter of mere application of pre-constituted prescriptions.

But al-Fārābī's reading and re-elaboration of the Greek thinkers, in its founding character and lasting influence, forcefully shows how commentary may be the site not only of sophisticated interpretation, but also of the deepest speculative effort, and that the transmission and repetition of texts may indeed entail the thorough transformation (or unprecedented illumination) of them.[34] And this may have less to do with inaccuracy or misunderstanding than with the commitment to re-enact the thrust of the search, of the philosophical longing, in one's own way, and therefore in light of the possibility of renewal. This should have a sobering effect on the way we view the crystallization of the ancient texts in our tradition (if it is indeed one, and whatever the possessive adjective may mean), and the often unwarranted self-confidence regarding the truth and exhaustiveness of our reading, of what we read into the past – as though we had resolved the problem of our relation with what constitutes us, with the past and with our own (no less constitutive) projections into the past. These are basic problems that concern the

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[34] See, for instance, Parens 1995, on the phenomenological (*ante litteram*) interpretation of Plato outlined in al-Fārābī's paraphrase.

philosophy of history no less than all inquiry concerning truth, its status, its anthropological implications.[35]

IV

Happiness, then, would find its fullest realization in the assimilation of the human to the intellect. In reporting Aristotle's research, al-Fārābī notes: "When he investigated this intellect, he found that it is an intellect in act, had never been potential, and has always been and will always be . . . when the human intellect achieves its ultimate perfection, its substance comes close to being the substance of this intellect."[36] In its quest for perfection, the human being strives toward the intellect in act as a paradigm, that is to say, as the horizon and element of the most accomplished human becoming:

> in achieving the perfection of its substance, the human intellect follows the example of this intellect. This intellect is the end . . . the most perfect end, and it is the agent. It is thus the principle of man as the agent, ultimately, of that which renders man substantial insofar as he is man. It is the end because it is that which gave him a principle with which to labor toward perfection and an example to follow in what he labors at, until he comes as close to it as he possibly can.[37]

Attaining happiness, thus, means "following the example" of the agent intellect, approaching it as much as possible – relating to the "example" in a mode that closely resembles that of imitation or, more pointedly, in an oscillation between imitating and becoming it. As a matter of fact, the intellect in act is said to be the "separate form" of the human being, which the human being undertakes to "follow" and "intellect," tending to the annihilation of all distance, "separation," and "intermediary," so as to "become" such an intellect, or at least asymptotically become one with it (again, in an oscillation between unification and identification).[38]

In the *Attainment of Happiness*, the cipher of human perfection in the highest degree is the figure of the philosopher, legislator, and *imām*. Much as here al-Fārābī may emphasize that "the idea of *imām*, philosopher, and

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[35] We barely need to mention the prominence that philosophical reflection of the last century has accorded to questions of textual/semiotic interpretation, commentary, critique, and concomitant responsibilities. From Benjamin to Foucault, from Gadamer to Derrida and Irigaray, whether in the form of structural analysis, conceptual archeology, genealogy, double reading, or deconstruction, interpretation becomes the site of an interrogation both perturbing the category of the past and suggestively accessing the present.

[36] Al-Fārābī 1962: 127.   [37] Ibid.   [38] Ibid.

legislator is a single idea,"[39] it is noteworthy that the human thrust toward becoming the intellect (the "uncompounded") should result in a compound. Indeed, in such a figure are conjoined the "theoretical virtue" characteristic of the philosopher, the "knowledge concerning the conditions of practical intelligibles" (practical deliberation) distinguishing the legislator, and the exemplariness of the *imām*, described as "the one whose example is followed and who is well received."[40] Such a figuration returns us, again, to the relation between ethico-political matters and "theoretical" knowledge, not to mention the *vexata quaestio* of the connection between philosophy and religion. It also occasions a few observations that will complement our previous emphasis on community as the necessary condition for individual self-realization. In closing, thus, we shall consider how the highest human accomplishment, which becomes possible within the political framework alone, may remain altogether unrecognized in that space, thereby failing to actualize itself and explicate its leading and orienting power. The political organism granting such an attainment may be structurally inadequate to recognize it; the most remarkable fruit of living together may remain unshared. In fact, it may have protectively to dissimulate itself and abide in hiding, a secret below the surface of ordinary worldly dealings.

Let us examine first the com-position of philosophy, politics, and spiritual authority. The fact that, al-Fārābī repeats, "philosopher, supreme ruler, prince, legislator, and *imām*" designate "but a single idea"[41] amplifies our previous considerations on the indissoluble intertwinement of physical and metaphysical, theoretical and practical matters. Such a unifying view indicates the essential convergence of the disciplines of philosophy, ethics/politics, and religion: they say the same while remaining irreducible in their sayings and ways. Al-Fārābī confronts this point with subtle dynamism.

On the one hand, he underscores the primordiality and commanding role of theoretical knowledge (philosophy *stricto sensu*) vis-à-vis ethical and political deliberation as well as religion. Philosophy and religion differ in the manner in which they bring about knowledge and assent: in the former case the "essence" of something is made "comprehensible" through intellectual perception, in the latter the essence is "imagined through the similitude that imitates it."[42] Let us follow the movement of al-Fārābī's thinking:

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[39] Ibid. 46.   [40] Ibid.   [41] Ibid. 47.   [42] Ibid. 44.

> Now when one acquires knowledge of the beings or receives instruction in them, if he perceives their ideas themselves with his intellect, and his assent to them is by means of certain demonstration, then the science that comprises these cognitions is *philosophy*. But if they are known by imagining them through similitudes that imitate them, and assent to what is imagined of them is caused by persuasive methods, then the ancients call what comprises these cognitions *religion*. And if those intelligibles themselves are adopted, and *persuasive* methods are used, then the religion comprising them is called *popular*, *generally accepted*, and *external* philosophy. Therefore, according to the ancients, religion is an imitation of philosophy. Both comprise the same subjects and both give an account of the ultimate principles of the beings. For both supply knowledge about the first principle and cause of the beings, and both give an account of the ultimate end for the sake of which man is made – that is, supreme happiness – and the ultimate end of every one of the other beings.[43]

Philosophy teaches and compels assent by its simple, immediate appeal to the ideas themselves, while religion wanders outside, takes the detour through exteriority. It is "external philosophy," phenomenally evoking intellectual contents, replicating them out of its implication in images. Imitation is a fantastic, phantasmatic affair. Again, al-Fārābī contrasts philosophy and religion, and lingers on the imitative operation of the latter – probably intuiting the undecidability of the translation from intellect into image, indeed, the abyss in the becoming visible of the invisible:

> In everything of which philosophy gives an account based on intellectual perception or conception, religion gives an account based on imagination ... Philosophy gives an account of the ultimate principles ... as they are perceived by the intellect. Religion sets forth their images by means of similitudes of them taken from corporeal principles and imitates them by their likenesses among political principles. It imitates the divine acts by means of the functions of political principles. It imitates the actions of natural powers and principles by their likenesses among the faculties, states, and arts that have to do with the will ... It imitates the intelligibles by their likenesses among the sensibles: for instance, some imitate *matter* by *abyss* or *darkness* or *water* ... It imitates the classes of supreme happiness ... by their likenesses among the goods that are believed to be the ends. It imitates the classes of true happiness by means of the ones that are believed to be happiness. It imitates the ranks of the beings by their likenesses among spatial and temporal ranks.[44]

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[43] Ibid.   [44] Ibid. 44–45.

Philosophy and religion, then, proceed by intellectual perception/demonstration and imaginative persuasion/imitation, respectively. In this passage, practical deliberation (requiring a fine-tuned evaluation of contingency and of the ways effectively to intervene in it) tends to be assimilated to the order of the imaginal.[45] It seems that the principles of all the beings, constituting the subject matter common to the disciplines, cannot be said simply. They require approaches from different perspectives and in different registers.[46] However, al-Fārābī insists on the privilege of philosophy. Because of its essentially imitative trait, religion constitutes a "popularization" of the theoretical sciences, indeed, the field of "the image-making theoretical sciences."[47]

To be sure, in its mimetic elaboration, religious imagination "attempts to bring the similitudes of these things as close as possible to their essences."[48] But, of course, the adequacy of the images with respect to the intelligibles imitated is precisely the question, especially in light of the poetic overtones never fully silenced in the thinking of likeness: similitude is always also a simile, analogy is never fully stabilized in a codification or proportional calculation.[49] Thus, al-Fārābī repeats and peremptorily

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[45] The legislator "is the one who invents the images and the persuasive arguments" (ibid. 47).

[46] *Logos* manifests itself in its manifoldness and irreducibility to the demonstrative mode, in fact, to the domain of human utterance. Signification operates well beyond logic and even verbalization, disclosing a richer sense of meaning in the stratification and interpenetration of multiple linguistic/semiotic orders.

[47] Al-Fārābī 1962: 39. See al-Fārābī 1927: 55–57, and al-Fārābī 1996: xxv, where al-Fārābī, in relation to the vision of the intelligibles, speaks of "prophecy" (*nubuwwa*) of things divine.

[48] Al-Fārābī 1962: 45.

[49] Of course, for al-Fārābī imagination here means no mere storytelling, work of inventiveness, let alone anything fictional or arbitrary. Rather, imaginative work occurs at the same level of intellectual perception, although in another mode. Such a synthesis paradigmatically takes place in the figure of the legislator, securing images to the order of knowing. The imitations of intelligibles "are *philosophy* when they are in the soul of the legislator. They are *religion* when they are in the souls of the multitude. For when the legislator knows these things, they are evident to him by sure insight whereas what is established in the souls of the multitude is through an image and a persuasive argument. Although it is the legislator who also represents these things through images, neither the images nor the persuasive arguments are intended for himself. As far as he is concerned, they are certain" (ibid. 47). The identity of the intellected and the imagined emerges, at this level, perspicuously. The same content is variously inflected as it propagates across the folds of the world. The legislator, al-Fārābī reiterates, "is the one who invents the images and the persuasive arguments, but not for the sake of establishing these things in his own soul as a religion for himself. No, the images and the persuasive arguments are intended for others, whereas, as far as he is concerned, these things are certain. They are a religion for others, whereas, so far as he is concerned, they are philosophy. Such, then, is the true philosophy and the true philosopher" (ibid.). However, the peculiar emphasis discernible here betrays the preoccupation with the fragility of the imaginative work – a questionability and dubious authoritativeness that this mode of imitation shares with poetic inspiration, prophetic rapture, visionary enthusiasm at large. The problem is, of course, immense and we cannot here even begin to broach an introduction to it. It certainly concerns al-Fārābī as well as the ensuing tradition of Arabic Aristotelianism, indeed, *falsafa* as such, and not

concludes, "in everything of which philosophy gives an account that is demonstrative and certain, religion gives an account based on persuasive arguments. Finally, philosophy is prior to religion in time."[50]

And yet, on the other hand, al-Fārābī, affirms with analogous persistence the equiprimordiality and interdependence of theoretical and imaginative/imitative faculties. This becomes most evident in the examination of the legislator – "he who, by the excellence of his deliberation, has the capacity to find the conditions required for the actual existence of voluntary intelligibles in such a way as to lead to the achievement of supreme happiness."[51] Granted, al-Fārābī says that the "voluntary intelligibles" (the intelligibles that can be brought about) must be intellected to begin with. He says as well that the legislator cannot "find their conditions" (which, alone, make his action in the world efficacious and the attainment of happiness in cities possible) "without having perceived supreme happiness with his intellect."[52] Accordingly, "if he intends to possess a craft that is authoritative rather than subservient, the legislator must be a philosopher."[53] And yet, al-Fārābī discerns the same logic of interdependence and mutual implication in his analysis of the philosopher. Far from depicting him in terms of unqualified priority, autonomy, and separation, he observes that the situation of the philosopher is "similar" to that of the legislator:

> if the philosopher who has acquired the theoretical virtues does not have the capacity for bringing them about in all others according to their capacities, then what he has acquired from them has no validity. Yet he cannot find the states and the conditions by which the voluntary intelligibles assume actual existence, if he does not possess the deliberative virtue; and the deliberative virtue cannot exist in him without the practical virtue. Moreover, he cannot bring them about in all others according to their capacities except by a faculty that enables him to excel in persuasion and in representing things through images.[54]

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only the Persian-Eastern developments of neo-Platonism (from Ibn Sīnā to Suhrawardī). The considerations by al-Fārābī just quoted show that, far from being tendentious, Corbin's meditations on the issue of the imaginal (the distinction between imaginal and imaginary, between *imaginatio vera* and fantasy, and hence the issue of the *mundus imaginalis* and the "active imagination" properly perceiving it) are central in this context. See Corbin 1979.

[50] The assertion of the priority of philosophy in time is surprising in light of the opening statements about "primary knowledge," possessed by human beings from the start and yielding the first premises. Such a knowledge operates below the threshold of consciousness and not demonstratively (al-Fārābī 1962: 13). Only in this sense, it would seem, could philosophy be understood as temporally more archaic.

[51] Ibid. 45. [52] Ibid. [53] Ibid. 46. [54] Ibid.

The impotence, and therefore the imperfection, of the theoretical virtues severed from the practical and imaginative ones, could hardly be stated more categorically.[55] Thus, the intertwinement of philosophy and the other modes of knowing is not simply for the sake of the guidance and completion of the latter. Rather, the fulfillment of philosophy itself is here at stake. In a lapidary statement, al-Fārābī asserts that, "if it be determined that the theoretical virtue reach its ultimate perfection in every respect, it follows necessarily that he [the philosopher] must possess all the other faculties as well."[56]

The imitative relation between the philosophical and religious disciplines is peculiar indeed. On the one hand, the religious/imaginative gesture is illuminated as secondary (even later in time), as a mere imaginal reverberation of intellectual perceptions. One the other hand, in its abysmal character, unfathomable from the point of view of calculation, the work of imagination is acknowledged as equally founding and accorded a certain primordiality with respect to perfected philosophy. But, in this way, what does imitation come to designate? How are we to understand the imitative bond if the imitation (the image) is a necessary condition for the perfected enactment of the imitated (the intelligible)? It would seem that "philosophy" is in play here in at least two ways: first, as intellectual apprehension as yet unmediated and inarticulate, from which the imaginative articulation would stem; and second, as discursive articulation proceeding by demonstration. The imaginative discourse would be secondary with respect to "silent" philosophical insight, but prior with respect to philosophy spoken and speaking – which means, among other things, that demonstrative discourse as such (i.e. in its plenitude) is never simply emancipated from the imaginal (i.e. rhetorical, figurative, sensible) element. On the contrary, the image should be woven even into the strictest argumentation – or else, in pure abstraction, the argument cannot say,

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[55] But is it only a matter of the impotence, or also of the impossibility of philosophy as such? Especially in light of al-Fārābī's sumptuously imaginal thinking, we wonder whether and how the disjunction of philosophy from images can at all be conceived. Unless, of course, by philosophy we mean the silent, dazzling intuition beyond discursive articulation. Al-Fārābī observes that, if the images are the offspring (and imitation) of preceding knowledge, the converse is also true, i.e. intellectual perceptions (no less than practical matters) come most fully into their own thanks to images, i.e. they are perfected in virtue of their passage through imitation: "Once the images representing the theoretical things demonstrated in the theoretical sciences are produced in the souls of the multitude and they are made to assent to their images, and once the practical things . . . take hold of their souls and dominate them so that they are unable to resolve to do anything else, then the theoretical and practical things are realized" (ibid. 47). Again, theoretical knowledge is most properly realized in action. It is *as such* folded into the imaginal/practical becoming of the world.

[56] Ibid. 46.

touch, move, bring about anything. This casts light on the equal standing of philosophy and religion (intellectual and imitative work), as if they would draw upon the same source of unspoken understanding. At stake, then, are two ways of thinking, thinking through intelligible axioms and thinking through images, equally disclosive of truth. Their equiprimordiality and interdependence are evident in the figure of the legislator.

V

As anticipated, we conclude these notes by turning to the somehow surprising scenario with which the *Attainment of Happiness* ends. Indeed, the treatise studying the conditions and principles of human happiness closes with the image of the eminently accomplished human being remaining both unemployed and unrecognized within his or her own city – the city that essentially made him or her possible.

After contemplating the convergence of *imām*, prince, legislator, and philosopher, and recognizing in this composite the figure of "true philosophy and the true philosopher," al-Fārābī looks at the phenomenon of "mutilated philosophy," at "the counterfeit philosopher, the vain philosopher, or the false philosopher . . . who sets out to study the sciences without being prepared for them," i.e. without fulfilling "the conditions prescribed by Plato in the *Republic*."[57] He then proceeds to restate the psychological substratum necessary not only for the study of ethics, but for the study of the contemplative sciences as well – illuminating, once again, ethical and political formation as the archaic receptacle (the morphic field) within which all human endeavors, including the study of the sciences and of the highest science, take place. But, of course, it can always happen that such prerequisites be forgotten and neglected, leading to various perversions in the exercise of philosophy:

> The false philosopher is he who acquires the theoretical sciences without achieving the utmost perfection so as to be able to introduce others to what he knows insofar as their capacity permits. The vain philosopher is he who learns the theoretical sciences, but without going any further and without being habituated to doing the acts considered virtuous . . . The counterfeit philosopher is he who studies the theoretical sciences without being naturally equipped for them. Therefore, although the counterfeit and the vain may complete the study of the theoretical sciences, in the end their possession of them diminishes little by little . . . For the natural dispositions of the

[57] Ibid. 48.

former and the habit of the latter overpower what they might have remembered in their youth and make it burdensome for them to retain what they had patiently toiled for.[58]

As for the false philosopher, he lacks the awareness "of the purpose for which philosophy is pursued."[59] Thus, whether because of negligence, easygoingness, self-indulgence or superficiality, the philosophical exercise may result in a sterile endeavor, failing to touch life, to reach out beyond itself and foster happiness.

Just as philosophy may be experienced in this distorted and diminished way, so, conversely, it may happen that a most evolved member of the communal organism remain unacknowledged – and even be ostracized. He might be a prince, could wisely lead others in the ways of happiness, and yet it may be that "no use is made of him."[60] The city bears its own *arkhe*, its own ruling principle in its midst, yet cannot recognize it. The "fact that he is of no use to others," notes al-Fārābī, "is not his fault but that fault of those who either do not listen or are not of the opinion that they should listen to him."[61] Here is exposed at once the impotence of *logos*, which can always remain unheard and cannot simply impose itself on circumstances, and the fragility of the philosopher, always vulnerable to misrecognition, suspicion, hostility, and ultimately to the charge of futility.[62]

The prince both possible and unnecessary: this is the human being in his or her most magnificent self-realization – tenuously possible, certainly unlikely, most frequently not requested. Indeed, this scene struck the ancients (as well as al-Fārābī himself) as rather unexceptional. It is a scene of risk and solitude, where communication is impeded and precious resources remain untapped – as if the city (which still, with its structures and institutions, crucially contributed to the coming to be of such a being),

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[58] Ibid. 48–49.   [59] Ibid. 49.   [60] Ibid.   [61] Ibid.
[62] This theme is recurrent in Plato's *Republic*, most notably in Book VI (see in particular the discussion leading to the image of the city as a ship [487b–489c] and that of the philosopher seeking refuge from adverse circumstances, like someone in a storm [496d–e]), but also in Book IX (ending with Socrates' invitation to care for the city that may not be anywhere on this earth, but inside oneself and reflecting the sky above [592a–b]). Consider, furthermore, the ambiguous ending of Aristotle's *Nicomachean Ethics* X, unstably bringing together, in the figure of the wise one, communal belonging and self-sufficiency, political engagement and self-transcendence of the human (indeed, the most accomplished human being is identified with the beyond-human, that is, with the divinity of *nous*). These problems are also amplified in the *Politics*, where the excellent political animal is shown to be at the limit (i.e. on the margins) of political association, because of the self-sufficiency making him/her resemble a god (1253a25–29, 1284b26–34). At its best, the best of political animals seems to overcome itself as an animal. Such a being may neither be expelled from the city nor be subjected to rule, but is naturally the ruler, according to Aristotle. See al-Fārābī 1996: XXVIII.

were not ready for her, not ready to need her, to acknowledge her and its own need for her.

And yet, the commentator ends celebrating the felicity of such a being nevertheless. Even as the radiance of the prince should remain hidden to his fellow citizens, his beauty invisible, his treasures unimagined, still:

> the prince or the *imām* is the prince and *imām* by virtue of his skill and art, regardless of whether or not anyone acknowledges him, whether or not he is obeyed, whether or not he is supported in his purpose by any group . . . . [N]either the *imamate* of the *imām*, the philosophy of the philosopher, nor the princeship of the prince is done away with by his not having tools to use in his activities or men to employ in reaching his purpose.[63]

As a counterpoint to the earlier focus on the worldly, political, altogether phenomenal conditions allowing for human realization, in this conclusion the *magister secundus* recalls an irreducible experience of silently gathered interiority, inappearance, reserve.[64] Carried in the body of the philosopher, guarded and cultivated there, the work of the invisible disseminates itself in the world.

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[63] Al-Fārābī 1962: 49.
[64] Again, the figure of the hidden prince in al-Fārābī's meditation can ultimately be traced back to the solitary god of *Nicomachean Ethics* x, or even to the "private man" who takes care of his own life, indifferent to glory and reputation (this would be the life chosen by Odysseus, finally healed from his desire for recognition, according to Er the *angelos* at the end of Plato's *Republic* (620c–d)). This will prove to be a fecund suggestion. Suffice it to think of the reflections on individuation and self-awareness by Abū l-Barakāt al-Baghdādī, or of Ibn Bājja's focus on the estranging character of politico-philosophical excellence, making one a foreigner in one's own homeland. See Ibn Bājja 1969.

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