Avicenna is the greatest philosopher of the Islamic world. His immense impact on Christian and Jewish medieval thought, as well as on the subsequent Islamic tradition, is charted in this volume alongside studies which provide a comprehensive introduction to and analysis of his philosophy. Contributions from leading scholars address a wide range of topics including Avicenna’s life and works, conception of philosophy, and achievement in logic and medicine. His ideas in the main areas of philosophy, such as epistemology, philosophy of religion, and physics, are also analyzed. While serving as a general introduction to Avicenna’s thought, this collection of critical essays also represents the cutting edge of scholarship on this most influential philosopher of the medieval era.

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INTERPRETING AVICENNA

Critical Essays

EDITED BY
PETER ADAMSON

CAMBRIDGE UNIVERSITY PRESS
In memory of David C. Reisman
# Contents

_Acknowledgments_  
_Notes on contributors_  

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Introduction</strong></td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>The life and times of Avicenna: patronage and learning in medieval Islam</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td><em>David C. Reisman</em></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Avicenna's philosophical project</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td><em>Dimitri Gutas</em></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Avicenna on the syllogism</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td><em>Tony Street</em></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Avicenna's natural philosophy</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td><em>Jon McGinnis</em></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Avicenna on medical practice, epistemology, and the physiology of the inner senses</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td><em>Peter E. Pormann</em></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Avicenna's epistemological optimism</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td><em>Dag Nikolaus Hasse</em></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Certitude, justification, and the principles of knowledge in Avicenna’s epistemology</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td><em>Deborah L. Black</em></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Avicenna’s metaphysics</td>
<td>143</td>
</tr>
<tr>
<td></td>
<td><em>Stephen Menn</em></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>From the necessary existent to God</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td><em>Peter Adamson</em></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Avicenna’s Islamic reception</td>
<td>190</td>
</tr>
<tr>
<td>----</td>
<td>-----------------------------</td>
<td>-----</td>
</tr>
<tr>
<td></td>
<td>Robert Wisnovsky</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>The reception of Avicenna in Jewish cultures, East and West</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>Gad Freudenthal and Mauro Zonta</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>The reception of Avicenna in Latin medieval culture</td>
<td>242</td>
</tr>
<tr>
<td></td>
<td>Amos Bertolacci</td>
<td></td>
</tr>
</tbody>
</table>

Bibliography 270
Index 297
Acknowledgments

David C. Reisman, author of the first chapter in this volume, passed away within a few months of writing his contribution. David's untimely death cut short a scholarly career that would have continued to break new ground in delineating Avicenna's ideas, as well as the Avicennan corpus and its reception. More importantly, of course, many of us who work on Avicenna and other topics in the intellectual history of the Islamic world have lost a dear friend. It is hoped that the present volume will form a fitting tribute to the memory of a scholar who accomplished so much in such a short time.

The editor would like to thank the Leverhulme Trust, whose support brought David Reisman to London in the last months of his life. The Trust's generosity has also facilitated the editor's work on the volume and the invaluable editorial assistance provided by David Bennett. Thanks are also due to Dimitri Gutas, who helped with the posthumous revision of David Reisman's paper, and to David's family for agreeing to allow its publication.

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Abū ‘Alī Ibn Sīnā (known in this volume by his Latin and, hence, English name, Avicenna) should be recognized as the single most influential thinker of the medieval period. As shown in the chapters that comprise this volume, he had an unparalleled impact on Muslim philosophers and theologians – who mostly ceased responding to Aristotle in order to engage instead with Avicenna. He was also greatly (albeit often indirectly) influential on Jewish philosophy. And, of course, he was perceived as a major thinker by medieval and Renaissance philosophers in the Latin Christian tradition. Yet much fairly basic research remains to be done concerning this giant in the history of ideas. As Peter E. Pormann mentions in his contribution to this volume, the study of Avicenna’s epochal contribution to the history of medicine is still in its infancy. On the philosophical side, things are somewhat better. Indeed, a great deal of excellent research has been devoted to Avicenna’s life and thought.¹ Still, we lack such basic tools as reliable editions of some works and translations, even for many major writings. Even major texts such as the *Physics* and *Metaphysics* from the *Cure* have become available in English only within the past few years.

Major figures like Plato, Aquinas, and Kant are, naturally enough, the subject of an ever-growing body of collected volumes, companions, and guidebooks. So it is another mark of the relative neglect paid to Avicenna that there has, until now, been no collection in which leading experts examine all aspects of his thought.² This volume is intended to fill that lacuna. It is not, however, only a companion or guide to what is already known about Avicenna. In keeping with the aims of the series to which it belongs, each chapter in *Interpreting Avicenna* seeks to advance the current

¹ As attested by Janssens 1991 and 1999. See also the annual bibliographies on Islamic philosophy compiled by T.-A. Druart, at http://philosophy.cua.edu/faculty/tad.

² There have, of course, been previous volumes of collected papers on Avicenna, but these do not attempt to cover the various departments of his philosophy as the present book does. See, for instance, McGinnis 2004; Reisman 2003; Wisnovsky 2001.
state of our knowledge. Often, the authors have additionally pointed to areas where work remains to be done. His medical writings have already been mentioned. Another example is the Jewish and Latin reception, where the contributions found here not only present (and, indeed, push forward) the status quaestionis, but also show how many questions remain to be answered.

The volume begins by examining the entire Avicennian corpus from two complementary points of view. First, David C. Reisman explains the historical and personal context within which Avicenna wrote. The most valuable document for our understanding of Avicenna’s life story is the biography he wrote himself, which was completed by his student, al-Júzjáňi.3 As Reisman points out, Avicenna and al-Júzjáňi both qualify as untrustworthy narrators. Nonetheless, several points emerge with clarity from the work. First, Avicenna’s fortunes rose and fell with his access to patronage, to the point that his adult life can appear to be little more than a series of varyingly successful attachments to regional potentates. This relates to a second point emphasized by Reisman: Avicenna’s high degree of methodological self-awareness. He wrote with various audiences in mind, whether students, patrons, or polemical opponents. These different occasions determined the structure and complexity of argument in his various works. A third point, made by Avicenna himself in the biography, is that he was a self-consciously original thinker, well aware of his own genius.

That point emerges likewise from the next chapter in our volume, by Dimitri Gutas. He approaches the Avicennian corpus with an eye to its overall philosophical structure and goal: to realize the single, unified, and comprehensive science only envisioned by Aristotle. The sprawling Avicennian summae – including his most important single work, the Cure – were intended to fulfill this ambition. This was not merely a matter of filling in gaps in Aristotle’s system, but of producing a new, properly Avicennian system. Sometimes this meant grafting original thoughts onto an Aristotelian structure;4 sometimes it meant striking off in entirely new directions. Along with the new Avicennian system came a new epistemology against which the system was to be measured. As Gutas explains, Avicenna devised a theory of “verification” which placed great emphasis on experience. For Avicenna, philosophy is syllogistic in structure and thus thoroughly rational, yet it must be grounded ultimately in our experience, both of the world around us and of our own selves.

3 Gohlman 1974.
4 See, for instance, Bertolacci 2006, which examines in detail the relationship between the Metaphysics of Aristotle and the Metaphysics section of Avicenna’s Cure.
This mention of syllogistic brings us to the next chapter, on logic. Though Avicenna is among the most important and sophisticated figures in the history of logic, only a handful of scholars have been working on this aspect of his achievement. They include Tony Street, who here examines Avicenna’s syllogistic. He focuses particularly on modality, that is, the notions of necessity, possibility, and impossibility. We see some significant departures from the Aristotelian tradition here. A striking example is Avicenna’s “Rule of the Major.” Whereas the traditional “Rule of the Weaker” stated that the modal status of the conclusion of a syllogism will be the same as the weaker premise (in other words, a syllogism that combines a necessarily true premise with a possibly true premise will yield only a possibly true conclusion), Avicenna believed that the conclusion would have the same modal status as the major premise. Here Avicenna may appear to have made a serious mistake. But as Street shows, the new Rule is not unmotivated: as so often, Avicenna set out his logic with an eye on metaphysical applications. Street explores these applications and also considers the reception of Avicenna’s innovative ideas among later Muslim logicians.

From here we move on to four chapters that deal with Avicenna’s natural philosophy. The framework is set out by a chapter on physics by Jon McGinnis who, along with Ahmed Hasnawi and others, has been showing the innovative ideas to be found in this part of the Avicennian corpus. As with logic, attention naturally focuses on topics where Avicenna diverges from Aristotle. We already find a divergence in his handling of the most central notion in Aristotelian physics, motion. As McGinnis remarks, Avicenna’s “analysis is as startling as it is simple”: he permits us to consider something as moving at an instant, rather than over a segment of time. This may strike us as obvious, but it is not something allowed by Aristotle in his *Physics*. McGinnis goes on to consider Avicenna’s ideas about divisibility and the minimum of natural bodies, in terms of both extension and motion. These points are incidentally crucial for understanding Avicenna’s relationship to contemporary theologians (*mutakallimūn*).

One of the most important, yet least researched areas of Avicenna’s thought, is medicine. Pormann’s contribution is a step towards remedying this situation. He begins by explaining the relationship between Avicennian medicine and Avicennian philosophy. He then explores the extent to which

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5 See, e.g., Street 2002, 2004, 2010. Also important is the work of such scholars as Paul Thom, see, e.g., Thom 2008.


7 Compare Rashed 2005.
Avicenna was a practicing doctor, or only a systematizer of medical book-
learning. The question is crucial not only historically, but also because it
bears on Avicenna’s medical epistemology. As Pormann shows (and here
we find a strong resonance with Gutas’s chapter), Avicenna followed Galen
in emphasizing the role of experience in medicine, for instance, in order to
test the efficacy of drugs. It would thus be ironic if Avicenna barely engaged
in actual medical practice, as some have alleged. But Pormann shows that
this is unlikely, given the detailed references to Avicenna’s own experience
in his medical writings.

The final section of Pormann’s study looks at the relation between
Avicenna’s medical theory and his well-known account of the “internal
senses.” This provides a natural transition to the next two chapters, in which
Deborah Black and Dag Nikolaus Hasse explore Avicenna’s psychology
and attendant epistemology. The central role of experience in Avicenna’s
epistemology has often been taken to clash with the role he gives to the
Active Intellect. If we know through an emanation from this Intellect,
why do we also need experience to acquire knowledge? Alternatively, if
we can learn empirically, what need is there to invoke a superhuman
Intellect? Hasse lays out various possible solutions to this vexed problem,
and explains why an emanation from the Active Intellect is necessary,
despite Avicenna’s abstractive theory of knowledge. Black’s chapter further
explains how truths gleaned from experience would fit into Avicenna’s
more general epistemology. He recognizes a range of degrees of certitude,
depending on how one has arrived at a given belief. Much as Black has
already shown in an earlier study of al-Fārābī, certitude has for Avicenna
both a subjective and an objective dimension. Thus, it is difficult to classify
him neatly as an internalist (who would insist that a knower must have
access to the grounds on which his or her belief counts as knowledge) or
as an externalist (who would deny this).

Avicenna’s metaphysics (including his discussion of God) is probably
the best-researched part of his philosophy. But even here there is much
yet to discover, as shown by the next two chapters in the volume. Menn
shows, among other things, that Avicenna reacted to the interpretation of
Aristotle’s *Metaphysics* found in al-Fārābī and Ibn ʿAdī in arriving at his
own groundbreaking conception of existence. Menn’s chapter adds con-
siderable further evidence and detail to an emerging picture of Avicenna as
engaging thoughtfully with the Baghdad Peripatetic school. His attitude
towards this group did not, then, consist only of the invective described in

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8 Black 2006. 9 See Rashed 2004.
Reisman’s piece, or the negative self-definition embodied by the “Easterners vs. Westerners” nomenclature. My own chapter studies another aspect of Avicenna’s metaphysics, namely, his philosophical theology. The Avicennian proof for the existence of God has deservedly received a good deal of attention. I try to answer a further question: why, according to Avicenna, is the Necessary Existent to be identified with the creator God worshipped in Islam?

Having covered the major areas of Avicenna’s thought, the volume concludes with three chapters on his reception. The authors of all three pieces faced daunting challenges, but Robert Wisnovsky had a particularly intractable task. After all, the history of Avicenna’s reception in the Islamic world is more or less the history of all philosophy subsequent to Avicenna in the Islamic world. Wisnovsky underscores this point by beginning with a quote from the nineteenth–twentieth-century philosopher, Muḥammad ʿAbduh, for whom Avicenna’s ideas are still relevant. Wisnovsky manages to cover quite a lot of ground by focusing on the question of which Avicennian texts and themes drew the attention of his commentators and critics across many generations. Gad Freudenthal and Mauro Zonta show that, by contrast, we find surprisingly little in the way of detailed textual engagement with Avicenna among Jewish authors. Freudenthal and Zonta offer explanations for this fact, and also show that Avicenna nonetheless managed to exercise a great deal of influence on Jewish thought, often indirectly.

The final chapter by Amos Bertolacci surveys the Latin reception of Avicenna. The importance of this topic hardly needs argument. Indeed, until not too long ago European scholarship on Avicenna was motivated primarily by his importance as a source for figures like Aquinas. As Bertolacci shows by focusing on the Metaphysics of the Cure (Philosophia Prima in Latin), Avicenna’s initial impact on the Latinate Christian world came in three phases, culminating in the sophisticated use of the text made by Albert the Great. Complicating the story is the fact that Averroes and al-Ghazālī were being translated and read alongside Avicenna. Ironically, Latinate readers knew al-Ghazālī primarily as the author of the Intentions of the Philosophers, a summary of Avicennian doctrine, so that for them he

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10 One might, admittedly, have included pieces on at least three other disciplines. First zoology, a topic on which Avicenna wrote extensively (on this, see Kruk 2002). Second, his work on the exact sciences. It was originally planned that the volume would include chapters on both of these topics, but this did not come to fruition. Third, there is practical philosophy (ethics and political philosophy). Given space limitations and the fact that this is not an area that drew much attention from Avicenna (as Gutas notes in his chapter), we have not devoted a study to it here. See, however, Black’s contribution for some pertinent remarks.
was an ally of Avicenna, whereas Averroes emerged as Avicenna’s primary rival and critic.

I have stressed how much remains to be accomplished in Avicenna studies. In part, that is because the volume is intended to invite and facilitate further work on the Avicennian corpus and tradition. But it should once again be admitted that, despite the gaps in our understanding of him, Avicenna is one of the few classical Muslim thinkers to have received substantial attention from historians of philosophy. Along with al-Kindī, al-Fārābī, al-Ghazālī, and Averroes, he is at least widely acknowledged as a major medieval thinker. The same cannot be said of other figures who would deserve the same recognition: Ibn ‘Adī, Suhrawardī, or Fakhr al-Dīn al-Rāzī, for instance. Their names and works are not well known outside a relatively small, though growing, community of specialists. This is a field whose excitement lies not only in the excellent work already being done – as amply shown by the studies collected here – but also in the fact that generations of scholars to come will have no difficulty finding themes, texts, and authors in need of study. Whatever new insights their research brings, it seems certain that those future generations will continue to see Avicenna as the central philosopher of the Islamic world.
With regard to the textual sources for Avicenna’s life, we are both blessed and cursed.¹ We possess two texts that may reasonably be considered as the foundation of the narrative, for the simple reason that they were composed by the actors themselves. One is his so-called Autobiography, in which Avicenna plots the contours of his initial studies and provides some information about his early career. The other is a Biography of Avicenna written by his student and amanuensis, al-Ịżjānī.² Some time ago, Dimitri Gutas showed that both texts must be approached as tendentious literary documents rather than the “accurate” historiography which the modern historian may hope for but rarely encounters.³ The Autobiography is set within a presentation of the Aristotelian curriculum which Avicenna deemed essential to the philosophy of his times – indeed, of all times. The text implicitly assumes that readers will construe that account of the Aristotelian curriculum as one that molded the development of his life and education, as legitimated by a narrative of Avicenna’s progression through the Aristotelian texts. The Biography, on the other hand, has to be approached as a hagiographical presentation of the master by the grateful companion and student. Al-Ịżjānī’s narrative defends and justifies his master’s genius, and above all, stresses al-Ịżjānī’s own participation in Avicenna’s career. In what follows I will draw largely on these two texts, but also make use of stray remarks found in Avicenna’s personal correspondence. In laying out the trajectory of his life and works, I will highlight the importance of Avicenna’s social context, in particular the role of patronage and controversy.

³ Ibid.: 149–98 (part 2, chapter 3).
I Avicenna’s Early Career

Born in the provincial town of Afshana sometime before 370/980, and raised in the then cosmopolitan city of Bukhārā, Avicenna’s early education seems to have been directed by his father, a provincial administrator for the Samānid rulers. At a very young age his informal studies included arithmetic, which probably involved simple sums – it was taught by a greengrocer. His studies in law were guided by the Ḥanafī jurist, Iṣmā‘īl al-Zāḥid. His father then invited his acquaintance, Abū ‘Abd Allāh al-Nāṭili, whom Avicenna describes as a person “who claimed to know philosophy,” to educate the young man, beginning with logic. Avicenna notes only that he studied Porphyry’s *Eisagoge* and perhaps Aristotle’s *Categories* with al-Nāṭili, taking on the other Aristotelian texts (presumably through to *Posterior Analytics*) by himself. After Avicenna had also mastered Ptolemy’s *Almagest* and Euclid’s *Elements*, al-Nāṭili advised him to go on by himself. Avicenna notes his continuing studies through Aristotle’s *Physics* and *Metaphysics*.

Avicenna also studied and quickly mastered medicine, described by him as “not one of the difficult sciences.”

Medieval readers would pick up on the fact that Avicenna’s education follows the Aristotelian curriculum of his day, moving from logic, the “tool” of theoretical research, through the theoretical philosophical disciplines including, importantly, the “primary” disciplinary umbrella of metaphysics. However, Avicenna’s training also had a practical side: after all, disciplines like administration, medicine, and astronomy also got one a job. The arc of Avicenna’s education is thus traditional, but his proudly claimed autodidacticism was unusual in a society which emphasized the master–student relationship for conferral of authority. Avicenna justifies himself as a self-taught man, recalling that he expressed novel solutions

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4 For the location of Afshana, see Gohlman 1974: 119, n. 6. The traditional date given in some sources for Avicenna’s birth, 370/980, cannot be sustained; see Gutas 1987–8, where it appears that the date may have to be pushed as far back as 964.

5 Gutas, ibid., provides the documentation for Avicenna’s Ḥanafī credentials.

6 Abū Abdallāh al-Ḥusayn b. Ibrāhīm b. al-Ḥusayn b. Khurshid al-Ṭabarī al-Nāṭili was a scholar of the ancient sciences with particular expertise in pharmacology. He prepared a “corrected” (*islāḥ*) edition of the Arabic translation of Dioscorides’ *Materia medica* which Avicenna himself used in his *Qānūn*.

7 He complemented his studies in the latter two disciplines with the works of Greek philosophers such as Themistius, Alexander of Aphrodias, and Philoponus, and his predecessors in the Arabic tradition, al-Rāzī, al-Fārābī, and Yahyā b. ‘Adī (this list is built from references in his early responses to the scientist al-Bīrūnī, on which, see below).


9 In the last, Avicenna was very much influenced by al-Fārābī’s *Aims of Aristotle’s Metaphysics*. See Gutas 1988: 238–54; and Bertolacci 2001b.
to logical questions; that al-Nāʿīnī endorsed Avicenna’s continuing studies on his own; that at an early age he was considered proficient enough to dispense his knowledge to experts; and that he was able to breeze through some disciplines, such as mathematical theory, astronomy, and especially medicine.

In his Autobiography, Avicenna gives us a glimpse of his method for self-teaching. He wrote up lists of notational formats for the Aristotelian syllogistic model of logic and used them to evaluate the validity of the arguments put forward by philosophers and theologians of the time. He was able to affirm some philosophical arguments commonly accepted in his time as demonstrative. The method also became a weapon, as he was able to expose the deficiencies of his opponents, such as the Baghdad Peripatetic “school” (see further below). It is striking that in other texts, Avicenna tends to refute such opponents solely on the basis of their faulty reasoning patterns, without focusing on their content. His rigorous self-training in logic became the basis not only for his rejection of the institutionalized pursuit of philosophy in his time, but also the construction of the new ideas he would set forth in his own philosophical system.

But there was at least one feature of contemporary philosophical practice which Avicenna was not at liberty to reject: in the absence of institutions of learning devoted to the non-religious theoretical sciences, Avicenna could find a stable environment for his work only thanks to court patronage. This was offered in exchange for the practical skills that the scholar could offer the patron. Dynastic courts of the time were thus instrumental in Avicenna’s intellectual output. As the fortunes of these dynasties rose and fell, so did Avicenna’s income and scholarly environment. Unsurprisingly, the tenor and focus of Avicenna’s writings were influenced by the audiences provided by the different courts.

At eighteen, Avicenna secured his first post, as physician, at the court of the Sāmānid ruler, Nūh b. Maṇṣūr, in Bukhārā. This environment secured for him two necessary ingredients of a scholarly life: regular access to a good library, and benefactors. Avicenna tells us that the Sāmānid library was filled with books from every branch of learning and that he first concentrated his attention on reading all of the “forerunners.” As for benefactors,

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10 Others have translated *awt’il* in this passage as “ancients” (Gohlman 1974: 37; Gutas 1988: 84). But the sciences he lists for his library research – language, poetry, and jurisprudence – suggest he means Arab-Muslim authorities in those disciplines. Thus, he is telling us that he read his own culture’s authorities in one room of the library, and then proceeded to and finished the study of Greek philosophical disciplines (called *'ulūm* in the Autobiography, properly translated “philosophical sciences” in Gutas 1988: 84).
Avicenna’s first three compositions are addressed to different recipients, who presumably provided some sort of support. The *Compendium on the Soul* was dedicated to his employer, with a typically ornate note of gratitude appended:

> Whenever the commander – may God make long his authority – commands me to give a detailed statement on these matters [addressed in the work], I will exert the greatest of efforts to comply, God willing. Once languishing, philosophy now flourishes through the help of the ruler, once obscure, it is now promoted, so that through his rule, its rule is now revived, through his days of power, its days now return, by his status, the status of its scholars now raised.

The *Compendium* already displays a characteristic feature of Avicenna’s thought: attention to the human soul and its salvation is connected to issues of proper philosophical methodology. The work sets out what might be dubbed a “salvationist theory of the human soul,” setting out a systematic discussion of the human soul’s cognitive capacities, by way of explaining how the soul can realize its innate potential. The soul must overcome the limitations of bodily influence, first by training itself to use the faculties it exercises through the body, and second by balancing the emotional reactions (caused by humoural “imbalance”) which disrupt its reasoning process. This training is often articulated by Avicenna within the framework of a broadly Aristotelian ethics. The ultimate goal of such exercises in training the intellect and balancing the bodily influences is to achieve a state of the human intellect that resembles (and even assumes the role of) the universal intellect of Neoplatonic cosmology. Also characteristic is that Avicenna offers a demonstration (*burhān*) of the self-subsisting substantiality of the human soul, alongside a less assertive investigation of the soul’s state after the death of the body (usually this topic is pursued in dialectical “adjudication” form, *hujja*).

Two further works dating from this period are the *Philosophy for ʿArūḍī* (*Al-Hikma al-ʿArūdiyya*), written for the litterateur Abū l-Ḥasan al-ʿArūḍī, and *The Available and the Valid* (*al-Ḥāṣil wa-l-Mahṣūl*), with its appendix on ethics, *Piety and Sin* (*Al-Birr wa-l-Ithm*), written for Abū Bakr al-Baraqī. Avicenna explicitly tells us that both men asked him to

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11 Landauer 1876: 372. I cannot agree with Gutas (echoing Landauer’s “Ansicht,” ibid., 336) that the work displays an unusual “obsequiousness” that helps determine its dating. Here he is actually asking for a raise commensurate with philosophy’s importance and the ruler’s “status.”

12 His minor essays on love (*Risāla fi l-ishq*, Mahdavi 1954, no. 90) and sorrow (*Fi ṭabyīn māhiyyat al-huzn*, Mahdavi 1954, no. 59) must be considered in this context.

13 For this individual, see Gohlman 1974: 123.

14 See ibid.
write up summaries (although the first was said to be in twenty volumes!) of the learning he acquired from his work in the court library. Along with the *Compendium*, these works belong to a first type of composition, one of three we can observe in Avicenna’s corpus. At the beginning of Avicenna’s writing career, he writes within a patronage context. Later he will write for pupils, with an explicitly pedagogical purpose. But another type, the refutation, accompanied more often than not by malicious personal slander in his personal correspondence, is the next to make its appearance.

The earliest of Avicenna’s publicized disputes happened around the year 1000, during his next appointment as lawyer in the Ma’mūnid court in Gurgānij. It comes down to us in the form of a written correspondence between Avicenna and the scientist al-Bīrūnī (d. 1048). The correspondence was initiated by al-Bīrūnī, who sent Avicenna a series of questions concerning Aristotle’s natural sciences. According to the later interpretation of the biographer al-Bayhaqī (d. 1165), it appears that the disastrous end to this correspondence was the result not of Avicenna’s impoliteness, but al-Bīrūnī’s. A reading of the texts suggests that Avicenna provided al-Bīrūnī with well-considered, well-reasoned responses (which reflected his Aristotelian-focused learning to date). At one point, he generously defers to al-Bīrūnī’s knowledge of mathematics, saying: “if it were not for your adeptness in geometry, I would provide a detailed geometrical proof for this position.” The sheer vehemence of al-Bīrūnī’s subsequent response suggests that he undertook the correspondence as a means to best Avicenna, to challenge the reputation and status of this young, but already recognized thinker. He does not appear particularly interested in the philosophical questions themselves, and winds up insulting Avicenna’s stupidity and slavish obedience to Aristotle.

Avicenna was so disenchanted by this turn of events that he returned with what we may perceive as the ultimate form of scholarly condescension: he asked his then current student, Muḥammad al-Maʾṣūmī (d. before 421/1030), to continue the correspondence with al-Bīrūnī. Al-Maʾṣūmī undertook this task in the most cynical of manners. In a note to Avicenna,

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15 Ibid.: 40–1.
16 The questions concern theoretical astronomy, meteorology, and natural philosophy as a whole.
17 Al-Bayhaqī 1932: 95.
18 Avicenna-Bīrūnī 1995: 29. Admittedly, this compliment could be construed as ironic.
19 For instance: “[Your theory amounts to] a shameless goof” (the Arabic for “shameless,” fāḥish, has the nuance of sexual depravity); “What do we get from your response but mere repetition of Aristotle without any commentary?” (Avicenna-Bīrūnī 1995: 57 and 56, respectively).
20 He says to al-Bīrūnī that the latter’s comments amount to provocation (*mughṭayāţa*) and rudeness (*muḥkāsāna*), ibid., 14.
he says that he has not given full attention to the task, busy as he is with his own work:

I have written my responses as quickly as possible, but I haven’t had time to collate them. If [al-Bīrūnī] finds errors in the ps and qs,\(^{21}\) I say: give him the least to satisfy him! Let him try to hide the likes of the wild delusions that he wrote from anyone under his authority, let alone anyone else. I send him only what he sent, following his fancy, although I don’t believe any of what I said, nor would I endorse it.\(^{22}\)

Al-Maṣūmī carries this condescending tone over to his responses to al-Bīrūnī. He says at one point: “it would have been more appropriate if you had only chosen your words more carefully,”\(^{23}\) and at another, “[your argument] is itself a shameless goof that is not worthy of someone like you.” In a sense, Avicenna had the last word in this dispute: he handed al-Bīrūnī over to his derisive student. It cannot be seen as coincidence that shortly after the conclusion of the correspondence Avicenna set off to Jurjān to seek a position at the court of the Ziyārid Qābūs b. Vushmīr (d. 997), al-Bīrūnī’s own patron at the time of the correspondence. Avicenna arrived in Jurjān too late: the ruler had been killed by his own army in his second reign.

II THE PEDAGOGICAL TURN

Avicenna ends the account of his early career here in Jurjān. Al-Jūzjānī begins his Biography at the same point and fills us in on the details of Avicenna’s living arrangements after his fruitless search for a court in which to work. A wealthy patron named Abū Mūhammad al-Shīrāzī\(^{24}\) bought him a house in which to work. Al-Jūzjānī tells us that he would visit Avicenna daily for studies in astronomy and logic. Avicenna wrote his so-called Middle Summary on Logic for al-Shīrāzī. The Summary on the Almagest and Universal Observations, both also dated to this period, most likely came out of readings in Ptolemy they undertook together. At Jurjān, too, Avicenna began composition of his magisterial textbook on medicine, The Canon.

Another work that he wrote for al-Shīrāzī at this time, The Provenance and Return (al-Mabda’ wa-l-ma‘ād), has been taken as “esoteric” or “mystical.” But that would be a misreading. Rather, Avicenna’s approach is tied to the tradition of harmonizing and reconciling philosophical discrepancies, a motif of philosophical education since classical times. (An earlier example

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\(^{21}\) The Arabic suggests he means the dotting of the Arabic letters (tashīf); in other words, he is excusing his sloppy handwriting.

\(^{22}\) Avicenna-Bīrūnī 1995: 59.

\(^{23}\) Al-Bayhaqī 1932: 95.

\(^{24}\) On whom, see Gohlman 1974: 126.
The life and times of Avicenna

Harmonizing the Two Philosophers, Plato and Aristotle, ascribed to al-Fārābī. Such works assume that a primary task for the philosopher who reads past thinkers is the reconciling of apparent discrepancies by fitting them into a single over-arching theory. In his correspondence with al-Bīrūnī, for instance, Avicenna says on the topic of the world’s eternity:

It is as though you took this objection [to Aristotle’s view] from John Philoponus when he misrepresented [Aristotle] to the Christians by revealing Aristotle’s dissenting view on this issue. However, Aristotle’s agreement on this issue cannot be hidden from anyone who examines [Philoponus’] commentary on the last part of [Aristotle’s] De generatione et corruptione and his other books.

The Provenance and Return marks a further development in Avicenna’s construction of his educational methodology and his approach to the history of philosophy. Unlike the Compendium on the Soul, this work is an occasion for Avicenna to set down his theories for students and friends (the first may include al-Jūzjānī and al-Maṣūmī, the last may be the minister Abū l-Ḥusayn al-Suhaylī). He says in the introduction to The Provenance and Return:

In this treatise I attempt to clarify and disclose what [the Peripatetics] have left obscure, veiled and hidden; to harmonize their disagreements; and to lay out what they treat as a whole to the best of the limited abilities of such a one as me who has been plagued by the current extinction of the scholarly world and the attendant evaporation of enthusiasm for the aims scattered by wisdom.

In the later précis of the work, The State(s) of the Human Soul, he likewise says:

In this essay I have left out a discussion of the most obvious aspects in the theory of the soul, except where absolutely necessary. Instead, I have “removed the cover” and “lifted the veil” by indicating the secrets stored in the books but withheld from explicit articulation. [I wrote it like this] in solidarity with my friends. Moreover, I am convinced that in our times there is no one who would be instructed in these implicit theories or be able to gain by himself a comprehensive grasp of them by the forensic method. Second, I have given up hope that anyone who desires to perpetuate the philosophical disciplines and hand them down to future generations has any means at his disposal other than to write them out explicitly. One cannot rely on the student’s desire to ascertain them properly . . . or on the interest of our contemporaries and their like-minded successors to examine the allegorical passages . . .

25 See Rashed 2009 for a recent argument against the ascription to Fārābī.
29 Qur’ān 50:22 (cf. 18:101).
31 I have relied on the translation of Gutas 1988: 32–3 with comparison to MS Ahmet III 3447, f. 249v.
The treatise is for those who have the training and insight to understand it, and it is not to be shared with anyone else. Avicenna’s language here has invited misinterpretation. His aim is to withhold knowledge from the less-advanced thinkers of his time, and to protect the exclusive educational program he pursued with his students. In his later works directed towards education (e.g. the Pointers and Reminders), this dialectical methodology of harmonization is replaced by a purposefully allusive language, but the goal is the same: to train students in hermeneutic technique. Thus, while the patron-commissioned works written during Avicenna’s Bukhāra days were straightforward presentations of a system inspired primarily by Aristotle, the form we see at this juncture, however embryonically, is directed towards the education of pupils (and perhaps amateur enthusiasts). Training is adumbrated through tropes of textual concealment, and the emphasis is on teaching the philosophical method of spotting unarticulated links in traditional argument structures.

III RIVALRY AND REFUTATION

In the next stage of Avicenna’s career (1014) we find him in Rayy, (present north-western Iran), serving under one branch of the Būyid dynasty, then nominally under the rule of Majd al-Dawla, but largely directed by his mother, the Sayyida (i.e. the “queen mother”). We are told by al-Jūzjānī that he entered court as a physician, to heal the young ruler of the dread “black humor” (“melancholy”), a disease already discussed in ancient sources and marked by a range of psychological disturbances. Apparently Avicenna later served in an undefined capacity as the Sayyida’s “business manager” in Qazwīn and Hamadhān, but the details of his service are obscure. It was a productive period in terms of his own research and writing. In the time he served this branch of the Būyid rulers, he finished The Canon, started writing his major work The Cure, and prepared The State(s) of the Human Soul, a little synopsis of The Provenance and the Return. Other treatises and letters dated to this period would be initiated after another foray into public refutation.

32 See Gutas 1988: 225–34 for this technique.
33 This is a little text with many titles, including Treatise on the Study of Soul by Inference and Demonstration, On the Human Intellect, The Return, The States of the Human Soul and On the Celestial Soul. The dating of the work has been the cause of some debate (Mahdavi 1954: 244: and Gutas 1988: 99f). Al-Jūzjānī is fairly clear on the date and location; he says “then [Avicenna] moved to Rayy and . . . wrote The Return there” (Gohlman 1974: 48–50). “The Small Return” presumably has been confused with The Provenance and the Return; a plausible solution is that the former is no more than a précis of the latter and that it was indeed written at Rayy.
In Hamadhān, Avicenna encountered a new rival who, it would seem, presented a serious threat to the furtherance of his career. What we know about this rival has to be pieced together from a variety of sources. The twelfth-century biographer al-Bayhaqī has a brief entry on one Abū l-Qāsim al-Kirmānī, who, he says, engaged in public debate with Avicenna. According to al-Bayhaqī, the debate turned so sour that Avicenna accused Abū l-Qāsim of a fundamental ignorance of logic, while Abū l-Qāsim accused Avicenna of bad manners. Al-Bayhaqī then says Avicenna wrote to the vizier Abū Saʿd, requesting that he intervene in the matter. In a letter to his student Bahmanyār, Avicenna links this Abū l-Qāsim with the philosophical dilettante Miskawayh. This allows us to align Abū l-Qāsim with the Baghdad school of philosophers, and in particular with the third-generation study circle who traced themselves to the “logician” of Baghdad, al-Sijistānī (c. 912–85) and whose personalities are sketched so charmingly by al-Tawḥīdī, Miskawayh’s friend in Baghdad. Al-Tawḥīdī makes a brief reference to “our friend in Rayy,” the “apprentice (ghulām)” of the philosopher al-ʿĀmirī (d. 992), who belonged to the generation of scholars just prior to Avicenna and who himself had earlier served the same Šāmānid master as Avicenna. Again, we see al-Tawḥīdī identifying this apprentice’s friend in Baghdad as Miskawayh, to whom the apprentice would later send a Treatise on Logic of all things, in which he now calls himself the kātib, a secretary in the Būyid bureaucracy at Rayy.

Abū l-Qāsim has been identified by one modern scholar as the author (perhaps more likely, the redactor) of the Siwān al-hikma, a collection of biographies and sayings of the ancient philosophers, whose later sections, penned by al-Bayhaqī, included notices on Miskawayh and other scholars linked to the Baghdad school which at this point was operating in the court of Šāmās al-Dawla (r. 990–8) in Iraq. Abū l-Qāsim thus appears to be aligned with the last representatives of the “Baghdad Peripatetics.” Their interpretation of Aristotle and other Greek philosophers would in part lead Avicenna to propose his “philosophy of the Easterners,” which would break with the slavish practice of mere commentary on Aristotle (engaged in earlier by the “Baghdad Peripatetics”) as well as amateurish popularization of the tradition (by these latter-day “Baghdādis”).

Avicenna arrived in Hamadhān in 1015, acting in the service of the Sayyida. A common practice for newly arrived scholars in Western Iran at the time was the public debate, a means of testing one’s reputation against

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34 The pertinent passage is translated in Reisman 2002: 173.
35 See ibid.: 166.
36 Al-Qāḍī 1981. See also Gutas 1982.
the local talent. Avicenna, by his own account (see below), went through this ritual. The debate did not go well. Shortly afterwards, Avicenna would write his *Letter to the Baghdad Peripatetics*, whom we can identify likely as Abū l-Faraj b. al-Ṭayyib (d. 435/1043), ʿAlī b. al-Samḥ (d. 418/1027), and others, elder contemporaries of the provincial circle that included Abū l-Qāsim al-Kirmānī. In this letter, Avicenna says, in the third person:

[When] a man from Bukhāra [that is, himself, Avicenna] who loves philosophy and who has devoted himself to it in the measure that he has been given by God, journeyed to this country, he met a group who had studied with you. They would regularly accord him the status of the scholars [in the area], and he would hear from them philosophical principles similar to those he had learned from his teachers and from the books which he had expended much energy examining, as well as the conclusions that he had arrived at himself. [This continued] until he came to the city of Hamadhān and encountered there a master of great virtue, adept in scholarship and proficient in the philosophical and legal sciences. Thus, he sought to befriend him and looked forward to conversations with him.

However, when he tried to determine his methods, he found him strange and outlandish, very different from what he understood of the ancients. As for his logic, it was another logic, his natural science some other natural science, his metaphysics of a type suited to the talk of mystics and strange. Moreover, his geometry appeared to be based on some unknown system. He was most amazed by something that was continually presented to him with every debating point that came up, when [this man] would say “this is something instinctively understood,” and “this is an opinion formed by consensus,” and that this was taken from your mouths [i.e. the Baghdad Peripatetics] and from the mouths of your predecessors who have departed, may God have blessed them in their lives . . .

I have sent to you . . . a copy of a statement in refutation of a method you [are said] to endorse and a statement from me explaining its great remove from the truth. Then I write after that his methods with other debated points in which he sets down the same arguments he used with me. I ask you to make a frank statement about the truth in this matter . . . and I ask you to evaluate my method and his method in these issues.37

It seems clear from Avicenna’s account of the debate and the logical points he addresses in the remainder of the letter that Abū l-Qāsim employed a dialectical form of argumentation in the debates. This was a wholly acceptable method in debates within traditional disciplines of the Muslim community (law, theology, etc.). However, Avicenna’s emphasis on the Aristotelian demonstrative syllogism for arriving at philosophical truth meant that he may not have performed well in the debate, or at least not

have appeared to do so. The public debate, after all, was not designed for real philosophical enquiry, as Avicenna expected. Rather, it was an exercise in establishing or preserving reputation. Because Abū l-Qāsim claimed that his opinions went back to the respected Baghdad Peripatetics – a compelling claim of allegiance in provincial Hamadhān – Avicenna wrote to them to determine if this claim was true. As far as we know, no response was forthcoming. This would help explain the later contempt in which Avicenna held them, evident in his refutation of the views of Abū l-Fāraj b. al-Ṭayyib on the soul’s natural faculties,38 as well as in a letter, the so-called “Memoirs of a Disciple from Rayy.” Here we are told that Avicenna, having purchased the books of the Baghdad scholars, against his better judgment and for an exorbitant price, read them, found them useless, and returned them to the bookseller without asking for his money back.39

Abū l-Qāsim seems to have retaliated in a more vicious manner. In a letter to an unknown correspondent, written at a later date while he was in Iṣfahān, Avicenna addresses the concerns of the recipient, who has heard malicious rumors about him. Avicenna tells him:

As for that report which came to you from that man whom you mentioned [i.e. Abū l-Qāsim], pay no mind to that nonsense, nor for even a moment pay heed to that prattle . . . I forbid you to debate on this issue for any reason, or to let that mischief-maker know that this report has reached me; for I know that the malicious rumors he has spread will only become a cause for his own cursing, once I have made my own complaints about him.40

In the course of the letter, Avicenna refers to an earlier event, in which the “dolts of Hamadhān” accused him of attempting to imitate the stylistic structures of the Qurʾān in his “Sermons on Divine Unity,”41 a charge whose seriousness cannot be underestimated in the larger Muslim culture. A recently discovered manuscript in Bursa contains a letter Avicenna wrote to the vizier Abū Sād while he was in Hamadhān, probably around the time this charge was leveled at him. The descriptions of this letter by its

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38 See the edition and translation in Reisman 2008.
39 See Gutas 1988 for a translation of this letter. In Reisman 2002: 203, the anonymous disciple is identified as Ibn Zayla, on whom more below.
40 See ibid.: 178–9. The translation above is based upon a collation of MSs Ahmet III 3447, Aya Sofya 4849, Esat Effendi 3688, and Hamidiye 1447, 1448.
41 Of the so-called (plural) al-Khutab al-Tawḥidiyya, one exists. Avicenna reports he lost the others in the 1030 seizure of his papers (Reisman 2003: 178–9; for the seizure, see below). I have read it in Avicenna 1629, i: 27–8 and MS Nuruosmaniye 4894; others are listed in Reisman 2005. On the evidence of the remaining one, they were merely an exercise in using classical Arabic prose to articulate Avicenna’s Neoplatonic cosmology and salvationist theory of the human soul.
editor, Yahya Michot, indicate that Avicenna had enlisted the support of Abū Saʿd, a deputy of Majd al-Dawla, to look into the matter and rule against Abū l-Qāsim. The status of Abū Saʿd suggests that much more than a public spat between Avicenna and Abū l-Qāsim was at stake. It seems reasonable to assume that Avicenna was petitioning Abū Saʿd to intervene also in a legal capacity, perhaps with regard to the charge of imitating the Qurʾān.

It is no coincidence that shortly after the proposed date of the debacle, Avicenna gave up his service to the Sayyida and joined the court of the rising Būyid ruler Shams al-Dawla (r. 997–1021). After all, Abū l-Qāsim, like Avicenna, was in the employ of the Sayyida, as a secretary in Rayy. Furthermore, it is not unlikely that at least some of the very serious problems Avicenna encountered during his service with Shams al-Dawla are connected to Abū l-Qāsim’s smear campaign, recounted by Avicenna in the letter quoted above. In his biography of Avicenna, al-Jūzjānī is noticeably reticent about the precise reasons Avicenna left the service of one patron for another, and, indeed, makes no comment on any aspect of the controversy generated by the public debate, nor even a single mention of Abū l-Qāsim’s role in Avicenna’s career. Considering the number of texts produced by the encounter with Abū l-Qāsim, al-Jūzjānī’s reticence sits at odds with the importance of the event. If it is the case that Avicenna’s problems with Abū l-Qāsim played a significant role in his search for patronage, we must recognize public competition as a decisive factor in Avicenna’s development.

Between 1015 and 1024, Avicenna was working for the invading Būyid ruler Shams al-Dawla. He was originally summoned to cure the ruler, who had just invaded Hamadhān, and was then strong-armed into the role of minister. We know that he was still working on parts of The Cure, because the correspondence about and constant revision of that work can be dated in part to this period (these are the texts that would come to be collected as The Discussions). Abū l-Qāsim again came into contact with Avicenna here, albeit second-hand through the intermediary of the former’s

42 Avicenna 2000.
43 He says in passing, “[Avicenna] happened to be introduced to Shams al-Dawla,” Gohlman 1974: 50. In all likelihood, it was a case of transfer of service to the ruler Shams al-Dawla newly installed by conquest.
44 See ibid.: 127, nn. 62–3.
45 Again, al-Jūzjānī is politely reticent about this change of position, but he does add that Avicenna was “asked” to take on the position in the aftermath of Shams al-Dawla’s campaign on his old ally Ḥusām al-Dīn Abū Shawk b. ʿAnnāṣ in 1015 in Hamadhān.
46 See Reisman 2002.
study-partner, the young aristocrat Bahmanyār b. al-Marzubān (d. 1066).\textsuperscript{47} Avicenna was upset by Abū l-Qāsim’s behind-the-scenes participation. As the correspondence goes on, he makes passing reference to Abū l-Qāsim as the “dung-beetle” and the “shit-eater,” and repeatedly threatens to end this type of long-distance teaching of Bahmanyār.\textsuperscript{48}

The relationship between Avicenna and another student, Ibn Zayla, follows the same progression as the one between Avicenna and Bahmanyār. Ibn Zayla was studying with Abū l-Qāsim – in this case, astrology – and then contacted Avicenna for advice on the validity of this discipline. Avicenna responded with a treatise criticizing astrology. He refers obliquely to Ibn Zayla and Abū l-Qāsim in the beginning:

I saw one of my friends [i.e. Ibn Zayla] become very attracted to this science and . . . let himself be duped by the views of the practitioners of this science when their sophistic misrepresentations took deep root in his soul.\textsuperscript{49}

Clearly, the sophist to whom Avicenna refers is none other than Abū l-Qāsim.\textsuperscript{50} A little while later, in the \textit{Letter to Ibn Zayla},\textsuperscript{51} Avicenna harshly criticizes him for the stupidity of his views on \textit{The Cure} and suggests that, if Ibn Zayla really wants to study philosophy, he should do it by meeting Avicenna face-to-face. The reason for his disdain is clear: two young men who are engaged in studying Avicenna’s thought are doing so with his intellectual and political opponent. When he later wrote \textit{Pointers and Reminders} – a much more difficult text than \textit{The Cure} – Avicenna imposed the constraint that it could be studied only with him. Not only patrons, but also students had to be obtained in a harsh context of intellectual enmity and public dispute.

\textbf{IV AVICENNA’S EVOLVING VIEW OF ARISTOTELIANISM}

In the last few years of his service with Shams al-Dawla, and after the spat with Abū l-Qāsim al-Kirmānī, Avicenna’s writings in philosophy changed dramatically. There were at least three developments here. First, his refutations of self-styled Aristotelians. Second, his “appraisal” of the Aristotelian system, as requested by his correspondent Ibn Zayla. This led to his \textit{Fair Judgment} and then to the philosophical revision preserved in the extant remains of \textit{The Easterners}, followed by his \textit{Pointers and Reminders}. Along

with this came a third development, in Avicenna’s ideas about how to teach philosophy. Here we can see how the directions of Avicenna’s thought present in, for instance, *The Provenance and the Return*, are pushed forward by the events and relationships of his private life.

His refutations focus on the faulty, almost sophistic, form of logical argument employed by the last generation of the moribund Baghdad Peripatetic school, or at least those based in Avicenna’s region, like Abū l-Qāsim, who linked themselves with the old school. As already noted, his criticisms focus on logical issues rather than on philosophical content as such. This can be linked to his life-long interest in Aristotelian logic, evident from the very beginnings of his self-directed studies, but a new impetus was presumably the wretched experience of dealing with Abū l-Qāsim, self-styled heir of that school. After the plaintive, and unanswered, *Letter to the Baghdad Scholars*, at least two refutations of that group’s representative writings were forthcoming from Avicenna. The first is his refutation of Abū l-Faraj Ibn al-Tāyyib’s *On the Natural Faculties*, in which Avicenna accomplishes a defense of Aristotle against an Aristotelian philosopher. He applauds his opponent’s appreciation of the Aristotelian theses, but criticizes the arguments he draws from these premises:

[Ibn al-Tāyyib’s] proofs, however, we considered very weak. It occurred to us that either he had presented his doctrines in that treatise when he had not even begun [his studies] in medicine, or that what is to be ascertained from his discussion of medicine does not originate in a comprehensive science but rather from transmitted [knowledge]. We will repeat his claim and then follow it with mention of his proofs when they show their contradiction to disciplinary principles.

In another refutation entitled “The judgment of the arguments of those who maintain that the past has no beginning,” Avicenna corrects misunderstandings regarding the contradictory theses of Aristotle and Philoponus on the topic of infinity. Again, it would seem that the Baghdad Aristotelians were the target of this treatise. Avicenna proceeds by laboriously listing the permutations of the hypothesis, “If the past has no beginning, then the past sequence of things is infinite.” He seems to be moved to this procedure by the difficulty of dealing with concepts that have no application in real existence, such as actual infinity or the temporal beginning of the universe. He tells us that he has had to develop a special method for handling such topics, having found none in the writings of the ancients. The idea is

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52 These letters could initially have formed the drafts, or at least framework, of some of the contents of his *Fair Judgment*. See further, Gutas 1988: 131.

53 See Reisman 2008, from which I quote in the following translation.

54 MS Istanbul Universitesi A4724, f. 9r.
apparently that, by running through all possible relevant hypothetical syllogisms, we will be led to the correct solution by “intellectual intuition.” This means finding a middle term to complete a syllogism with categorical (i.e. non-hypothetical) premises. This idea of using non-demonstrative methods to provoke intuition will reappear in other works, as we shall see below.

Two other Avicennian works on the Aristotelian philosophical tradition, The Easterners and The Fair Judgment, are connected to these treatises of refutation as direct or indirect appraisals of the Aristotelian system. In speaking of “the Easterners,” “Eastern topics,” or “Philosophy of the Easterners,” Avicenna meant to contrast his own ideas and methods in the East of the Islamic world (al-Mashriq, Khurāsān) to those of the “Western” Peripatetics in Baghdad. He thought of The Easterners as the culmination of his “fair judgment” of their faulty Aristotelianism. This is clear from his private correspondence with a correspondent named al-Kiyābūfahār, otherwise unknown. Here he says that in The Fair Judgment he had divided “Westerners” and “Easterners” and presented the Easterners’ arguments against the Westerners. Indeed, in The Fair Judgment his corrections of the Westerners reflect the tone and focus of his refutations of the Baghdad Peripatetics, exampled in his refutation of Abūl-Faraj b. al-Ṭayyib. Unfortunately, neither this work nor The Easterners survives in full: we have only the Logic and Physics sections of The Easterners, and for The Fair Judgment we are left with a commentary on Book Lambda of the Metaphysics, together with a related set of marginal notes on Aristotle’s De Anima.

The third aspect to be considered is Avicenna’s evolving ideas about how to teach philosophy. Note that it is Avicenna’s pedagogy that is changing,

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55 The testimonia about the “Eastern” project are mostly collected in Gutas 1988: 115–20; see also Gutas 2000c.
56 His identity has become confused with that of Avicenna’s student, Bahmanyār, even in the medieval sources; see Reisman 2002: 186ff., and 65ff. for a discussion of the manuscript evidence for the letter.
57 Translation Gutas 1988: 116. Greek commentators on Aristotle may also have been included among the “Westerners.” For instance, Avicenna does point out the errors of “Alexander of Aphrodisias and those who follow his doctrine” in the related Marginal Notes on Aristotle’s De Anima (Avicenna 1947: 106).
58 In the Marginal Notes on Aristotle’s De Anima (somehow related to The Fair Judgment), Avicenna argues for the “one faculty–one action” model for the vegetative and animal faculties and actions of the soul, as he does in his refutation of Ibn al-Ṭayyib regarding the vegetative faculties (see Reisman 2008). The “Easterners” appear regularly in the same work presenting formal logic analyses of the “Westerners,” as also happens in the treatise on infinity.
59 Gutas 1988: 115–40. Although it has been argued that these “marginal notes” (taʿlīqāt) were not a part of The Fair Judgment (ibid.: 138–40; Gutas 2004b), the evidence is inconclusive. But certainly, the Marginal Notes do contain the “adjudications” of the Easterners consistent with the commentary on the Theology. The Notes were quite likely at least part of the The Fair Judgment “project.”
rather than his philosophy as such. There is a long tradition which finds in *The Easterners* and the *Pointers* a wholesale rejection of Aristotelianism in favor of a mystical “wisdom of the East.” This legend is inspired by the later writings of mystics and illuminationist philosophers beginning in the twelfth century and carrying on, in some circles, even to the present day. We do find a change in these later works, but it has to do with the way Avicenna articulates his arguments and employs a method of philosophical training. Avicenna’s interest in methodology and habit of allusive writing can already be found in his early *Provenance and Return*, as we saw. But he was prompted to develop his methodology further by his disillusionment with the poor logical skills of contemporary philosophers and his determination to correct that flaw in future generations. His new method centers on the use of enthymemes (arguments with missing premises) to force a student to spot what is needed to complete the argument. In *Pointers*, Avicenna revisits the “clear” arguments made in *The Cure* and expresses them as enthymemes. For instance, he will allude to the major premise of the intended syllogism in less than perspicuous terms, express the “pointer” in the form of a question, and omit the conclusion. The trick for the student is to identify possible meanings of the major premise terms, to arrive at the appropriate response to the “pointer” to construct the minor premise, and then be reminded of the syllogistic figure by which the satisfactory conclusion may be reached.

V TURBULENT TIMES IN HAMADHĀN

When Avicenna’s patron in Hamadhān, the Būyid Shams al-Dawla, who had appointed him to the ministry, lost his battle with colic and died in 1021, his son, Tāj al-Mulk, offered to ratify Avicenna’s ministership, but the latter thought it better to seek service with another, and presumably less inconstant, court. He went into hiding with the private patron, Abū Ghālib al-‘Aṭṭār.60 We can date Avicenna’s “secret correspondence” (as al-Jūzjānī calls it61) with the Kākūyīd Alā’ al-Dawla to around the time of his stay with al-‘Aṭṭār. With Avicenna’s appointment in the Kākūyīd court, he at last received the intellectual and monetary support that he deserved. But during the conflict between the Būyids and the Kākūyīds, Avicenna was subject to the whims of war and its attendant political maneuvers. Al-Jūzjānī paints a picture of Avicenna’s frenetic completion of *The Cure* during his short period of sanctuary in al-‘Aṭṭār’s home.62 He would write

60 The medieval histories apparently do not recognize this individual; see Gohlman 1974: 131.
61 Gohlman 1974: 56–7, neglects this characterization (*sirran*) in his translation.
fifty pages a day, often from memory alone, until he had finished nearly the whole of the sections on natural philosophy and metaphysics, and the start of the logic. Then the house was ransacked on Tāj al-Mulk’s orders in search of the purported “secret correspondence” with ʿAlāʾ al-Dawla and, for the next four months, Avicenna was kept under a sort of house surveillance in the Fardajān Castle outside of Hamadhān. Al-Jūzjānī blames an informer who was one of the Master’s “enemies.” We can imagine it was the final result of whatever compelled the Būyid army to rebel against Avicenna.

Shortly after the house raid, the Kākūyid ʿAlāʾ al-Dawla invaded Hamadhān and, ironically, Tāj al-Mulk moved in with Avicenna in Fardajān after his rout by the Kākūyid forces. Still under Tāj al-Mulk’s thumb, but now living in the house of Abū ʿṬalib al-ʿAlawī, Avicenna engaged in two philosophical exercises. One is represented by the work The Guidance (Kitāb al-Hidāya), the other by Alive, Son of Awake (Ḥayy b. Yaqqān). The Guidance was written for al-ʿAlawī, ostensibly as a précis (taḥbīra) of philosophy – he describes it as written with the “shortest words and clearest expressions.” Its aim is to connect the traditional philosophical subjects with the overall improvement or perfection of the human soul. Thus, it begins with short sections on the types of logic in the Aristotelian tradition, proceeds to a lengthy presentation of natural philosophy and ends with a combination of metaphysics and psychology. Noteworthy is the explicit separation of metaphysics into the traditional Aristotelian universal science and “philosophical theology,” with a focus on the latter. As in other works from Avicenna’s later period, we also find him insisting on the types of logical argumentation appropriate to each topic.

A still more adventurous format was chosen for Alive, Son of Awake. This is a philosophical parable, which contains a narrativized form of Avicenna’s so-called “floating man” argument. As with The Guidance, the choice of method is likely to be explained both by its private patronage setting and by Avicenna’s desire to explore new ways of expressing his theories. In Alive, Son of Awake, Avicenna aims for rhetorical persuasion, using familiar concepts and terms in place of technical terminology, to

63 Conservatively we should take this to refer to a sketch of contents before actual writing, but anything is possible with Avicenna.
64 This irony could be merely a use of the “literary retribution” topos familiar in medieval historiography.
66 Ibid.: 61.
67 See Goichon 1959.
68 Al-Jūzjānī describes it as an “allusion” (ramz, not “allegory” as translated at Gohlman 1974: 96–7).
fashion a sort of bestseller format for his philosophy. This is in dramatic contrast to a work like *Pointers*, in which philosophical problems are recast in such a way as to train the student reader.

At this time, a military storm was brewing on the edges of the Būyid territory, where the combined forces of the Ghaznavids were preparing a large-scale invasion. The first target of the Ghaznavid army was Isfahān, the latest haven for Avicenna and the field headquarters of his new employer, the Kākūyid ʿAlāʾ al-Dawla. We have a letter Avicenna wrote to ʿAlāʾ al-Dawla around the time Avicenna was stopped at the gate of Isfahān where the forces of the Būyids, the Kākūyids, and the Ghaznavids met in battle over possession of the city. The dating of the letter has been the subject of debate in relation to the report of the seizure of Avicenna’s works or works-in-progress. The letter also contains other information of a personal nature that helps to flesh out his relationship with ʿAlāʾ al-Dawla. While his tone in the letter seems frantic on the surface, this is likely the effect of the prose style he chose; it is stuffed with allusions to the tropes and figures of the classical Arabic love poem. We can at least say that it expresses Avicenna’s devotion to his new patron:

Depending on my loved ones is a hardship, a wound for the flames of thoughts in my heart, for every rib of anxieties an arrow [shot by] these two despicable ones to whom I had been appointed far from the safety of the Noble Presence and in sorrow for the service I have missed in a time such as this. Thus, hastening news of him to me is a war-cry, while the delay of supplies of nobility through his writing a blow, clinging to [the hope of] the return of my servants whom I sent off when the flight from the gate of Isfahān occurred, and the voices clashed like waves and without order, the false rumours conflicting on what would bring safety, what harm, and I wavered in confusion and was flung between sorrow and foolhardiness. I don’t know what to do, how I can find a way to something I can arrange for myself, on which course I can rely, how I can achieve a return to service or even which road to take in gravitating toward the Presence [i.e ʿAlāʾ al-Dawla]; for all of them are great distances, fraught with dangers, guarded by terrors. Thus, I have neither the perception of the one in the company of [the king’s] horsemen, nor the knowledge of the Noble Judgment as he marshals, sends on or holds back [his troops], since God has made all of that contingent on [His] help, support, majesty and facilitation.

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70 I take the ending as a dual because of the following pronominal reference *bi-himā*. It is a mystery who is meant.
71 I have collated the manuscripts used in the edition Avicenna 1953: 44–5 along with MS Cairo Ṭalʿat 197. The many tropes and figures of love poetry embedded in it include yearning for the beloved, war experiences, travel in the frightening dark of the desert, etc. (I thank B. Gruendler for this observation.)
The seizure and search of Avicenna’s saddlebags resulted in the loss of (most of) The Fair Judgment and The Easterners, and a treatise entitled The Throne Philosophy. A copy of the Pointers and Reminders was also lost.

VI final years of stability

The last seven years of Avicenna’s life, spent as advisor, if not minister, with ‘Ala’ al-Dawla, proved to be the most stable period of his life. His literary output in this period was the direct result of that environment’s influence. It seems to have been foremost a period of teaching through correspondence on the themes of The Cure. He also cobbled together two more digests of philosophy based on The Cure. One was his first presentation in Persian of those themes of the Aristotelian system he viewed as comprising the basic education of the student – Al‘i’s Textbook of Philosophy (Dānishnāmah-yi ‘Alā‘i), dedicated to ‘Ala’ al-Dawla. The other, in Arabic, was The Salvation (al-Najāt), a pastiche of passages taken from The Cure and other earlier works (and containing passages taken from Dānishnāmah).

Two characteristics of the Dānishnāmah should be noted in relation to Avicenna’s mature thought on Aristotelian philosophy. The first is an autobiographical passage in which he refers to himself as a philosopher blessed with a natural quickness of intellect, who thus has little need of recourse to a teacher. The second is Avicenna’s re-ordering of the traditional disciplines from Logic–Natural Philosophy–Metaphysics to Logic–Metaphysics–Natural Philosophy. The two features are not unrelated: the re-ordered curriculum culminates in an account of the cognitive powers that were so highly developed in Avicenna’s own case. The curriculum begins with logic, which is “unnatural” in the sense that it must be taught (to most people). Logic allows one to gain access to and analyze properly

72 The Throne Philosophy was no more than a précis of works like The Guidance and perhaps a sketch of the Dānishnāmah, which he would write later.
73 That a copy of Pointers was seized in 1030 suggests that Avicenna was either working on it, or had indeed finished it before the incident, and implies that other copies existed at the time of the seizure. We cannot give credence to the reports of the later historian Ibn Funduq al-Bayhaqi or the Longer Bibliography appended to al-Jūzjānī’s Biography (the two sources which Gutas 1988: 140, n. 1 lists). The Longer Bibliography was appended by an anonymous scribe or scholar sometime between the late twelfth and the thirteenth centuries (see the dates of the MSs used by Gohlmann 1974: 13–14). Note that Gohlman’s MS B, dated 1192, does not contain it, and MSs AJN (dated 113th–16th centuries) explicitly state that it has been added to al-Jūzjānī’s Biography. Indeed, it is prefaced by a note describing it as an addition (mudāf) to al-Jūzjānī’s narrative.
74 Avicenna 1951b.
75 Mahdavi 1954: no. 118, lists 39 MSs of the various parts, the medieval Latin and Hebrew translations, and a few of the many commentaries, refutations, etc., in Arabic and Persian.
76 Gutas 1988: 114 sees this re-arrangement here as a precursor of the order of The Easterners.
metaphysical abstractions and, above all, the hierarchical layers of Neo-platonic cosmology. This cosmology in turn provides the principles for understanding natural philosophy: for Avicenna, the separate intellects are ordering principles for the natural world. The human intellect, too, is a natural phenomenon, and is perfected by coming into relation with these same celestial intellects. Its study thus belongs to natural philosophy, so that the new sequence brings us from provenance – the beginning of our education and logic – to return – the study of human intellectual perfection in natural philosophy. It is thus appropriate that Avicenna’s final treatise, *On the Human Rational Intellect*, should mark the end of his literary career. It is the final statement of his psychology, which had also begun in his first publication, *Compendium on the Soul*.\(^\text{77}\)

Al-Jūzjānī records the facts of Avicenna’s last illness and subsequent death, adding a little gossip about Avicenna’s indulgence in sex and a dash of paranoia as to the real cause of death. On a march with ‘Alā’ al-Dawla to yet another battle for Isfahān in 1037, Avicenna had a recurrence of a seemingly life-long battle with colic. While initially he undertook self-treatment, he eventually experienced the seizures (mainly of the bowels) attendant on the disease, but here elicited by a last-minute physician’s poorly prescribed medication regimen. Al-Jūzjānī informs us that Avicenna’s servants then administered a dose of an electuary, composed mainly of an opiate sedative to calm the seizures and which, compounded incorrectly, eventually induced death. The end of the narrative is al-Jūzjānī’s hypothesis of murder on the part of the servants to cover up the theft of Avicenna’s cash savings.\(^\text{78}\) One way or another, Avicenna died in 428/1037 in Hamadhān, where he was buried.

**VII Conclusion**

As we have seen, Avicenna’s intellectual development was embedded in the political and social contexts of his time. The instruments by which we gain access to that context are the scant documents that have survived, and these are problematic. But on any reading, these documents make clear the importance of patronage for Avicenna’s life and works. The winning of patronage involved the staging of intellectual controversy, and the environments provided by Avicenna’s patrons determined the boundaries of his fields of research, and above all, the language in which Avicenna presented his philosophical system. Both of these factors, patronage

\(^{77}\) Ibid.: 72. \(^{78}\) Gohlman 1974: 84–9.
and language use, had profound effects on Avicenna’s thought and its subsequent interpretation. The central role of controversy enabled him to develop from an early adherence to Aristotelianism, to the criticism of that philosophical system as it was practiced in his day, and finally to the discovery of solutions to problems that emerged from the Aristotelian heritage. Formative here were the harsh encounters with al-Bīrūnī who called into question many Aristotelian presuppositions, and with Abū l-Qāsim al-Kirmānī, a mediocre representative of the Aristotelianism of the time.

More positively, Avicenna’s own intellectual development depended, in no small part, on the opportunity provided by safe patronage contexts. The court structures and the personalities of the rulers who utilized Avicenna’s talents are important here, particularly the Kākūyid ruler ʿAlāʾ al-Dawla, who wanted from Avicenna only a conversational partner (nadīm). However, it is obvious that it is within the private patron context that his real thinking occurred. The scale of production in Avicenna’s corpus reaches periodically intense levels in the company of learned but amateur enthusiasts (al-Shīrāzī, Abū Ghālib al-ʿAṭṭār, and Abū Ṭalib al-ʿAlawī – all unknown to posterity) and amongst his students. One advantage of this private patronage was the absence of any need for Avicenna’s practical skills as physician and administrator – disciplines that are “easy” to acquire, as Avicenna remarks. Avicenna’s life was marked by intense efforts to find a worthy patron and an equally intense effort to improve on the standard of philosophy found among his contemporaries, all in the face of the unmitigated political turbulence of his times. His success in this enterprise was due not only to the favor of patrons, but also his own powerful intellectual intuition.79

79 Editor’s note: this chapter was drafted in 2010 before David Reisman’s untimely death. A good deal of editing was still required to produce this final version, not least, significant condensation for reasons of space. I am grateful to Dimitri Gutas for his help in the editorial process, and to David’s family for permission to publish the piece. Any remaining infelicities or errors are solely my responsibility.
Avicenna’s philosophical project*

Dimitri Gutas

I

Avicenna came of age in the last quarter of the tenth century, a time when
the philosophical and scientific activities in the Islamic world, and the
Graeco-Arabic translation movement which they fostered and sustained,
had been in progress for over two hundred years. The vast majority of
Greek philosophical and scientific texts had already been translated into
Arabic upon demand by those who engaged in these activities as both
practitioners and sponsors, and in all intellectual fields works originally
composed in Arabic developed research beyond the level of the translated
texts.

The rationalist outlook which considered philosophical research as a
cultural good was developed in Baghdad, along with the beginnings of
the Graeco-Arabic translation movement, in the second half of the eighth
century during the first decades of the rule of the new Arab dynasty
of the ‘Abbāsids.1 It was to this outlook and the factors that brought
it about, in the final analysis, that we owe the rebirth of philosophy in
Arabic with al-Kindī early in the ninth century, after its extinction as
living practice and instruction in Greek before the rise of Islam.2 With

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* This is an abridged version of the concluding chapter in the revised edition (2013) of my 1988 study of Avicenna, which was followed by a number of articles (soon to be collected in a Variorum volume) complementing its main theses about the formation and orientation of Avicenna’s philosophical thought. The reader is referred to the revised edition and to the articles for full statement and documentation of the arguments presented synoptically here.

1 In the intellectual history of late antiquity and classical Islam, philosophy embraced all sciences which we today differentiate into philosophical and scientific; see the contents of Avicenna’s The Cure, listed below in Section VII.

2 The causes, history, and development of the Graeco-Arabic translation movement are discussed in detail in Gutas 1998b.

the decentralization of political power that followed the gradual erosion of caliphal authority by the middle of the tenth century, there arose local dynasties in the vast Islamic empire, from al-Andalus to central Asia, which took over regional governing while acknowledging the caliph in Baghdad as the ultimate overlord. A concomitant of the decentralization of power was decentralization of culture, and the several capitals of the local dynasties, from Cordoba to Bukhārā, began to imitate and rival Baghdad for intellectual and cultural supremacy, adopting the same tastes and fashions as those in the ‘Abbāsid capital.

Avicenna grew up in Bukhārā, the capital of the Persian-speaking dynasty of the Sāmānids (819–1005) in central Asia. His father was governor of nearby Kharmaythan, and Avicenna as a young boy grew up in the company of the Sāmānīd administrative elite. His education began early, as was customary, and continued throughout his teens. He studied the traditional subjects, the Qur’ān, Arabic literature, and arithmetic, and had a particular propensity for legal studies as well as medicine. In his famous *Autobiography*, which is our sole source for this information, he reports that he had started practicing both law and medicine by the time he was sixteen; but he also reports that at the same time he was studying repeatedly all the branches of philosophy at increasingly proficient levels. Avicenna’s description of the depth and extent of his studies is a significant witness to the spread and dominance of the philosophical culture that was created in Baghdad in the first two centuries after its foundation in 762. It was this culture that provided Avicenna both with an intellectual orientation of rationalism within which to work, and the resources – the philosophical material – with which to carry out his research. It is important to realize this intellectual and social context in order to appreciate the direction of his work. There is no doubt that he was gifted, and not only because he says so himself – his awesome analytical powers are manifest – but mental prowess is only one half of the whole. The other half is availability of means.

On his testimony, therefore, there is little doubt that during his education (but also later in his career) Avicenna had access not only to the entire intellectual production in Arabic, but also to everything that we know was translated from Greek. Nevertheless, in order to avoid misunderstanding and desist from imagining non-existent sources, it should be borne in mind that by the ninth century Graeco-Arabic translation movement the vast majority of (pagan) Greek philosophical works had already mostly

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5 For a list of all the Greek philosophical works known to have been translated into Arabic, see Gutas 2010b.
perished, and of what had survived – mainly the texts of the Aristotelian and Platonic traditions – not all were translated into Arabic. On the Greek side, to be specific, Avicenna mastered essentially the Aristotelian tradition: all the works of Aristotle that had been translated\(^6\) and the whole range of Greek commentaries on them. On Plato, on the other hand, Avicenna had partly peripheral information about his life and works, their order, and the subjects they treated, and partly access to paraphrases and summaries of some dialogues and to the synopses of some others by Galen. Of the authentic dialogues he had read none, for none had been translated in its entirety in Arabic,\(^7\) and accordingly he had come to a relatively negative assessment of Plato’s philosophical worth.\(^8\) The Neoplatonic tradition, whatever of it could be seen in the works of the Aristotelian commentators apart, he knew essentially from two paraphrases which, however, circulated in Arabic under the name of Aristotle: selections from Plotinus’ *Enneads*, known as the *Theology of Aristotle*, and from Proclus’ *Elements of Theology*, known as *The Pure Good* (*De Causis* in its Latin translation).

Of the other ancient schools of philosophy, finally, none had survived in any significant form until late antiquity, and neither did any of their works that would be available to the Arabic translators in the ninth century, even if interest in them had been forthcoming. Stoics, Epicureans, Sceptics, and Pythagoreans were known primarily through collections of the lives and sayings of the philosophers and, in the case of the Neopythagoreans, through the translation of a few works, some mathematical, some hortatory, and some spurious.\(^9\)

II

Equally important as the availability of the Graeco-Arabic philosophical literature to Avicenna was the structure of this philosophical knowledge which he studied and internalized. The course of studies, or philosophical

\(^6\) Of the extant authentic works of Aristotle, the following are not known to have been translated into Arabic and were hence unavailable to Avicenna: *Movement and Progression of Animals*, *Eudemian Ethics*, most of *Magna moralia*, most of *Politics*, and, from the collection later known as *Parva naturalia*, the brief essay(s), *On Youth and Old Age, Life and Death, and Respiration*. The *Constitution of Athens*, which has survived accidentally in a papyrus roll discovered at the end of the nineteenth century, was not available in medieval manuscripts even in Greek.

\(^7\) For the knowledge of Plato and his works in Arabic, see Gutas 2012a. For the *Timaeus*, Plato’s most influential and widely diffused dialogue in the Middle Ages, see Arnzen 2012. The extent to which Avicenna knew of Plato’s theory of ideas and the way in which he dealt with it are presented by Arnzen 2011: 86–99.

\(^8\) In the epilogue of the Sophistics part of *The Cure*, cited in Gutas 1988: 38.

\(^9\) For a survey of the information about these schools in Arabic, see Gutas 1994.
curriculum which he followed, as he reports in the *Autobiography*, is patterned according to the classification of the philosophical sciences in the Aristotelian tradition of Alexandria in late antiquity: logic comes first as the instrument, the *organon*, for the study of philosophy, followed by theoretical philosophy, which consists of physics (Aristotle’s physical and zoological treatises), mathematics (the *quadrivium*: arithmetic, geometry, astronomy, music), and metaphysics. This would be followed by practical philosophy (ethics, household management (i.e. economics) and politics). It is significant to realize that Avicenna did not study these sciences as discrete entities, but as a structured whole.

Avicenna was in fact following a curriculum, based on a classification of the sciences exhibiting an understanding of the philosophy of education, that was very influential in imperial and late antique times and throughout the Middle Ages in several languages. It largely set the framework both for the kind of knowledge in high learning that was to be translated and transmitted, and for the way in which it was to be studied. The ultimate origin of this classification and theoretical structure of the sciences was Aristotelian, as exhibited in the edition of his complete “esoteric” works (i.e. the extant school treatises) in the second half of the first century BC. In late antique times this ordering of the material, reflecting all knowledge, was used for pedagogical purposes, insofar as each part in this classification reflected a book by Aristotle. However, also by late antique times, this classification gained normative value in that it was seen to reflect actual reality: the sciences are so classified because the order of the universe is so arranged. All these aspects of the classificatory scheme were taken over into Arabic, where they were developed in particular by al-Fārābī, just as they were later taken over and developed by Dominicus Gundisalvi in Latin. Implicit in this understanding of the structure of knowledge and its correspondence to, or explication of, reality, is that in this tradition doing philosophy meant being what we today call a scientist: the rational and logically verifiable understanding of the universe and its operation.

This traditional classification of the Aristotelian corpus and, by extension, of all philosophy, presented a blueprint for an all-encompassing book of knowledge, or “an Encyclopaedia of Unified Science” that was already hinted at in some later statements by Aristotle himself. “In a perfect Aristotelian world, the material gathered in the corpus [of his writings] will be systematically presented; and the logical structure of the system will follow

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the pattern of the *Posterior Analytics*.\(^\text{11}\) Throughout the long history of Aristotelianism until Avicenna, followers and adherents never actualized this implicit comprehensive and systematic work of unified science, possibly because they thought the Aristotelian corpus had already achieved it—though other factors, yet to be investigated, were certainly also operative. They wrote commentaries instead, or monographs, clarifying or treating various points which better expressed what this implicit “encyclopaedia” in their minds contained. Avicenna broke the mold. He was the first philosopher ever to write about all philosophical knowledge (what he called simply *al-’ilm*, knowledge) within a single composition as a unified whole: he developed the *summa philosophiae* (discussed in Section vii below). The first goal of his philosophical project was thus clear. Philosophy, he felt, needed to be presented as a whole, to reflect both the interrelatedness and interdependence of all knowledge, and its correspondence with reality.

### III

The philosophical knowledge that Avicenna received in this fashion, though structurally presented as a unified whole, was neither internally self-consistent nor complete. From our vantage point and understanding of the history of philosophy from Aristotle to Avicenna, we can identify the diverging directions taken after the Hellenistic period by mainstream philosophy, i.e. the Aristotelian and Platonic traditions. There are discrepancies already within the surviving work of Aristotle, while the developments after Aristotle brought about shifts and changes on the original teachings in the hands of the commentators. Neoplatonists, on their part, in addition to effecting substantive elaborations of Platonic philosophy—partly with an eye to responding to or accommodating Aristotle, as in Plotinus, and partly largely independently of such concerns, as in Proclus—by late antiquity developed the “conception that Aristotelianism leads to and is completed by Platonism,”\(^\text{12}\) thus introducing upon the trunk of the Aristotelian system an incongruous emanationist head, among other changes. This development is not unrelated to the power of the aforementioned Aristotelian curriculum to rationalize and integrate discrepant elements. At the same time, the view of the history of philosophy through an Aristotelian prism that it presents must be a significant factor in the reception of Aristotelianism as the main philosophical tradition in Arabic, as described above, and the favoring of the translation of some books over

\(^\text{11}\) Barnes 1994: xii.  
\(^\text{12}\) D’Ancona and Adamson in Adamson 2002: 42.
others. In addition, the philosophers preceding Avicenna in Islam, faced with the same problems as he, had effected their own partial adaptations and accommodations.

Avicenna had no way of knowing the particulars of this history of philosophy for the pre-Islamic period, but he was fully aware of Aristotle’s philosophical project and could tell where it fell short, as we do, just as he could distinguish between it and what he would characterize as the subsequent developments and accretions, erroneous or not, in the hands of the “commentators,” among whom he would count the Neoplatonists. As Avicenna came to realize and acknowledge, Aristotle, the architect of the system, was correct in most things, but not in all; moreover, Aristotle had lived one thousand three hundred and thirty years before him, and knowledge, being cumulative over time, had advanced since then. More significantly, in Avicenna’s opinion, successive generations of philosophers in Aristotle’s footsteps had followed customary practice in defending and trying to explicate what Aristotle said instead of discovering the truth through critical thinking and philosophical analysis, and had added to and compounded the errors. The second task of his philosophical project, then, Avicenna concluded, was to bring philosophy up to date.

But just as much as Avicenna was aware of the unity of philosophy and its history, he was equally conscious of his own historical moment and social context, which was yet a third factor motivating his holistic efforts. He was convinced that if philosophy is what we would call today a scientific system explaining all reality, it must certainly also explain religion and other manifestations of the contact between humans and the transcendent, all parts of reality in his time. Starting from an empirical stance (below, Section vi), Avicenna acknowledged that religious phenomena such as prophecy and miracles, and the efficacy of religious practices like prayer, fasting, and the visitation of saints’ tombs, as well as the insights of some mystics, were all real, just as he readily accepted the existence of other phenomena that we would call “paranormal,” such as veridical dreams, prognostication of

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33 Avicenna mentions this number in the epilogue of the Sophistics part of The Cure (Gutas 1988: 37). Aristotle died in 322 BC. Assuming Avicenna is reckoning in solar years (which in this case he would, because he knew that transmitted chronologies, like the Alexandrian era from which he most likely derived this number, reckoned in solar years), he must have been writing in AD 1008. By my reckoning (Gutas 1988: 145), he had started writing The Cure around 1020. Avicenna says “approximately” (al-mudda qariba min) 1,330 years had gone by since Aristotle. This is pretty accurate.
the future by soothsayers, the ability to effect telekinesis, the evil eye, etc. At the same time, however, he set out to understand the causes of these phenomena, explain how they happen, and describe the mechanisms of the human soul which bring them about. Previous philosophers writing in both Greek and Arabic had touched upon some of these subjects, but none had done this effectively or completely. Avicenna dealt with these phenomena comprehensively within the parameters of the Aristotelian theory of the soul, which he greatly developed to accommodate the demands of this new subject, creating a veritable metaphysics of the rational soul, as I have called it.\(^14\) Thus, if philosophy needed to be treated not piecemeal, but comprehensively as an integral whole, and if it needed to be brought up to date through the elimination of its internal inconsistencies and anachronisms, it also needed to include within its compass the experience of reality of his time and place.

In this latter respect, Muslim intellectuals were keenly aware of Avicenna’s achievement. The greatly respected Mālikī jurist of Tunisia, al-Imām al-Māzarī (d. 1141), explicitly recognized that Avicenna attempted “to derive the principles of religious doctrines from philosophy (ḥāwala radda usūlī l-‘aqā’idī ilā ʿilmī l-falsafa),\(^15\) while the great Ḥanbalī theologian, Ibn Taymiyya (d. 1328), keenly exposed Avicenna’s incorporation of Islamic subjects into traditional Aristotelian doctrines.\(^16\) It is significant that these two scholars who had a proper assessment of Avicenna’s philosophical project and described it explicitly and accurately, were a Mālikī and a Ḥanbalī, respectively, members of the two juridical schools which, in the centuries after Avicenna, were the least prone to philosophize theology and adopt its language and methods. The adherents of all the other mainstream schools who did – the Shāfī‘īs, Ḥanafīs, and Shi‘ites – did so implicitly, partly by openly criticizing philosophy while surreptitiously adopting its methods and ideas (like al-Ghazālī),\(^17\) and partly by interpreting Avicenna tendentiously to fit their views or otherwise misrepresenting his positions (like the majority in the Shi‘ite tradition). In the former instance, there was created a philosophical theology among both Sunnīs and Shi‘ites whose parameters have only now begun to be fully understood in recent research. In the latter, there developed a tradition that interpreted


\(^{15}\) Quoted by al-Subkī 1969, vol. 6, 241.

\(^{16}\) See his Radd ‘alā l-mantiqīyyīn, cited in Gutas 2002b: 83.

\(^{17}\) See now the fundamental study of al-Ghazālī’s “despoil-and-repackage technique” of appropriating philosophical ideas, and indeed, on the crucial subject of noetics and prophecy, in Treiger 2011.
Avicenna’s philosophy as having two sides: an exoteric aspect – he was the unchallenged representative of Peripateticism in Islam (mashšā’ī) – and an esoteric and mystical one, based partly on Avicenna’s allusive style and use of mystical terminology in some works (and in particular in his latest summa, the *Pointers and Reminders*, discussed below, Section vii), and partly on pseudepigraphic works that began circulating about a century after his death.\(^\text{18}\) In Iran especially, where he was elevated to a most revered status also on account of his presumed Persian origins, he has been seen as the master of esoteric “gnosis” (‘irfān), the origins of which allegedly go back to a pre-Islamic Persian spirituality.

In modern times and until quite recently, scholarship, both East and West, partly following this latter tradition in its tendentiousness and partly on the basis of the European predisposition since the nineteenth century to view “orientals” as mystical and otherworldly, believed Avicenna to have a two-sided philosophy, one Aristotelian and logical, and another esoteric and mystical, representing his true teachings. But there is no basis to such an understanding of the historical Avicenna, as early scholars like al-Māzarī and Ibn Taymiyya knew, and as more recent studies have shown.\(^\text{19}\) Avicenna’s philosophical project aimed at erecting a system that harmonized, rationalized, and completed, through personal verification on the basis of syllogistic logic, all the discrete traditions of Aristotelian philosophy and the Neoplatonic and other accretions that accumulated over the ages, while at the same time expanding it to incorporate analyses of all reality, including all manifestations of religious life and beliefs.

In the realization of his project, from the very beginning Avicenna concentrated above all else on the verifiability of the knowledge he set out to acquire. Verifiability depends on two interdependent factors: following a productive method and having the mental apparatus to employ that method and understand its results. The method Avicenna already adopted at the start of his career was logic, and the mental apparatus wherewith we know involved an understanding and study of the human soul. Thus, logic and the theory of the soul as the basis for epistemology are the two motors

\(^{18}\) For a discussion of Šūfī pseudepigraphy in works attributed to Avicenna, see Reisman 2010.

\(^{19}\) For a critique of this understanding and a discussion of the question of Avicenna’s “mysticism,” see, in particular, Gutas 2002a and 2006a and b. See also, Adamson 2004a, for the syllogistic nature of non-discursive thought in the human intellect, and McGinnis 2010, for a comprehensive evaluation of Avicenna’s rational philosophical system.
driving Avicenna’s philosophy. He wrote more, and more frequently, on these two subjects than on anything else.

The starting point of Avicenna’s logic is that all knowledge is either forming concepts (tasawwur) by means of definitions – i.e. in good Aristotelian fashion, realizing the genus and specific difference of something – or acknowledging the truth (tasdiq) of a categorical statement by means of syllogisms. The inspiration here is clearly the beginning of Aristotle’s *Posterior Analytics*. Avicenna took this book seriously, following both the curriculum, in which this book was made the center of logical practice, and especially his two Peripatetic predecessors in Baghdad, Abū Bīshr Mattā and al-Fārābī, who made it the cornerstone of their philosophy and advertised its virtues.

Acknowledging the truth of a categorical statement meant verifying it, and this could only be done by taking that statement as the conclusion of a syllogism and then constructing the syllogism that would conclude it. There being three terms in a syllogism, two of which, the minor and the major, are present in the conclusion, the syllogism that leads to that conclusion can be constructed only if one figures out what the middle term is that explains the connection between the two extreme terms. In other words, if we seek to verify the statement “A is C,” we must look for a suitable B to construct a syllogism of the form, “A is B, B is C, therefore A is C.” The significance of the middle term is discussed in the *Posterior Analytics* (I.34), where Aristotle further specifies, “Acumen is a talent for hitting upon (eustochia) the middle term in an imperceptible time” (Barnes trans.). Avicenna picked up on the very concept of the talent for hitting upon the middle term, literally translated in the Arabic version as habds (hitting correctly upon the answer, guessing correctly), and made it the cornerstone of his epistemology. This theory made the core of syllogistic verification by means of hitting upon the middle term the one indispensable element of all certain intellectual knowledge, and it explained why people differ in their ability to apply this syllogistic method by presupposing that they possess a varying talent for it, as with all human faculties.

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20 On tasawwur and tasdiq in the history of logic in Islam, see Lameer 2006.
21 For the significance of the *Posterior Analytics* in philosophy in the Islamic world, see Marmura 1990.
22 In my previous studies I have used the word “intuition” to render habds. Although this one-word rendering of the Arabic term is serviceable if one understands it exclusively in this narrow sense to mean the ability to hit upon, guess correctly, or “divine” the middle term, the more common meaning of the word, “sensing without the use of rational processes” (*American Heritage Dictionary*) may tend to mislead or create a misunderstanding of this crucial concept as something mystical. I accordingly avoid it here.
In essence, following this method of logical verification meant for Avicenna examining the texts of Aristotle, read in the order in which they are presented in the curriculum, and testing the validity of every paragraph. How he did this in practice, teasing out the figures and forms of syllogisms implied in Aristotle’s texts, can be seen in numerous passages in his works. By his eighteenth year, he had internalized the philosophical curriculum and verified it to his own satisfaction as a coherent system with a logical structure that explains all reality.

According to the scientific view of the universe in his day which he studied in the curriculum – Ptolemaic cosmology to which was attached Neoplatonic emanationism – all intelligibles (all universal concepts and the principles of all particulars, or as Avicenna says, “the forms of things as they are in themselves”) were the eternal object of thought by the First principle, and then, in descending hierarchical order, by the intellects of the celestial spheres emanating from the First and ending with the active intellect (al-aql al-fâ‘âl), the intellect of the terrestrial realm. Avicenna’s identification of hitting upon the middle term as the central element in logical analysis on the one hand established the syllogistic structure of all knowledge also as thought by the celestial intellects, and on the other enabled Avicenna to unify and integrate the different levels of its acquisition by the human intellect within a single explanatory model. As a result, he succeeded in de-mystifying concepts like inspiration, enthusiasm, “mystical” vision, and revelation. At the basic level there is discursive thinking in which the intellect proceeds to construct syllogisms step by step with the aid of the internal and external senses, and acquires the intelligibles by hitting upon the middle terms (something which in emanationist terms is described as coming into “contact” with the active intellect, to be discussed further below). At a higher level, Avicenna analyzed non-discursive thinking, which takes no time and grasps its object in a single act of intellection, though the knowledge acquired is still structured syllogistically, complete with middle terms (because in its locus, the active intellect, it is so structured). Avicenna also discussed a facility for or habituation with intellection, which he called direct vision or experience (mushâhada) of the intelligibles. It comes about after prolonged engagement with intellectual techniques through syllogistic means until the human intellect is not obstructed by the internal or external senses and has acquired a certain familiarity or “intimacy” with its object, “without, however, the middle

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23 Examples of his procedure can be seen in Gutas 1988: 311–18, and 2004b: Appendix.
24 Adamson 2004a.
term ceasing to be present.” This kind of intellection is accompanied by an emotive state of joy and pleasure. The highest level of intellection is that of the prophet, who, on account of his supremely developed ability to hit upon middle terms, acquires the intelligibles “either at once or nearly so...i...n...a...n...d...r...h...i...c...h...i...n...c...l...u...d...e...s...h...e...m...i...d...d...l...e...t...e...r...m...s.”

This knowledge, which represents and accounts for reality and the way things are, also corresponds, Avicenna maintains, with what is found in books, i.e. with philosophy, or more specifically, with the philosophical sciences as classified and taught in the Aristotelian tradition. However, the identity between absolute knowledge in the form of the intelligibles contained in the intellects of the celestial spheres and philosophy as recorded in the Aristotelian tradition, is not complete. Though Aristotelianism is the philosophical tradition most worthy of adherence, Avicenna says, it is nevertheless not perfect, and it is the task of philosophers to correct and amplify it through the acquisition of further intelligibles by syllogistic processes. It is this understanding that enabled Avicenna to have a progressive view of the history of philosophy and set the framework for his philosophical project. For although the knowledge to be acquired, in itself and on the transcendent plane of the eternal celestial intellects, is a closed system and hence static, on a human level and in history it is evolutionary. Each philosopher, through his own syllogistic reasoning and ability to hit correctly upon the middle terms, modifies and completes the work of his predecessors, and reaches a level of knowledge that is an ever closer approximation of the intelligible world, of the intelligibles as contained in the intellects of the spheres, and hence of truth itself. Avicenna was conscious of having attained a new level in the pursuit of philosophical truth and its verification, but he never claimed to have exhausted it all; in his later works he bemoaned the limitations of human knowledge and urged his readers to continue with the task of improving philosophy and adding to the store of knowledge.

VI

The human intellect can function in syllogistic processes in an order which includes the middle terms and which are identical with those of the celestial intellects for the simple reason, as Avicenna repeatedly insists, that

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26 A formulation of the issue with which Avicenna was very pleased, for he repeats it in at least three different works, cited in Gutas 1988: 162–3.
27 For the documentation of the points made in this paragraph, see the discussion in ibid., chapters 4 and 5.
both human and celestial intellects are congeneric (mujānis), immaterial substances. However, their respective acquisition of knowledge is different because of their different circumstances: the human intellect comes into being in an absolutely potential state and needs its association with the perishable body in order to actualize itself, whereas the celestial intellects are related to eternal bodies and are permanently actual. Thus unfettered, their knowledge can be completely intellectual because they perceive and know the intelligibles from what causes them, while the human intellect is in need of the corporeal senses, both external and internal, in order to perceive the effect of an intelligible from which it can reason syllogistically back to its cause. This makes it necessary for Avicenna to have an empirical theory of knowledge, according to which “the senses are the means by which the human soul acquires different kinds of knowledge (ma‘ārif),” and man’s predisposition for the primary notions and principles of knowledge which come to him unawares is itself actualized by the experience of particulars. For human knowledge, therefore, the intellect functions as a processor of the information provided by the external and internal senses. It is important to realize that this is not because the intellect does not have the constitution to have purely intellectual knowledge, like the celestial spheres, but because its existence in the sublunar world of time and perishable matter precludes its understanding the intelligibles through their causes. Instead, it must proceed to them from their perceived effects. However, once the soul has been freed of the body after death, and if, while still with the body, it has acquired the predisposition to perceive the intelligibles through philosophical training, then it can behold the intelligibles through their causes and become just like the celestial spheres, a state which Avicenna describes as happiness in philosophical terms and paradise in religious.

Avicenna’s rationalist empiricism was broadly conceived to include, as it did later with John Locke, our immediate experience of ourselves, an empiricism, so to speak, of the self. Propositions based on experience (mushāhādāt), he said, are of two kinds, one based on sense perception and another on self-reflection (qadāyā i‘ribāriyya). These latter “are due to the observation of faculties other than sense perception, like our realization that we have thought, that we are afraid and angry, and that we are aware of our selves and of the acts of our selves.” “Self awareness,” he further specified, “is innate to the self, being its very existence, and thus we do not

28 Notes: 23. See Gutas 2012b for a study of Avicenna’s empiricism.
29 Salvation, 101–2. See the discussion in Gutas 2012b, Section V.
30 Pointers, Nahj 6, at Avicenna 1892: 56.
need anything external with which to perceive the self, but the self is that with which we perceive its self.”

That empiricism, and especially empiricism of the self, was essential to Avicenna’s philosophical edifice can be gauged from the fact that he based it on the absolutely primary and irreducible empirical fact of existence. We simply know that there is existence and that we exist, absolutely: not by acknowledging the fact at the end of a syllogism, not by forming a concept by identifying species and specific differences, and not by any sense, either external or internal. We simply know that there is existence: as stated in five simple words by Avicenna, lā šakka anna hunā wujūdan (“no doubt, there is existence”). This irreducible empirical fact is the basis for his argument for the existence of God – we exist, but contingently, therefore we may not have existed; but we do exist; therefore there must be a necessary existent that causes existence to exist – and for his argument for the existence of our immaterial and substantial rational souls – the flying man argument whereby we simply know that we exist apart from our body or any other external element. And from these two positions flows everything else.

Avicenna’s rationalist empiricism is the main reason why he strove in his philosophy on the one hand to perfect and fine-tune logical method and on the other to study the human soul and cognitive processes at an almost unprecedented level of sophistication and precision. In section after section and chapter after chapter in numerous works he analyzes not only questions of formal logic, but also the very conditions operative in the process of hitting upon the middle term: how one can work for it and where to look for it, and what the apparatus and operations of the soul are that bring it about. He charts in great detail the operations of all the senses, and especially the internal senses – common sense, imagination, estimation, etc. – and how they can help or hinder the intellect in hitting upon the middle term and perceiving intelligibles more generally. When, at the end of all these operations just described, the intellect hits upon a middle term or just perceives an intelligible that it had not been thinking about before, it acquires the intelligible in question (hence the appellation of this stage of intellection, “acquired intellect,” al-ʿāql al-mustafād), or,

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**Notes:**

33. Salvationa 383 (Iṭḥāyiyyāt §II.12); cf. the translation of the entire passage in Marmura 1980: 350. Marmura (p. 339) calls the apperception of existence “an intellectual intuition of existence,” but in the case of the proof of God from contingency based on existence, it is the proof itself that is intelligible (as Avicenna says in *Cure: Metaphysics* 1.3, cited by Marmura on p. 339), not the apperception of its starting point, existence, which is empirical.
34. See the discussion in Gutas 2001.
otherwise expressed, receives it from the active intellect which thinks it eternally and atemporally since the active intellect is, in effect, the locus of all intelligibles, there being no other place for them to be always in actual existence. Avicenna calls this process of acquisition or reception a “contact” (iṭṭiṣāl) between the human and active intellects. In the emanative language which he inherited from the Neoplatonic tradition, and which he incorporated in his own understanding of the cosmology of the concentric spheres of the universe with their intercommunicating intellects and souls, he referred to the flow of knowledge from the supernal world to the human intellect as “divine effluence” (al-fayḍ al-ilāḥī). The reason that this is possible at all is again the consubstantiality of all intellects, human and celestial alike. Only, as already mentioned, because of their varied circumstances, the latter think of the intelligibles directly, permanently, and atemporally, while the human intellect has to advance from potentiality to actuality in time by technical means leading to the discovery of the middle term as it is assisted by all the other faculties of the soul and body.

The wording itself of this acquisition of knowledge by the human intellect—“contact with the active intellect,” or receiving the “divine effluence”—has misled students of Avicenna into thinking that this “flow” of knowledge from the divine to the human intellect is automatic and due to God’s grace, or ineffable and mystical. But this is groundless; the “flow” has nothing mystical about it; it just means that the intelligibles are permanently available to human intellects who seek a middle term or other intelligibles at the end of a thinking process by means of abstraction and syllogisms. Avicenna is quite explicit about the need for the human intellect to be prepared and demand to hit upon a middle term or actively seek an intelligible in order to receive it: “The active principle [i.e. the active intellect] lets flow upon the [human rational] soul form after form in accordance with the demand by the soul; and when the soul turns away from it [the active intellect], then the effluence is broken off.”

The same applies to other forms of communication from the supernal world. In the case of the prophet, he receives all the intelligibles comprising knowledge complete with middle terms, as already mentioned, because his intellective capacity to hit upon the middle terms and acquire the intelligibles is extraordinarily high, and this is coupled with an equally highly developed imagination that can translate this intellective knowledge into

language and images (in the form of a revealed book) that the vast majority of humans can easily understand. But in addition to intelligible knowledge, the divine effluence from the intellects and the souls of the celestial spheres also includes information about events on earth, for all of which they are responsible: past, present, and future, what Avicenna calls “the unseen” (al-ghayb). This information can also be received by humans in various forms – as waking or sleeping dreams, as visions, as messages to soothsayers – depending on the level of the humoral equilibrium of the recipient, the proper functioning of his internal and external senses, and the readiness of his intellect. Somebody whose internal sense of imagination or estimation is overactive, for example, may be hindered thereby in the clear reception of dream images so that his dreams would require interpretation, while someone else not so afflicted may get clearer messages; or the Turkish soothsayer who wishes to receive information about the future has to run long and hard in order to bring about such an equilibrium through the exertion, thereby preparing his intellect to receive the message, etc.

The logistics of the reception of information from the supernal world thus varies in accordance with what is being communicated and who is receiving it, but in all cases the recipient has to be ready and predisposed to receive it. All humans have both the physical and mental apparatus to acquire intelligible and supernal knowledge and the means to do so, but they have to work for it, just as they have to prepare for their bliss in afterlife while their immortal rational souls are still affiliated with the body. There is no free emanation of the intelligibles on “couch-potato” humans, or afterlife contemplation for them of eternal realities in the company of the celestial spheres (Avicenna’s paradise). To have thought so would have negated the entire philosophical project Avicenna so painstakingly constructed.

There is a deeply ethical aspect to Avicenna’s philosophical project, much as he may not have dwelled a lot upon practical philosophy because, it seems, he considered it too self-evident and philosophically unchallenging. Because our theoretical intellects – our selves – are con-substantial with the celestial intellects, it is our cosmic duty to enable

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36 See, in particular, the discussion in Gutas 2006a, Section III.
38 In the introduction to the Easterners, he says that he will treat “only as much of the practical science [i.e. ethics, household management, and politics] as is needed by the seeker of salvation,” i.e. the subjects discussed in the metaphysics of the rational soul, while the rest of it will not be dealt with presumably because, just like mathematics, “there is no disagreement about it” (cited in Gutas 1988: 279).
them to reach their full potential and behave like them, i.e. think the intelligibles. And because we (i.e. our essential core which identifies us and survives, our rational souls) are given a body and our materiality hampers our unencumbered intellection like that of the celestial beings, we have to tend to the body by all means, behavioral (religious practices, ethical conduct) and pharmacological, to bring its humoral temperament to a level of equilibrium that will help the function of the intellect. This is humanist ethics dictated by a scientific view of the world.

If Avicenna’s philosophical project involved putting together a unified theory of everything in which he would integrate in a self-consistent whole, based on Aristotelian logic, all parts of philosophy as traditionally transmitted, and which would represent all knowledge and account for all reality, including religious reality, then the ways which he devised and employed to communicate this knowledge were no less global in their aspirations. To a large extent this is to be expected from a thinker who dwelled long and hard on the modalities of the transmission and reception of knowledge from all directions, transcendent and mundane, and was alive as much to the mechanics of every nuance of this process as to the range and subtleties of literary style. But it is still amazing to witness the numerous compositional styles with which he experimented and the different registers of language that he used for each. This is not accidental or routine, but bespeaks the fact that communicating this knowledge intelligibly, both to his contemporaries at their various levels of preparation and background and to posterity, was part of his philosophical project itself. More than most other indicators, this fact alone shows that Avicenna was the second philosopher after Aristotle to have as pronounced a sense of advancing philosophy to a qualitatively higher level and the corresponding need to communicate it broadly and systematically.

At a very basic level, Avicenna brought to fruition a development that had been in progress for centuries, first in Greek and then in Arabic, by putting between the covers of a single book the entire philosophical curriculum: he

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39 See the discussion of the “contemplative life” in Avicenna’s philosophy in Lizzini 2009.
40 Avicenna’s sophisticated discussion and presentation in The Cure of the garbled translation of Aristotle’s Poetics is a masterpiece of literary analysis, to say nothing of his forgery, recounted in Jūzjānī’s biography (Gohlman 1974: 68–73), of bellettristic essays good enough to fool the experts of his day.
developed the *summa philosophiae*. The very first substantial philosophical work that he wrote, *Philosophy for ‘Arūḍi*, is a summa of all these parts of philosophy.\(^\text{42}\) And Avicenna went on to write seven more summae, ranging in length from a booklet he called *Elements of Philosophy* to the monumental *Cure*.\(^\text{43}\)

*The Cure*, which in the Cairo edition runs to twenty-two large-size volumes, contains the most extensive coverage of philosophy he ever wrote. In it he treated all subjects in the curriculum. The work is methodical and argumentative in its approach, discussing all aspects of an issue that had been raised since Aristotle, and is written in a fine expository prose that subsequently became the standard in philosophy. Its contents exhibit the various parts or books in the tradition which they reproduce, revise, adjust, expand, and re-present:

**A. Logic:**

1. *Eisagoge* (Porphyry’s *Eisagoge*)
2. *Categories* (Aristotle’s *Categories*)
3. On interpretation (Aristotle’s *De interpretatione*)
4. *Syllogism* (Aristotle’s *Prior Analytics*)
5. *Demonstration* (Aristotle’s *Posterior Analytics*)
6. *Dialectic* (Aristotle’s *Topics*)
7. *Sophistics* (Aristotle’s *Sophistical Refutations*)
9. *Poetics* (Aristotle’s *Poetics*).

**B. Theoretical Philosophy**

**I. Physics:**

1. On nature (Aristotle’s *Physics*)
2. On the heavens (Aristotle’s *De caelo*)
3. On coming to be and passing away (Aristotle’s *De generatione et corruptione*)
4. Mineralogy (Aristotle’s *Meteorology IV*)
5. Meteorology (Aristotle’s *Meteorology I–III*)
6. On the soul (Aristotle’s *De anima*)
7. Botany (*De plantis* by Nicolaus of Damascus)
8. Zoology (Aristotle’s *History, Parts, and Generation of Animals*).

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\(^\text{42}\) See *ibid.* 87–93. The parts on practical philosophy are missing. The unique manuscript containing this work, Uppsala 364, is lacunose, but it is not clear whether Avicenna had actually included a section on practical philosophy in the work.

\(^\text{43}\) In chronological order, these are: *Philosophy for ‘Arūḍi*, *Elements of Philosophy*, *The Guidance*, *The Cure*, *The Salvation*, *Philosophy for ‘Alā’ al-Dawla*, *The Easterners* (or *Eastern Philosophy*), and *Pointers and Reminders*. 
II. Mathematics:
   (1) Geometry (Euclid’s *Elements*)
   (2) Arithmetic (Nicomachus of Gerasa, Diophantus, Euclid, Thābit, and others)
   (3) Music (mostly Ptolemy’s *Harmonics* with other material)
   (4) Astronomy (Ptolemy’s *Almagest*).

III. *Ilāhiyyāt*:
   (1) Universal Science: the study of being as being (Aristotle’s *Metaphysics*)
   (2) Metaphysics of the Rational Soul (phenomena of Islamic religious life).

C. Practical Philosophy:
   (I) Politics (general remarks; (Plato’s and Aristotle’s books on politics))
   (II) Household management (Islamic family law; (Bryson’s *Oikonomikos* and related books by others))
   (III) Ethics (as legislated by a caliph; (Aristotle’s *Nicomachean Ethics*)).

Avicenna treats practical philosophy (ethics, household management, and politics) very briefly in *The Cure* as an appendix at the end of his section on metaphysics, and not independently.\(^\text{44}\)

Avicenna’s very last summa, *Pointers and Reminders*, covers again logic, metaphysics, and physics, omitting practical philosophy, but it is written entirely in the allusive and suggestive style indicated by its title, a style expressly developed by Avicenna for this purpose. The language is ornate, with frequent use of rare words culled from literature, while the syntax at times is complex to the point of obscurity. Accordingly, the work, Avicenna’s most popular, generated an extensive literature of commentaries, as, it would seem, was intended. The whole is breathtaking and quite a tour de force; there is nothing like it in Arabic philosophical literature.

A *topos* in the introductions to the study of Aristotle in later Greek tradition, taken over also in Arabic, and intended to explain why Aristotle was difficult to understand, was that the philosopher had cultivated obscurity deliberately in order both to discourage the unworthy from taking up philosophy and to train students. Avicenna taps into this tradition to justify and explain his procedure by pointers and reminders both in this work and

\(^{44}\) Had he included independent sections on practical philosophy in *The Cure*, in all probability he would have paraphrased or followed the books I enter in square brackets, within the parentheses above, on the basis of his own references to these books in his *Divisions of the Intellectual Sciences* (p. 69, ed. Bombay 1318, p. 107–8 ed. Cairo 1326/1908). For Avicenna’s works on ethics, see Karliga 2002, and Lizzini 2009: 207–8.
in other contexts. To a certain extent this topos was part of the philosophical culture in Arabic to which lip service had to be paid\textsuperscript{45} — historically, though, in the two centuries of the Graeco-Arabic translation movement, there was never any question of hiding philosophy from anybody. To the contrary, the efforts of philosophical authors were directed at popularizing philosophy in the intellectual arena, and, with the style of pointers and reminders, Avicenna hit upon the perfect formula to wed his philosophical system as exposed in detail in \textit{The Cure}, to a means of communicating it to the widest possible sophisticated audience in the Islamic societies of his time.

Equal in extent to the summae were two massive works, each in about twenty volumes, written in the age-old traditional style: the text of Aristotle followed by commentary. The first, \textit{The Available and the Valid} (of philosophy, to be understood), was an early work, commissioned by a neighbor in Bukhārā, that has completely disappeared. In the second, the \textit{Fair Judgment}, Avicenna divided philosophers into the Westerners (the traditional Aristotelians of late antiquity and Baghdad) and the Easterners (himself, working in Khurasān in the East), and in the guise of judging fairly between the views of the two camps, he presented his own system, that of “the Easterners,” or the “Eastern philosophy.” It was in this vein that he also wrote \textit{The Easterners}, indicating that this was the new appellation he wanted to give to philosophy. However, in this final regard, it appears that Avicenna met his contextual limits. This was too much neoterizing for his milieu to take; the complete break with tradition that this step would have entailed was not tolerated, and Avicenna in his final years tacitly disowned the idea of the Easterners, and wrote \textit{Pointers and Reminders} instead.

In addition, and in order to reach a yet wider audience, Avicenna also wrote allegories (\textit{Alive, Son of Awake}, and \textit{The Bird}),\textsuperscript{46} composed monographs and essays on various subjects, interpreted a number of verses from the Qur’ān,\textsuperscript{47} and wrote didactic poems on logic and medicine – poems setting in rhyming verse (\textit{rajāz}) the entire subject to be learned – two posthumous collections by disciples of comments and responses to questions circulating in the manuscript tradition under the titles of \textit{Discussions}.

\textsuperscript{45} The background and development of this \textit{topos} are discussed in Gutas 1988: 225–34. A misunderstanding of the history and function of this \textit{topos} in Arabic philosophical literature gave rise, in the middle of last century, to the false notion that philosophers expressed themselves cryptically out of fear of persecution by the religious authorities. The baseless nature of this notion is set forth by Leaman 1980 and Gutas 2002a.

\textsuperscript{46} See Goichon 1959.

\textsuperscript{47} On philosophical interpretation of the Qur’ān by al-Kindī and Avicenna, see Janssens 2004a and 2007a.
and Notes, and finally, the considerable correspondence, presented in David C. Reisman’s preceding chapter, disclosing the philosophical, social, and historical contexts in which they were written.

Avicenna sought to express his new synthesis of philosophy in a way that would also respond to philosophical concerns of his age and society, and this explains his experimentation with the wide variety of compositional styles mentioned above. He communicated with everybody, not only among his contemporaries, but also with an eye to posterity. Perhaps the most telling indication of his success is that after him philosophers read no more Aristotle and Galen, but Avicenna. By the same token, however, he was responsible for the final integration and naturalization of Greek philosophical thought in Islamic intellectual life. His influence was colossal, as described in the later chapters of this volume; it introduced a “golden” era in the Islamic world when philosophical activity reached unprecedented heights, and it determined high intellectual culture for centuries to come.

48 For a comprehensive discussion of the genesis and compilation of the Discussions, see Reisman 2002; the Notes still lacks such treatment, though cf. the preliminary studies by Janssens 1997 and 2012c.
49 An assessment first made in Gutas 1998b: 172, and then presented in detail in Gutas 2002b; see now, Langermann 2010.
Avicenna wrote extensively on the syllogism, and in this chapter I examine aspects of what he had to say on the subject in his last work, *Pointers and Reminders*.¹ I focus my attention on *Pointers* because it is a manageable length, it states a decisive position on every matter of importance, and it exercised extraordinary influence over the logicians responding to Avicenna in the three centuries after his death (one of whom, Naṣīr al-Dīn al-Ṭūsī, wrote a magisterial commentary on it). Many would argue that *Pointers* is not the best introduction to Avicenna’s work on the syllogism, and I consider these arguments in section vi.

I limit myself mainly to one text for another reason. Avicenna shifted in his logical views over time, and it is unclear that we can take doctrines from a number of his texts and assume that they will combine coherently. I do not want to exaggerate the shift, but it is there and can be a hazard in coming to grips with Avicenna’s logic.

Logic is presented in *Pointers* as both a science in itself and an instrument for the other sciences.² This has two consequences for the manner of its presentation. Because it is a science, logic is most properly developed by setting out primary principles for which no argument can be given; these principles are then used to derive further results. Because it is an instrument, Avicenna is interested above all in those operations in logic which have an application for the other sciences. So the exposition of logic in *Pointers* moves from principles to derived conclusions, and gives as its examples propositions with terms taken from the various sciences for which it is the instrument – among others, geometry, medicine, physics and metaphysics.

The *Pointers*’ account of logic consists of ten chapters, or Paths. Only the seventh of these is designated as dealing with arguments, pre-eminent

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¹ Translations of the logic section of *Pointers* are available in French (Goichon: Avicenna 1951) and English (Inati: Avicenna 1984).
² El-Rouayheb 2012 is a recent study of what it means to take logic to be a science (a view Avicenna adopted against the majority of Peripatetics). See also the classic study in Sabra 1980.
among which is the syllogism. That treatment is, however, intimately con-

nected to the more primary analysis of how terms are joined together to
form the propositions which function as premises in the syllogisms, and
the various operations to which propositions may be subject. These mat-
ters are considered in Paths three, four, and five. Further, consideration of
the syllogism is connected to more general questions about the nature of
logical arguments; this is the subject of Path eight. So half of the Point-
ers' logic section is given over to the syllogism, from its first principles to
its final development as a formal instrument for the other sciences. The
remaining five paths contribute further to problems entailed in investigat-
ing specific material implementations of the formal instrument (above all,
the Demonstration and its counterpart, the Sophistical Fallacy). To some
degree, therefore, every part of the logic of Pointers bears on the syllogism.

In the first section of this chapter, I deal with the almost totemic role of
syllolgistic in all of Avicenna's works, and in the work of those he respects; the
texts quoted through the rest of the chapter reveal his attitude to the logical
insights of some of his revered predecessors. In the following sections, I try
to present selected material according to the order of exposition in Pointers,
and to mirror – so far as is possible in a short chapter – the book's primary
emphases. At times I reach beyond Pointers, particularly for passages which
reveal Avicenna's attitudes to other logicians, or which are characteristic of
the way he talks about the syllogism, but I limit these forays. In section

11, I go through distinctions which mark off the propositions which take
center stage in Pointers. In section iii, I turn to Avicenna's treatment of
propositions without an explicit modal operator, then, of those with a
modal operator. I present the syllogisms Avicenna takes to be perfect in
section iv. I look at one aspect of the response of post-Avicennian logicians
to Avicenna's modal syllogistic in section v. Section vi is an Afterword,
dealing with alternative ways to approach Avicenna's work on syllogisms.
I close with a brief bibliographical note on the state of the field.

1 THE SYLLOGISM AS PROPER PHILOSOPHICAL METHOD

In his Autobiography, Avicenna describes the way he worked towards the
culmination of his philosophical studies in these terms:

Tr: I read Logic and all the parts of philosophy once again. During this time I
did not sleep completely through a single night, or occupy myself with anything
else by day. I compiled a set of files for myself, and for each argument that I
examined, I recorded the syllogistic premises it contained, the way in which they
were composed, and the conclusions which they might yield, and I would also take into account the conditions of its premisses [i.e. their modalities] until I had ascertained that particular problem. Every time I was at a loss about a problem, concerning which I was unable to find a middle term in a syllogism, I would repair on its account to the mosque and worship, praying humbly to the All-Creator to disclose to me its obscurity and make its difficulty easy.3

The Autobiography was probably written fairly late, and was designed to highlight the elements of Avicenna’s philosophical practice which he wanted to distinguish from the dominant tradition of the Bu¨yid realms, which is to say, that of the Baghdad school. Through Avicenna’s life Baghdad philosophy was led by Syriac Christian philosophers, and a disciple recorded what Avicenna once had to say about them:

T2: Upon my life, these people relax and are satisfied with whatever they imagine to be the case which is easily treated, dismissing logic absolutely. With regard to the matters of syllogisms, their dismissal is complete and they pay no attention whatever to them – and not only today, but they have been doing this for quite some time. As for the forms of syllogisms, specifically these people have disregarded them. Whenever they treated them, they strayed from the right path because they never acquired the habit of dealing with them and they never suffered the pains of analyzing the details of problems so that they may gain a syllogistic habit; their sole reliance, instead, is upon ideas not subject to rules.4

Whenever we come across a reference to those who follow blindly the “well-known” (mashhūr) account of the syllogism, or to the “literalist” (zāhirī) reading of Aristotle’s Prior Analytics, or to – in writings from one stage in Avicenna’s career – “the Westerners,” we are confronted with evidence of his contempt for the logical methods of the Baghdad school and the way they went about the business of philosophy.

Both the passages quoted above come from late works, but we can be sure that they exhibit an attitude Avicenna held from his earliest encounters with alumni of the Baghdad school. Not long after he first came to work in the realms of the Bu¨yids, Avicenna clashed with Abū l-Qāsim al-Kirmānī. In the course of a fruitless argument, al-Kirmānī time and again backed up his claims by calling on the authority of his Baghdad teachers. In response, Avicenna wrote a letter to the scholars of Baghdad asking if what al-Kirmānī had attributed to them was indeed their doctrine. (Incidentally, this letter was probably the first time Ibn al-Ṭayyib was to hear of Avicenna, a grim harbinger of humiliation to come.) Of al-Kirmānī’s argument technique, Avicenna says:

T3: When he spoke, he spoke with another species of syllogism; he thought they produced what he sought, but they didn’t, neither actually nor in potentiality close to actuality. When I analysed his syllogisms and established their sterility and the fact that they produced other than what he sought, it had no effect on him; rather he would aim to correct them with something even more remote than the first attempt.  

It would be easy to give many similar passages. One may equally easily give a litany of logicians Avicenna respected, including Aristotle, some of the early Peripatetics, and above all, al-Fārābī. Even so, Avicenna never followed anyone blindly, and I offer here a few words of generalisation about Avicenna’s approach to tensions between the views of those he respected and “the truth of the matter.”

Avicenna’s work is in productive tension with Aristotle’s work, its style of presentation, and its encrusted commentaries. As Gutas has noted, Avicenna believed that the Peripatetic tradition was closest to being right, and he departed from that tradition with care and deliberation. Above all, principles must be implemented uniformly and consistently across a properly developed logic. Even Aristotle falls down at times in respect of this ultimate and overarching requirement, and when he does, Avicenna upbraids him for that failing.  Such remonstrance is a last resort, and Avicenna has at least two ways to observe a principle of charity in reading Aristotle. When Aristotle has been silent on a matter about which he should have spoken, Avicenna assumes a text has been lost.  When Aristotle has set out doctrines that are hard to square with one another, Avicenna claims that they are tests for his readers (T13 below). In the normal course of doing logic, it is a merit for a doctrine that it accommodate Aristotle’s texts (T10), and a further merit if it can accommodate the interpretations of great Peripatetics like Theophrastus and Alexander of Aphrodisias (T6). By the time Avicenna wrote Pointers, however, he no longer referred to Aristotle explicitly (though implied references to the Organon pervade the work).

A special word should be given to Avicenna’s relationship to al-Fārābī in his treatment of the syllogism. It has been said that Avicenna’s logic owes

5 *Risālat ba’d al-afād ilā ‘ulamā’ Madinati l-Salām (Epistle from an Eminent Man to the Scholars of Baghdad),* in Avicenna 1332 AH: 75.3–6; tr. Avicenna 2000: 12”–13”.

6 *al-Maṣā’il al-Ishrīniyya (Twenty Questions [on Logic]),* in Mohaghegh and Isutzu 1974: 85 (on conversion of a-absolute).  *Twenty Questions* seems to me – broadly speaking – a critique of Aristotle’s perceived lack of consistency.

7 E.g. his deferred treatment of hypothetical syllogisms; *Cure. Syllogism:* 397.4–5, see also al-Ṭūsī 1971: 453.
a great deal to al-Fārābī’s, and that may well be true. But in *Syllogism*, we come across numerous references to an eminent later scholar “to whom I am most concerned to direct my remarks.” This is al-Fārābī. I am told by colleagues who have read much more of *The Cure* than I, that this is the only volume in which Avicenna makes such frequent reference to al-Fārābī. In spite of the frequency of these references, he declines to follow his respected predecessor on any of the doctrines reviewed.

### II PROPOSITIONAL CONDITIONS

There is a distinction which is as important for Avicenna and the later Arabic tradition as the distinction between composite and divided readings is for the Latin tradition: the distinction between reading a proposition under what came to be called either a *dhātī* or a *wasfī* condition. In this text, the distinction is given for necessity propositions. (Note that *wasfī*, which I translate somewhat barbarously as “descriptive,” is semantically related to *mawsūf*, “described.”)

T4: Necessity may be absolute, as in God exists; or it may be connected to a condition. The condition is either [1] perpetual [relative] to the existence of the substance [of the subject] (*dhāt*), as in man is necessarily a rational body; by which we do not mean to say that man is and always will be a rational body, because this is false taken for each human individual. Rather we mean that while he exists as a substance (*mā dāma mawjūd al-dhāt*) as a human, he is a rational body. Likewise for every negative which resembles this affirmative statement.

Or [the condition may be] [2] the duration of the subject’s being described with what is set down with it (*dawāma kawn al-mawdūʿ* *mawsūf* bi-*mā wudīʿ* *maʿahu*), as in all mobile things are changing; this is not to be taken to mean [this is so] absolutely, nor while the subject exists as a substance, but rather while the substance of the moving thing is moving.

Distinguish between this condition and the first condition, because the first condition has set down [as the condition] the principle of the substance, man, whereas here the substance is set down with a description which attaches to the substance, moving thing; the moving thing has a substance and an essence (*jawhar*) to which movement and non-movement attach; but “man” and “blackness” are not like that.

Avicenna’s claims about the way *wasfī* propositions contribute to an inference (see T18 below) came under fire by the early twelfth century, but

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8 Zimmermann in al-Fārābī 1981: lxxiv, n. 2: “there is little in the logic of Avicenna that is not foreshadowed in that of al-Fārābī.”

9 Street 2001.

the distinction between wasfī and dhātī has remained a central one in the tradition down to today. Most examples in this chapter are of propositions under the dhātī condition, which Avicenna considered to be the correct one for a reading of Aristotle’s syllogistic with modalized and absolute propositions.

The absolute proposition and the modal propositions with which it is mixed in syllogistic inference all take the subject term J in every J is B to include more than actual Js; by “J,”

T3: we mean that every single thing described as J, be it in mental supposition or extramental existence, be it described as J always, or sometimes, or whatever . . . 11

is subject of the predicate. How we are to interpret this extension (or, to use the Latin term, ampliation) of the subject term to things in mental supposition is open to dispute. Candidate interpretations include “every possible J is a B,” and “it’s necessary that every J is a B.” As will emerge in section v, post-Avicennian logicians were also uncertain how best to interpret Avicenna’s understanding of the subject term, although the majority were certain that they wanted to reject it (see T21 below). The most promising analysis to date is Thom’s de dicto/de re interpretation,12 under which all propositions are formalised as embedded in a de dicto necessity operator. So the absolute proposition every J is B (kull jīm bā’) is understood as “it’s necessary that every J is at least once B,” the necessity proposition every J is necessarily B (kull jīm bā’ bi-l-ḍarūra) as “it’s necessary that every J is necessarily B,” and the possibility proposition every J is possibly B (kull jīm bā’ bi-l-imkān) as “it’s necessary that every J is possibly B.” How the subject term is taken will determine the productivity or sterility of a number of syllogisms; this is touched on in section iv.

III PROPOSITIONS USED IN SYLLOGISMS

Pointers is a summary account of the logic, and Avicenna does not go through the full repertoire of propositions he presents in Syllogism, nor even as many as he considers in Easterners. For the purposes of an introductory account, I think such concision is a virtue. Summary or not, some arguments in Pointers were accepted by thirteenth-century logicians as advances on earlier arguments in Syllogism (see, e.g., T15 below).
The absolute proposition

It is a much-disputed question in the Peripatetic tradition as to how one should understand a proposition without a modal operator, one which is “unqualified” by such an operator, or “absolute” (qadiyya mutlaqa).\(^\text{13}\) Avicenna’s solution to the problem meets the criteria by which he judges a logical doctrine to be worthy: it applies the fundamental principles involved consistently, and it provides a way to understand previous Peripatetic solutions to the problem. It is easier to gain traction on the texts quoted in this section to bear in mind what I regard as the likely reading of Avicenna’s absolute (setting aside the ampliation of the subject term for present purposes): the universal affirmative general absolute should be read as every \(J\) is at least once \(B\), and the universal affirmative special absolute as every \(J\) is at least once \(B\) and at least once not \(B\).

First, let us see how Avicenna sets out the problem of giving truth-conditions for the absolute, and the solutions he recognises.

T6: There are two views concerning the absolute proposition, one belonging to Theophrastus and subsequently Themistius and others. [This view holds] that the absolute is that in which the modality of necessity or possibility of the judgment is not mentioned; rather [the judgment] is given absolutely. So the judgment may belong necessarily, and it may belong non-necessarily (that is, non-perpetually). It is not unlikely that this is the Philosopher’s view of the absolute, given that the Philosopher held it to be permissible that the universal affirmative and universal negative absolutes be true together, as in “every horse is sleeping” and “no horse is sleeping”; so the absolute universal affirmative judgment may be translated to the absolute universal negative judgment. Proponents of this view think that this [translation] is possible but not necessary, because the Philosopher sometimes also puts forward as absolutes examples for which that [translation] is not possible, but which are rather necessary and perpetual.

The proponents of the second view (among whom is Alexander . . .) think that this translation is necessary in the absolute; and that the absolute is that in whose judgement there is no necessity (except in one of the four modalities mentioned after the first two).\(^\text{14}\)

Just what is being said here about the absolute is open to a number of interpretations. Here is one: Avicenna confronts the fact that in the

\(^{13}\) The second section of Lagerlund 2009 gives an excellent summary of the issues involved.

\(^{14}\) Salvation, 34.pu–35.8. The “four modalities mentioned after the first two” refer to Avicenna’s famous six kinds of necessity: (3) under a given description of the subject (all As are Bs while As; the wasfī); (4) while the predicate holds (all As are Bs while Bs); (5) at a certain time (all As are Bs at time \(T\)); and (6) at an indefinite time (all As are Bs at some time); see ibid., 30.4–31.4; cf. Avicenna 2011: 32–3.
Aristotelian corpus, we find that two absolutes like “every horse is sleeping” and “no horse is sleeping” can be true together. This motivates Avicenna to stipulate truth-conditions such that two universal absolutes of opposing quality are compatible. Because of this, we may have a one-sided (the general absolute) and a two-sided, which in the universal is a conjunction of two contrary one-sided absolutes. The two-sided is called the special absolute (al-muṭlaqa al-khāṣṣa) or, in a bold move which lays claim to an established term, hyparctic (wujūdiyya).\(^{15}\) The two kinds of absolute, general and special, allow Avicenna to accept both the interpretation of Theophrastus and that of Alexander; the general will be that in which “the judgment may belong necessarily, and it may belong non-necessarily,” whereas the special will be “that in whose judgement there is no necessity.” So the necessity proposition, *every man is necessarily rational*, is true stated as a general absolute, but not as a special absolute.

The absolute proposition which results from this interpretation is, however, unlike the unmodalised proposition which is used throughout the first seven chapters of the *Prior Analytics* in the way it contributes to inferences. I skip ahead to material which comes later in *Pointers* because it sets the consequences of Avicenna’s truth-conditions in sharper relief. The square of opposition for Aristotle’s assertoric does not correspond to the one for Avicenna’s absolute because of the suppressed temporal operator, “at least once,” the dual of which is “always.”

T7: People have come to the opinion, wrongly and due to lack of reflection, that the absolute proposition finds its contradictory in absolute propositions. They look only to difference in quantity and quality, and do not reflect properly on what the status of other conditions might be, so that a contradictory might be found . . .

The contradictory of *All Js are Bs* in the most general absoluteness is *Some Js are always not Bs*. The contradictory of *No Js are Bs*, when it means that B is denied of all J with nothing further added, is *Some Js are always Bs*.\(^{16}\)

It is, however, possible to modify the absolute to allow it to contradict as the assertoric of the *Prior Analytics* does; to allow it, in Avicenna’s terms, to find a contradictory in its own kind. Avicenna proposes two “stratagems” (*ḥīlatān*, sing. *ḥila*), one of which is to read the proposition

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\(^{15}\) Avicenna claims this usage of *wujūdiyya* as his own term of art; *Pointers*, 309. Zimmermann first proposed “hyparctic” for *wujūdiyya* (al-Fārābī 1981: lx, n. 1); I adopt his translation, though, of course, Avicenna does not use the term as al-Fārābī did.

\(^{16}\) *Pointers*, 307–8.
under a *waṣfi* condition, the other to read it as true for a given moment (a *waqtī* reading).

E-conversion, too, will fail; that is to say, the negative universal of the absolute, *no J is B*, will not convert to *no B is J*.

T8: It is customary to begin with the conversion of the e-proposition, and prove that it converts to an [e-proposition]. The truth is, however, that it does not have a converse unless the stratagems spoken of are used. For it is possible to negate laughing actually of every single man, but it is not necessary that man may be negated of laughing.\(^\text{18}\)

E-conversion works, it is claimed, for the propositions formed by the stratagems. Other conversions are as for Aristotelian assertorics: the affirmative universal and particular both convert to an affirmative particular, though a special absolute converts to a general absolute.\(^\text{19}\)

Finally, two absolute premises in the moods of the second figure will not produce a conclusion, unlike two assertorics on Aristotle’s account.

T9: As for the second figure, know that it is the case that in this figure there is no syllogism from two absolutes of general force, nor from two possibles, nor from a mixture of the two. It is not in doubt that there is no syllogism from two absolutes, given both are affirmative or both negative; nor is there from two possibles, no matter how they are. Rather, the dispute concerns firstly the absolutes when they differ in affirmation and negation. Most think that a syllogism may follow from these [two premises differing in quality]. On this matter, we think otherwise.\(^\text{20}\)

Again, the modified propositions of the stratagems produce conclusions in the second figure. Why has Avicenna bothered to produce these stratagems which model the inferences of the first part of the *Prior Analytics*? Here is what al-Ṭūsī has to say:

T10: What spurred him to this was that in the assertoric syllogistic Aristotle and others sometimes used contradictions of absolute propositions assuming them to be absolute; that was why so many decided that absolutes did contradict absolutes. When Avicenna had shown this to be wrong, he wanted to give a way of construing those examples from Aristotle.\(^\text{21}\)

The Baghdad school of philosophers come under criticism again and again for their failure to appreciate the problems involved in a proper

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\(^\text{17}\) Respectively, ibid., 312 (though the claim that *no J is B while J converts to no B is J while B was questioned in the immediately subsequent tradition) and 315 (none questioned that at time *T*, *no J is B converts to at time T, no B is J*, though the subsequent tradition stipulated different truth-conditions for the *waqtī*).

\(^\text{18}\) Ibid., 322.

\(^\text{19}\) *Twenty Questions*, in Mohaghegh and Isutzu 1974: 85ff.

\(^\text{20}\) *Pointers*, 403–4.

understanding of the absolute proposition; they fail to understand that – although without explicit modalisation – the predicate is none the less under a temporal operator (i.e. “at least once”).

T11: How wretched is what the Westerners have done when they consider modality in the contradiction of necessary and possible propositions, and don’t for the absolute proposition, for being absolute is also one of the modalities. How the absolute proposition is taken – in being under its modality – differs from necessary and possible propositions. [This is so] even if its modality is being devoid of the modalities of necessity and possibility, for this absence [of alethic modalisation] has a status.22

Necessity and possibility propositions

Avicenna investigates three alethically modalised propositions in Point- ers: a necessity proposition (daru’riyya), a one-sided possibility proposition (mumkina ‘ammam) and a two-sided possibility proposition (mumkina khāṣa). (His terminology for the two possibility propositions shifts through his writings, but this is the terminology adopted by the later tradition.) The universal two-sided possibility proposition (whether negative or affirmative) is a conjunction of two contrary one-sided possibility propositions. The one-sided possibility proposition and the necessity proposition of opposing quantity and quality are contradictories; so, for example, every J is necessarily B contradicts some J is possibly not B.

For the necessity proposition, as mentioned in T4 above, the necessity of the proposition is conditional. “The condition is . . . perpetual [relative] to the existence of the substance [of the subject] (dhāt), as in man is necessarily a rational body; by which we do not mean to say that man is and always will be a rational body, because this is false taken for each human individual.” What is meant is rather “that while he exists as a substance (mā dāma mawjud al-dhāt) as a human, he is a rational body”; this is the dhātī necessity proposition, and it is the one appropriate to a reading of the Prior Analytics.23

Avicenna agrees with Aristotle’s account of conversion of the universal negative necessity propositions (so no J is possibly B converts to no B is possibly f), but differs on the affirmative necessity propositions; Aristotle has every and some J is necessarily B convert as some B is necessarily A. Avicenna counters by invoking a proprium: every laughing being is necessarily a human. It is obvious that it will convert to some humans are laughing.

22 Easterners, in Avicenna 1982: 133.18–22.
23 Twenty Questions, in Mohaghegh and Isutzu 1974: 89.12–91.6.
T12: but it does not necessarily convert as a necessary, for it may be that the converse of the necessary is possible; it may be that J (such as laughing) necessarily has B (such as man), but that B (such as man) does not necessarily have J (such as laughing). Whoever says otherwise, and has sought to find a stratagem for it, do not believe him.24

On the possibility propositions, Avicenna claims that the one- and two-sided universal negative possibility propositions do not convert, and all affirmative possibility propositions convert as one-sided affirmative particular possibility propositions.

Metaphysical application

Thom has reflected more usefully than anyone else to date on the application of these propositions. Necessity-propositions on his combined de dicto/de re analysis “have an application to metaphysical propositions in which the predicate is put forward as being constitutive of the subject.” He goes on: “Similarly, possibility propositions on the combined de dicto/de re reading state that it’s necessary that every j is a possible-b; and statements to this effect within an essentialist metaphysics state a natural or essential capacity of the subject-term.” So on Thom’s analysis, possibility-propositions “have an application to metaphysical propositions in which the predicate is put forward as expressing a potentiality of the subject.”25

Something has already been said about the application of the absolute proposition in T6 above. Thom offers further reflections. The example “all who sleep wake” states a truth about essential accidents of animals; “[t]wo essential accidents are linked by a true absolute proposition only when those accidents are naturally alternating states.” (The absolute proposition here would be a special, or two-sided, absolute: “all who sleep are awake at least once and not awake at least once.”) Thom goes on to note that statements of natural contingency (“every man goes gray”) and statements of final causality (“every man makes distinctions”) in Aristotelian metaphysics could also be given as true absolute propositions (though in this case, as general or one-sided absolutes, e.g. “every man goes grey at least once”).26

IV THE SYLLOGISMS

Avicenna’s modal syllogistic is an instrument designed to take propositions with a specific metaphysical application and deduce further such

24 Pointers, 334–5.  
26 Ibid.: 374.
propositions from them. As shown above, he differentiates the way his propositions contribute to inferences from the way they do on the “well known” (mashhûr) account. The account in *Syllogism* begins by asserting a license to ignore those passages in Aristotle’s account which seem impossible to square with other passages:

T13: You should realize that most of what Aristotle’s writings have to say about the modal mixes are tests, and are not genuine opinions – this will become clear to you in a number of places . . .

In *Pointers*, Avicenna presents a large number of perfect syllogisms with modalised premises, to which he reduces imperfect syllogisms to prove their productivity. (The reductions are fairly easy, so I limit this discussion to the perfect syllogisms, that is, to syllogisms in which the deduction of whatever follows is evident from the premisses being posited.) It is worth stressing that if the perfect syllogisms are accepted as perfect, there is no need to analyze any deeper than Avicenna does in *Pointers*.

Here are the perfect syllogisms in the first figure. When the minor premise is “actual” (fi’liyya), that is, either an absolute like *every J is once B* or a necessity proposition like *every J is necessarily B*, it can be combined with a major premise *every B is once/necessarily/possibly A*, to produce, respectively, *every J is once/necessarily/possibly A*. (Some might quibble with how perfect the middling of *necessarily B* is with *B*, but Avicenna takes it to be perfect.)

Nearly all post-Avicennian logicians agree with Avicenna to this point. They differ, however, on the productivity of first-figure syllogisms with possibility propositions as minor premise, when the major term only passes to the minor – to use their terminology – “in potentiality” (bi-l-quwwa). According to Avicenna, from *every J is possibly B*, *every B is possibly A*, we may infer *every J is possibly A*; from *every J is possibly B*, *every B is once A*, we may infer *every J is possibly A*; and from *every J is possibly B*, *every B is necessarily A*, we may infer *every J is necessarily A*. These are, Avicenna claims, productive mixes, but in *Pointers* he claims none of them to be perfect, but only “nearly perfect.”

Many of us would, I think, tend to feel that it is counterintuitive to claim that these are productive inferences, let alone nearly perfect. We might even be tempted to go further, and to adopt a widely accepted rule first posited

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Cure. *Syllogism*: 204.10–12.

I give the mixes in Barbara, but they are the same for Celarent, Darii and Ferio; I do not try to represent the ampliation of the premises, and I use “once” to mark a premise as absolute. The symbols used in this section follow those used by Robin Smith in Aristotle 1989.
by Theophrastus, the Rule of the Weaker, which states that the strength of a conclusion – in terms of its quantity, quality, and modality – follows the weaker of the two premises (al-natīja tābi‘a li-akhsas al-muqaddamatayn). In Pointers, Avicenna presents his syllogistic as a detailed alternative to the Rule of the Weaker, and argues against it that the modal strength of the conclusion follows that of the major premise.

T1.4: Thus the conclusion will follow the major in quality and modality in every case in the syllogisms of this figure . . . Do not pay any attention to the claim that the conclusion follows the weaker of the premises in everything . . .

The Avicennian Rule of the Major, which replaces the Rule of the Weaker, has a number of exceptions. The passage in Pointers presenting these exceptions is peppered with long-recognised textual problems, but the upshot is that there are three exceptions to the Rule of the Major. Towards the end of this section, I return to two of these.

As for the perfect and nearly perfect first-figure syllogisms mentioned above, one of the mixes with actual minors is at odds with the Rule of the Weaker: every J is B, every B is necessarily A, therefore every J is necessarily A. So long as the modality is taken to belong to the predicate (such that the major term is “necessarily-A”), this seems a natural – indeed, perfect – inference. It could, however, run into trouble if the universal affirmative necessity proposition is taken to convert as a particular necessity proposition, a conversion easier to take as true if “necessarily” belonged to the proposition as a whole rather than only the predicate. But Avicenna has rejected this conversion already (see T12 above).

Two of the inferences with possibility propositions as minor premise also outrage the Rule of the Weaker. Even if the modality is taken to belong to the predicate, it must be said that it is easy to agree that, for example, every J is possibly B, every B is necessarily A, therefore every J is necessarily A is not only not perfect, but not even nearly perfect. What if every J, while possibly B, never actually becomes B (to borrow a criticism from any number of Avicenna’s detractors on this point)? It is easier to see the mix as productive if the subject term is taken to amplify to the possible (see T5 above and following, and T21 below), whereupon the premises are something like every possible J is a possible B, and every possible B is a possible/one-time/necessary A. In Pointers, however, Avicenna does not argue for the productivity of these premises by dwelling on questions of ampliation,30 but rather, with proofs that are taken by the later tradition of

29 Pointers, 396–9. 30 Though he does in Twenty Questions, esp. 91.7–92.17.
Arabic logic to be innovative improvements on the proofs he had adopted from the Peripatetic tradition and used in his earlier works on logic. As al-Ṭūsī says:

T15: It was the custom of logicians to prove these by indirect reduction, and to reduce them to mixes of actual premises in the other two figures. There is not much clarity in [this procedure], along with its involving a lot of nonsense and bad ordering of material. So in this book Avicenna deserted the method and proved them with three proofs of the reasoned fact.

Space does not permit me to lay out these proofs, but they all turn on al-Ṭūsī’s understanding that there is a second-figure inference that is “primary in the mind” or “natural,” and that this primary inference can be contraposed to underwrite the first-figure mix. Here is Avicenna urging the intuition:

T16: You know that if J is such that B is true of it in its totality affirmatively without necessity (so B is non-necessary for everything which is J . . .), while A differs from this (since of everything that is A, B is necessary for it), then the nature of J (fa-inna tabī‘at jīm) . . . is disjoined from the nature of A (mubāyānatin li-tabī‘at alif), neither of them entering under the other, not even possibly . . . You likewise know that the conclusion is always necessary negative . . .

Since the conclusion is a necessary negative, it converts; in short, there are even more inferences derived from this insight than directly indicated in the text. Here is one, Camestres PNN: no J is possibly B, and every A is possibly B, therefore no J is possibly A. Here it is with the concrete terms used in al-Ṭūsī’s commentary: no celestial body is possibly still, every animal is possibly still, therefore no celestial body is possibly an animal. J is said of things which are such that their natures essentially exclude B, while A is said of things which may be B; so necessarily, the Js and the As are essentially different. Put another way, whatever is not possibly B (i.e. J) is not possibly what is possibly B (i.e. A). By contraposition, whatever is possibly what is possibly B is possibly B, which underwrites Barbara PPP (every J is possibly B, every B is possibly A, therefore every J is possibly A).

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31 A reference to the notoriously difficult proof in Prior Analytics, 3434–b2.
32 al-Ṭūsī 1971: 391; corrected against British Library Or. 10901 75r.
33 For clarity, I omit a phrase extending the number of inferences: “or non-necessary for what is the exposited part of J.”
34 As before, and for the same reason, I omit the phrase “or the exposited part of it.”
35 Pointers, 421–2; see Or. 10901 82 verso 13.
36 Aristotle accepts the mix with a weaker conclusion, Camestres PNP: 38a25–26.
37 For these examples, I adopt a convention of Thom 2008, and render lā shay‘ min J bī-l-darūra, not as I have up to this point no J is B necessarily, but as the more natural, no J is possibly B.
38 Strictly, Barbara PPP is underwritten by Baroco PNN.
This, at least, is how one representative of the later tradition understood Avicenna’s opaque claim:

T17: But if the judgment on B is by possibility, then there is a possibility of a possibility. And the mind nearly knows that it is a possibility, for what is possibly possible is by nature near the judgment that it is possible.39

Barbara APP is a closely related inference which strengthens one of the premises such that we have every J is possibly B, every B is once A, therefore every J is possibly A.40 I spoke earlier of exceptions to the Rule of the Major, and this is the first: an absolute major with a possibility minor premise in the first figure does not produce an absolute conclusion, but only a possibility proposition. A second exception comes about by using a necessity major in the wasfi reading (see T4 above; such a proposition is considered to be weaker than a dhāti necessity proposition, because the strongest dhāti proposition which may be inferred from it is an absolute). I use a text from Salvation to avoid the distracting detail in the Pointers’ treatment of this mix.

T18: Here there is something which should be known, and that is that if the major is absolute, and the time of its assertion is as long as the subject remains described by whatever it is described by, then the conclusion will be necessary, because J is B always, and it has been posited that B, as long as it is B, is A; so J is always A – so here the conclusion is necessary and the major absolute.41

Which is to say: the premise pair every J is necessarily B and every B is necessarily A while B concludes in every J is necessarily A; the conclusion is stronger than the wasfi major.

I apologise for the technicalities which have crowded into the end of this section, and offer by way of conclusion two general observations. The first is that Avicenna is building his modal logic around insights into natures and the essential differences between natures which are revealed by their differing potentialities and constituents; this is clear from T16. The second is that the modal syllogistic is concerned above all with investigating these insights, but that this is only one aspect of the broader investigations preparatory to developing demonstrations.

39 Pointers, 391.
40 I confess I can’t find the proof al-Tūsī takes Avicenna to have given for this syllogism, and there seems to me to be an argument for a stronger conclusion; but this is the mix as Avicenna puts it forward.
41 Salvation, 57.pu–58.
If “necessary” is said in books on demonstration, what is meant by it is more general than the necessary set down in books on the syllogism; what is necessary is as long as the subject is described as it is (mā damā al-mawdūʿ mawsūfan bi-mā wasifa bi-hī), not the pure necessary (al-ḍarūrī al-ṣīf).

In short, to pursue this discussion of syllogism into Avicenna’s account of demonstration, further investigation of the propositions introduced in T4 would be in order.

V POST-AVICENNIAN LOGICIANS ON THE SYLLOGISM

Nearly all post-Avicennian logicians accept Avicenna’s division of the syllogism, and of the conditions under which a proposition’s modality must be understood (though they reject his account of how wasfī propositions contribute to inferences within a century of his death). They also accept his interpretation of the temporal modalisation on the predicate of the absolute proposition. Finally, from around two centuries after Avicenna’s death, most Arabic logicians – following Avicenna in Pointers – cease to make much or any mention of Aristotle and the Prior Analytics, and follow Avicenna’s last ordering of the material on the modal syllogistic. In fact, to make these post-Avicennian logicians speak to the Prior Analytics, we need to make them do so by way of Avicenna’s various presentations, and in particular, the presentation in Pointers.

The post-Avicennian logicians do, however, differ from Avicenna, and scholars are trying to draw up lists of disputed points. It will be some time before we are able to generalise about what motivates the differences, but it would be satisfying to think that there is a single overarching notion behind all of them. One difference that leaps from the page is the decision that – contrary to Avicenna’s arguments – first-figure syllogisms with possibility propositions as minor premises are sterile (or, if productive, unprovable).

Logicians of the late eleventh and the twelfth centuries had questioned aspects of Avicenna’s syllogistic, but perhaps the most influential challenge came from Afdal al-Dīn al-Khūnājī (d. 1248), writing at almost exactly the same time al-Ṭūsī was writing his commentary on Pointers. Unlike al-Ṭūsī, al-Khūnājī was unimpressed by Avicenna’s solicitude for Aristotle, and said of his comment that Aristotle’s exposition of the modal syllogistic contained tests for readers rather than real opinions (T13 above):

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42 Pointers, 470–1; see Or. 10901 930v–6.
43 El-Rouayheb’s introduction in Khūnājī 2010 is the most comprehensive attempt to date.
T20: It is not for us to busy ourselves with the intentions of people in these matters, but rather with verifying the truth . . .

The truth that al-Khūnajī verifies is that Avicenna is using a proposition in his syllogistic that is too strong in one respect. The reading that followers of al-Khūnajī adopted is the second of the two mentioned in the following passage (from one of al-Khūnajī’s most influential followers, Najm al-Dīn al-Kātibī, d. 1276):

T21: Our statement every J is B is used occasionally according to the essence (bi-hasab al-haqīqa), and its meaning is that everything which, were it to exist, would be a J among possible individuals would be, in so far as it were to exist, a B; that is, everything that is an implicant of J is an implicant of B. And occasionally [it is used] according to actual existence (bi-hasab al-khārij), and its meaning is that every J actually (ji l-khārij), whether at the time of the judgment or before it or after it, is B actually (ji l-khārij) . . .

The distinction between the two considerations is clear. Were there no squares actually (ji l-khārij) it would be true to say a square is a figure under the first consideration and not the second; and were there no figures actually other than squares, it would be correct to say every figure is a square under the second consideration but not the first.

In other words, al-Khūnajī and his followers reject the ampliation of the subject term to mental existence (see T5 above). It should be noted that al-Ṭūsī does not think the formulation above pins down Avicenna’s reading accurately.

Why most post-Avicenna logicians want the subject to be read “according to actual existence” is a subject for further research but, at first blush, it appears that they want to be able to include many more propositions for logical analysis than can fit under Avicenna’s stringent truth-conditions. Take a counter-example to Avicenna’s first-figure mix, every J is possibly B, every B is necessarily A, therefore every J is necessarily A: every horse is possibly a mount for Zayd, every mount for Zayd is necessarily a donkey, therefore every horse is necessarily a donkey. On Avicenna’s truth-conditions, for example, “every mount for Zayd is necessarily a donkey” is false (it is clearly not true that every possible mount for Zayd has to be a donkey), so the counter-example does not touch him.

The post-Avicennian logicians recognised this. But they seemed to want logical propositions keyed more directly to the actual, and less dependent on our insights into natures and their eternal properties. “Every horse” should

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stretch only as far as actual horses, because considering every possible horse is not as straightforward as, for example, considering every possible square.

VI Afterword

In my opinion, Avicennian logic is the most exciting field in Avicennian studies. It is in a highly unsettled state, with new research coming out thick and fast. Perhaps the primary focus of dispute about how to approach Avicenna’s syllogistic has to do with where we should begin. The many who would not begin with a summary work like Pointers worry that he may be laying out insufficient material for his readers to allow them to work out what he is doing. The categorical syllogistic, for example, is conspicuously absent from Pointers, and some believe that Avicenna analyzes arguments down to categorical syllogisms. More worryingly, Avicenna may fail in Pointers to present all the distinctions necessary to stipulate sufficiently determinate truth-conditions for his propositions (or sufficiently many propositions) to fit his syllogistic. Even though Avicenna seems to be presenting the logic sections of Pointers and Salvation as stand-alone summaries, his is a philosophical praxis that regularly holds back or conceals important elements in the exposition of a subject. Perhaps in these two summaries he has held back important preliminaries and distinctions.

Scholars who take this view would prefer to base any account of Avicenna’s logic on the first books of The Cure. These books contain compendious expositions of logical matters, and one can only gesture towards the relative richness of the books: Syllogism is perhaps twenty times the length of the corresponding material in Pointers. In the bibliographical note that follows this chapter, a number of studies based on the logic books of The Cure are cited. The comprehensive nature of the information these books provide, and that studies on them convey, is the most eloquent testimony to the value of the logic of The Cure. That said, basing a logical summary on The Cure faces its own problems. How are we to assess the relative importance of the elements that make up the vast array of material covered in The Cure, and synthesise them into a summary account?

I do not think it is possible, or even desirable, to resolve the tension about where we begin. But a few reflections may be offered about the relation

48 Maybe he does in Salvation and Syllogism (though I doubt it), but in Pointers he won’t need to. Thom 2008 presents a model which analyzes down to the categorical syllogistic, but if Rules 1 and 2 are omitted – as they can be for an account without upgrading – the categorical syllogistic can be dispensed with, too.


50 See especially, Hasnawi 2008.
Avicenna’s philosophical project has to, on the one hand, *The Cure* and, on the other, the summaries. Avicenna’s primary concern in the logical works of *The Cure* is to follow the presentation of the *Organon*.

T22: In the first part of this book, I began with Logic. I strove (*tabarraytu*) to have it run parallel to the order of Aristotle’s books [on Logic], supplying in addition [discussions on] hidden and subtle issues which are lacking in available books.\(^{51}\)

Not only does he strive to make *The Cure* run parallel with the *Organon*; he deals in it with subtle issues that have arisen in the Peripatetic tradition. Perhaps it is best to look on *The Cure* as – at least in part – the culmination of centuries of Peripatetic philosophy, in which Avicenna judges the work of his predecessors on the great questions that arise on reading Aristotle, in the order in which they arise in the course of such a reading. It is clear, even at this early stage of research, that Avicenna has original and acute things to say on these issues. It is less clear that he has in mind a cumulative project that uses all the conclusions he hammers out as he follows through the trajectory of the *Organon* and its encrusted commentaries.

By contrast, he does not strive to have *Pointers* run parallel to any part of the order of Aristotle’s logic, not even in the presentation of the modal syllogistic. He is also actively revising substantive arguments of *The Cure*. One way to conceive *Pointers* – and I think this is true of *Pointers* as a whole – is as a programmatic account, a short, but deeply engaged revision of how best to present philosophy without reference to Aristotle. And to some extent, that is how the later tradition took the two books: *The Cure* looked back to the tradition from which logic had developed, *Pointers* looked forward to how it might be developed.

In short, we are in good company in using *Pointers* as a guide to the syllogistic. Sometime around the early thirteenth century, the great logicians were basing much of what they had to say about the modal syllogistic on *Pointers*, using it as a way to order the logical material they presented. They ranged far beyond it, and back into *The Cure*, particularly as they built up their impressive extensions of Avicenna’s syllogistic with conditional propositions;\(^{52}\) but *Pointers* was always prized as some of Avicenna’s best work.


\(^{52}\) See Khûnajî 2010: xlv–xlviii.
Some scholars would not use “syllogistic” to describe Avicenna’s writings on the syllogism, preferring to reserve the term for a tradition of modern logical writing that arises with Łukasiewicz and his work on Aristotle’s categorical syllogistic. *Fal-naṣṭaliḥ*, as Avicenna would say. I mean no more by it than any line of reflection that touches on syllogistic following (*luzūm qiyāsī*), syllogistic connexions (*qarā‘in qiyāsīyya*), the syllogicity (*qiyāsīyya*) of certain arguments, or other matters connected to a discussion of syllogisms. Here are some of the more important works on Avicenna’s syllogistic.

**Translations**

Avicenna gives summary accounts of a syllogistic like the one set out here in *Pointers* (Goichon: Avicenna 1951a; Inati: Avicenna 1984) and *Salvation* (Ahmed: Avicenna 2011). A valuable translation of a summary account that leaves the modal syllogistic to one side but sets out “the absolute syllogism” is *Philosophy* (Achena and Massé: Avicenna 1955–8).

There has not yet been much translation of the relevant logic books of *The Cure*. A valuable beginning has been made in Shehaby (Avicenna 1973), which is a translation of a substantial portion of *Syllogism*, the part relating to syllogisms with conditional premises. A polished translation of an important stretch of *On Interpretation* is given in Hasnawi 2008, and translations from *Syllogism of The Cure* (and a passage on propositional truth-conditions from *Easterners*) are given by Hodges at wilfridhodges.co.uk.

**Studies**

An alternative introduction to the matters covered in this chapter is Lagerlund 2009; Lagerlund sets the material out in a way that facilitates comparison with the logicians of the Latin tradition covered in his *Modal Syllogistic in the Middle Ages* (2000).

Much of the material from *On Interpretation of The Cure* goes to syllogistic in the sense I take it, and Hasnawi 2008, Ahmed 2008, and papers by Hodges (wilfridhodges.co.uk) all contribute to an understanding of the elements from which Avicenna built his propositions.

Two studies by Thom (Thom 2003, and 2008) have integrated Avicenna’s work on modal syllogistic into a larger project studying the relation between Aristotelian modal syllogistic and metaphysics. Thom 2003 presents, aside
from chapter 4, a fascinating comparison between Buridan and Avicenna, pp. 175–6. Thom is currently working on a new interpretation of the modal logic which highlights even more than his past interpretations its metaphysical commitments (see Thom 2012).

The post-Avicennian logicians are important in that their work represents the further development of Avicennian syllogistic. They are also important for the modern study of Avicenna’s logic because, thanks to Rescher’s pioneering work (see Street 2008), they are the way we have come to get some kind of bearing on Avicenna’s vast and complex writings. Thom 2010 deals with one of the most important points that distinguish the way the post-Avicennian logicians develop their syllogistic from Avicenna. El-Rouayheb’s introduction to Avicenna 2011 is a helpful overview of these logicians and their work. Al-Khūnajī’s Kashf (Khūnajī 2010) will be as helpful for allowing us to understand the rejection of central features of Avicenna’s logic as al-Ṭūsī’s Commentary on Pointers is for their defence.

**Avicenna’s works on logic**

What follows is a list of works referred to in the bibliographies of Avicenna’s works in Anawati 1950 (A) and Mahdavī 1954 (M) which have to do – or seem to have to do – with logic. Due to space constraints, I merely list the works without references to the studies done on them or editions; I hope, none the less, this list will give the reader some sense of the energy Avicenna devoted to the discipline.

- *Ajwībat al-Shaykh . . . ilā Abī Saʿīd Abū l-Khayr* – Avicenna’s Answers to Abī Saʿīd Abū l-Khayr (M4 (part A), A35) Part A is on al-Qiyās; probably inauthentic.
- *al-Hikma al-ʿArūḍīyya – Philosophy for ʿArūḍī* (also known as *al-Majmūʿ*) (M62, A 10, 28, 29, 32, 65 and 247 (though A65 and 247 are not on logic)) Bukhārā period, several portions on logic survive in ms. See Gutas 1988: 87–93, esp. 89.
- *al-Shīfa*’ – The Cure (M84, A14) Begun in middle-to-late Hamadhanid period, though views differ as to how quickly it was finished. Internal evidence shows its syllogistic was finished before Pointers. Most considered work on logic. See Gutas 1988: 101–12.
- *al-Hikma al-mashriqīyya – Philosophy of the Easterners* (M63, A12) Probably from middle of Isfahan period, Avicenna’s experiment in eastern
philosophy, perhaps 1027–29. See Gutas 1988: 115–30. Only the first part of the logic survives (up to what corresponds to the early parts of Path Five in Pointers and Reminders).

- ‘Uyûn al-ḥikma – Elements of Philosophy (M93, A15) Unknown date, though the editor (Badawi) clearly tends to think it late due to its concentrated style. According to Mahdavi, its logic is the Shorter Epitome (al-Mūjaz al-ṣaghīr).
- al-Mūjaza fi uṣûlī l-maṭnīq – Epitome of the principles of logic (M116, A31 and 44).
- Risālat ba’dī l-afādīl ilā ‘ulamā’ Madīnat l-Salām – Epistle from an eminent man to the Scholars of Baghdad (M78, no A number) Early Hama-dhan period; French translation of introduction with contextualisation in Avicenna 2000.
- Bayān dhawāt al-jiha – Explanation of the modal propositions (M42, no A number) Also known as Fi ‘ukūs dhawāt al-jiha – On the Conversions of the modals; referred to in Twenty Questions, so perhaps early 1020s.
- Taʾaqqub al-maʾuddī’ al-jadalī – Following the dialectical commonplace (M48, A26).
- al-Hiḍāya – Guidance (M130, A24) Written in Fardajan, 1023; section on logic.
- Mafāṭīḥ al-khazā’in fī l-maṭnīq – Keys to the treasures in logic (M111, no A number).
- al-Manṭiq al-mūjaz – Logic Epitomized (M114, A44).
- al-Mukhtasār al-awsat fī l-maṭnīq – Middle Summary in Logic (M108, A45)
  If this is the text Jūzjānī refers to in his biography, it is a Jurjan period work, written for Abū Muhammad Shīrāzī and defended by Avicenna in his Isfahan period at the prompting of questions from the scholars of Shiraz. Included later in Salvation (though only after abbreviation and revision).
- Urjūza fi ʾilm al-maṭnīq – Ode on the science of logic (M22, A25 and 33) 29-verse poem in rajaz, given two different titles in the bibliographies.
- al-Ishāra ilā ʾilm al-maṭnīq – Pointer to the science of logic (M28, A37) Also known as Taʾāliq al-maṭnīq.
• *al-Ishārāt wa-l-tanbīḥāt* – *Pointers and Reminders* (M27, A3 and 239) Late Isfahan; see Gutas 1988: 140–1.
• *al-Najāt* – *Salvation* (M118, A23) Isfahan period work 1026–7; see Gutas 1988: 112. Logic section has been translated in Avicenna 2011.
• *al-Mūjaz al-ṣagbīr fī l-māntiq* – *Shorter Epitome on Logic* (M115, A43) Perhaps the same as *Middle Summary*, perhaps, as per Gutas 1988: 112, the logic in *Salvation*. Gutas (ibid.) dates the work to 1013–14. The *Shorter Summary* of Jūzjānī.
• *Anwâ‘ al-qāḍāyā* – *The Species of Propositions* (M37, A34) Seven-verse poem.
• *al-Bahja fī l-māntiq* – *Splendour in Logic* (M41, A42).
• *al-Nukat fī l-māntiq* – *Subtleties in Logic* (M125, A46).
• *al-Masā’il al-‘ishrīniyya* – *Twenty Questions (on Logic)* (M8, A39) Isfahan period text defending a Jurjan period text on logic.
The term *tābī‘a* is the standard Arabic translation for the Greek *phusis*, which means nature.\(^1\) Natural philosophy or physics in its historical sense, then, is the study of the natures of things, where a nature, according to Aristotle, is an internal principle or cause of a body’s motions, actions or even being at rest, which belongs to that body essentially and not merely accidentally.\(^2\) Thus, when Avicenna identifies the subject matter of the science of physics with ‘the sensible body insofar as it is subject to change’ and further adds that physics investigates such bodies, initially, with an eye to understanding their principles and causes and then, from those principles, coming to understand those bodies themselves, he is placing himself squarely within a larger tradition of natural philosophy that has its roots in the classical Greek world.\(^3\)

In this study, I focus on a complex of interrelated issues drawn from Avicenna’s writings on non-living sensible bodies,\(^4\) some of which he inherited from his Greek predecessors, while others were raised by Muslim theologians of his own time. The first issue concerns Avicenna’s characterization of the form of motion and his account of motion at an instant, which can be fully appreciated only in light of his views concerning continua and infinite divisibility. The issue of continua segues into the question of whether there are indivisible magnitudes, or atoms, and Avicenna’s position concerning natural minima, which is itself intermingled with his theory of primary mixture.

I THE FORM OF MOTION

Natural philosophy in the ancient and medieval world frequently was a commentary and response to Aristotle’s *Physics*. Since the subject matter

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\(^2\) Aristotle, *Physics* ii 1, 192b21–3.
\(^3\) Cure: *Physics* 1.1 (3–4).
\(^4\) Strictly speaking, psychology and the life sciences are also part of physics.
of physics is the principles of motion or change in sensible bodies, the natural philosophers began with Aristotle’s definition of motion or change (Gk. *kinēsis*, Ar. *haraka*). Aristotle defined motion as the *entelekheia* of potential as such. One of the challenges for later commentators was to explain the enigmatic term *entelekheia* in Aristotle’s definition, a term that he apparently coined himself. The problem is that *entelekheia* might carry progressive aspect and so indicate a process that is currently going on – in which case it is best understood as actualizing or actualization – or the term might carry perfect aspect and so indicate the current completion of a process – in which case it indicates an actuality that has already been achieved.

Aristotle’s text is underdetermined and both readings have their own philosophical merits and demerits. For instance, if *entelekheia* indicates an ongoing process, Aristotle’s definition of motion obviously captures the idea of process or change, for motion would be the (progressive) actualizing of potential as such. Unfortunately, it does so at the cost of making Aristotle’s definition circular, since Aristotle intended the definition to capture the most basic idea of process or change, and yet the definition so understood assumes a process term in its *definiens*. Conversely, if *entelekheia* is understood as conveying perfect or completed aspect, Aristotle’s definition avoids the charge of circularity – for motion becomes the (completed) actuality of potential as such – however, it is no longer clear that the definition defines a process, for actuality indicates the completion of a process, not a process itself.

For natural philosophers working in Arabic, some of the difficulties that faced Aristotle’s earlier Greek commentators concerning *entelekheia* were mitigated by the fact that the translators had rendered the term with the Arabic word *kamāl* (perfection), which clearly indicates perfect aspect. Aristotle’s definition of motion or change for Arabic-speaking natural philosophers, then, was immediately understood as the (achieved) perfection of a potential qua potential. Thus the challenge was to show how Aristotle’s definition of motion actually describes a change or process.

To this end, Avicenna distinguishes two senses of motion: one, the form of motion as it exists in the retentive imagination (*khayāl*) or mind – what Avicenna frequently refers to as a ‘traversal’, – and, two, the form of motion as it exists extra-mentally – what he calls motion’s ‘first perfection’. The

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5 Aristotle, *Physics* iii 1, 203a10–11.
8 See Cure *Arabic Physics*: ii.1 (5–6) and Hasnawi 2001.
form of motion in the mind, that is, a traversal, exists as a continuous magnitude that encompasses an entire motion \textit{in toto}, for example, the motion that constitutes a walk between my house and the local pub. Motion – in this sense of a complete continuous magnitude – exists in the mind, notes Avicenna, when one holds in the imagination the beginning of the motion (the stepping out of my house) and the end of the motion (the entering into the pub) as well as what intervenes between the two points.

Extra-mental motion, that is, motion’s first perfection, however, observes Avicenna, cannot actually exist as a continuous magnitude occurring all at once as it does in the mind, or even in the way that the extra-mental spatial distance traversed does, as, for example, the way that the continuous sidewalk between my house and the pub does; for when I step into the pub, my stepping out of the house has long since ceased. As for the form of extra-mental motion, namely, that by which any moving thing is said to be in motion, Avicenna writes:

This is the form of motion existing in the moved thing – namely, an intermediacy between the posited starting and end points inasmuch as at any limiting point at which it is posited, it did not previously exist there nor will it exist there afterwards, unlike [its state at] the points of the two ultimate limits. So this intermediacy is the form of motion and is a single description that necessarily entails that the thing is being moved.\footnote{Cure. Physics: 11.1 (6).}

To clarify Avicenna’s point, let us return to the example of my stroll to the pub. There is, first, the distance that I traversed in which one can distinguish a starting point – my front door – an ending point – the pub’s front door – and the intervening distance through my neighborhood between these two points. Second, the walk itself has points corresponding with the traversed distance: a starting point when I walk out of my front door, an ending point when I enter the pub door and the sauntering along through my neighborhood.

The starting and ending points of the uninterrupted walk are preceded and succeeded respectively by periods of rest – I pause at the front door to kiss my wife goodbye and then pause upon entering the pub to greet my friends. As for the walk itself, that is, passing the intervening distance between front door and pub door, there are no pauses (assuming that I do not stop to chat with a neighbor or the like).\footnote{There is a sense for Avicenna that even if I were to stop and chat with my neighbor, there would still be but a single motion between my house and the pub; however, now ‘motion’ must be understood in the sense of traversal rather than first perfection. That is because motion in the sense of first...} Consequently, for any
moment that I care to take during the walk (for example, when I’m directly in front of my friend Dan’s front door) at any subsequent moment I’ll be a little bit further along on my walk (say, at the corner of Dan’s house). In other words, for any two moments during my walk, regardless of how short the period of time between them is, I’ll always be at some different place on the walk. It is never being at the same point for more than an instant that is for Avicenna the form of motion.\(^{11}\)

Avicenna’s analysis of motion should be as startling as it is simple. It is simple in that something is obviously in motion if it happens to be at some point for only an instant and at any other instant it is at some other point. For if some object were at some point for more than an instant, it would be at rest there for a period of time, regardless of how briefly, and so it would not be in motion during that time. Moreover, the solution shows how a perfection – namely, being at a point for only an instant – can explain a process, the very problem Avicenna inherited from his Greek predecessors.

The solution would have been startling, certainly from the Aristotelian point of view, in that it suggests that there can be motion at an instant, even though instants are not extended parts of time, but rather (for both Aristotle and Avicenna), instants are durationless divisions between extended periods of time. Avicenna’s suggestion would have been all that more upsetting to the orthodox Aristotelian, since Aristotle had a number of arguments against such a possibility.\(^{12}\) For instance, motion requires some change of state in the moving thing; for example, at the very beginning of my walk to the pub, I change from being at my front door (one state) to being on the porch (another state). More abstractly put: there is motion only if the moving thing has undergone a change in one of its states, \(x\), to a new state, \(y\), where \(y\) is not-\(x\); however, at any single instant something cannot be both \(x\) and not-\(x\) (that is, \(y\)) on pain of violating the law of non-contradiction. Thus, something’s being in motion at an instant seems to involve a contradiction.

Avicenna is not oblivious to this problem; however, he thinks that it arises from confusing motion taken as a traversal, that is, in the sense of motion that only ever exists in the mind, and motion as it exists extra-mentally.\(^{13}\) For recall that motion in the sense of traversal does include the two termini

\(^{11}\) For reasons of precision (see Cure: Physics: ii.2 [3]), Avicenna avoids defining motion in terms of an ‘instant.’ Still, intuitively this is the idea he wants to convey.

\(^{12}\) See Aristotle, for example, Physics vi 2, 232b20–4 and vi 4, 234a24–31.

\(^{13}\) Cure: Physics: ii.2 (7).
and those two termini are different, whereas motion understood as a first perfection involves only that single state of a moving thing at an instant. Moreover, Avicenna responds, his conception of motion at an instant does entail a change of state and so it is in agreement with the intuition that a change of state is a necessary condition for motion; for if the moving object is in some state for only an instant, then at any other instant there must be a new state, otherwise the object was not in the state for only an instant. Thus, while it is true that at any posited instant a moving thing cannot simultaneously be in both states \( x \) and not-\( x \), the moving thing nonetheless will necessarily be in both states \( x \) and not-\( x \), albeit at different instants. Aristotle’s concern in effect comes down to whether every motion must be in time, and to this Avicenna says, motion’s ‘being in time does not mean that it must map onto a period of time, although neither will it lack the occurrence of some traversal, where the traversal will map onto a period of time in which case neither will it lack some time’s coming to pass.’ In short, being in a particular state for only an instant necessarily entails, first, that a change of state occurs and, second, that any motion, understood as a traversal, takes a period of time.

II THE CONTINUUM, LIMITS AND INFINITE DIVISIBILITY

The foregoing shows that the three magnitudes – motion, the traversed distance and the time it takes for the motion – are all closely interrelated. Moreover, since motion and its necessary conditions, distance and time, are all magnitudes and so involve quantity (\( kamm \)), a complete understanding of motion requires an investigation into the nature of quantity. Perhaps the most pressing issue associated with this subject, at least by Avicenna’s lights, is whether quantity essentially has an atomic or continuous structure, a topic that takes up most of Book III of his Physics.

A quantity is atomic just in case a process of dividing it ultimately reaches some unit that itself cannot be divided further, in which case that unit is an atom, that is, something ‘indivisible.’ As I shall explain, however, Avicenna identifies two senses of divisibility: one that brings about an actual physical separation in the divided magnitude and another that merely involves a conceptual distinction being marked off in the magnitude. Consequently, while there is one sense in which Avicenna accepts the existence of (physical) atoms, there is another quite real sense that quantities must be continuous.

\[\text{Ibid.}\] \[\text{At least in the cases of local and positional motion.}\]
Before turning to this issue, however, let me sketch Avicenna’s somewhat novel conception of continua.

At *Physics* iii.2, Avicenna notes that the continuous (muttasil) is said in three ways. Two senses of continuous are understood relative to something else, while the third concerns the continuous considered in itself. One of the relative senses of the continuous is said in relation to a given motion such that when one thing undergoes motion, the other moves along with it. Thus, for example, if one considers a train, the engine, cars, and the caboose do not share common limits, and yet they move together so as to form a continuous moving thing.

The other relational sense that Avicenna considers is the continuous relative to a limit (tarafl), which involves a shared limit that is one and the same for the two divisions. This limit, Avicenna continues, might exist absolutely or accidentally. Two things are absolutely continuous relative to a limit, when the limit, while being one and the same for the two parts, marks off two really distinct parts. So, consider, for example, an angle. The angle’s vertex is a limit that marks off a real distinction between the two lines forming the angle, and yet the vertex is one and the same limit for both lines. Thus, the two lines at the angle’s vertex can be said to be continuous absolutely. As for accidental continuity relative to a limit, Avicenna writes:

It is like what happens when our estimative faculty imagines or we posit two parts for a line that is actually one, where we distinguish one [part] from the other by positing. In that way, a limit is distinguished for [the line] that is the same as the limit of the other division. In that case, both are said to be continuous with each other. Each one, however, exists individually only as long as there is the positing, and so, when the positing ceases, there is no longer this and that [part]; rather, there is the unified whole that actually has no division in it. Now, if what occurs through positing were to be something [really] existing in the thing itself and not by [merely] positing, then it would be possible for an actually infinite number of parts to exist within the body (as we shall explain), but this is absurd.

There is an accidental continuity, then, when a single unified continuous whole is distinguished into two (or more) parts through the psychological act of positing (fard). The positing, however, does not require really distinct parts to exist in the continuous magnitude. An example is pointing toward a uniform surface and saying, ‘this side,’ while pointing to the right, and ‘that side,’ while pointing to the left. The limit in this case, and Avicenna is adamant here, arises only as an accidental result of the positing, and ceases once the positing stops. It is simply false, chides Avicenna, to think that the

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16 *Cure: Physics* iii.2 (8–10).
17 Ibid. (8).
limit in this case really exists in the continuum, either as something actual, or even as something potential, if by ‘potential,’ one means something latent within the continuum waiting to be actualized.

As for the third sense in which continuous is said – namely, considered in itself – it is for Avicenna magnitude, which in itself has no part (lā jūz’),\(^{18}\) but in which one can posit limits in the accidental sense mentioned above. In other words, the continuous in itself is nothing other than a single, unified whole. As for defining the continuous in itself in terms of infinite divisibility, as Aristotle suggests,\(^{19}\) infinite divisibility, Avicenna insists, is at best a description (\(\text{rasm}\)) and does not constitute the essence (\(\text{māhiyya}\)) of the continuous.

Still, divisibility is closely associated with quantities, and at Physics iii.9 Avicenna identifies two senses of divisibility. The first, and what Avicenna considers the true sense of divisibility – call it physical divisibility – is the division that actually brings about a separation and discontinuity within the magnitude, whereas the second type of division – call it conceptual divisibility – is the accidental division associated with the continuous relative to a limit, namely, division through mere positing. Thus, Avicenna writes, ‘The first is true divisibility – namely, what changes the state of the thing – whereas the second is only a product of the estimative faculty (\(\text{mawḏūm}\)).’\(^{20}\) In the end, for Avicenna the potential infinite divisibility of continuous magnitudes simply refers to a potentially never-ending psychological process, not to some formal feature(s) potentially existing within the magnitude itself waiting to be actualized.\(^{21}\)

Avicenna’s insistence on the psychological nature of infinite divisibility and his earlier point that the essence of a continuum should not be understood in terms of potential divisions either actually or latently within the continuum, no doubt a response to certain mutakallimūn’s criticism of Aristotle’s conception of continua. Aristotle and his followers maintained that while the existence of an actual infinity is simply impossible, a potential infinity is not only possible, but also necessary, given the existence of continua.\(^{22}\) For the traditional Aristotelian, it was precisely because a continuum only implies potentially infinite divisibility that the continuum could exist, whereas if the continuum implied that there could be an actually infinite number of divisions, its existence would be impossible according to Aristotle’s own admission.

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\(^{18}\) See ibid. iii.3 (1).

\(^{19}\) See Aristotle, Physics vi 2, 232b24–5.

\(^{20}\) See Cure: Physics: iii.9 (3).

\(^{21}\) See ibid. iii.2 (8), iii.5 (3) and iii.9 (3–4).

\(^{22}\) Aristotle, Physics iii 6.
Against this defense of the continuous, certain *kalām* thinkers simply noted that in order for something to be truly potential there must be a corresponding power that can actualize that potential, whether it is the finite power of some created thing or the infinite power of God. To say that I have a potential tan, for example, just means that the sun has the power to act upon my melanocyte cells so as to darken them. Thus, the objection continues, if a continuum were to exist and something is continuous if and only if it has a potentially infinite number of divisions, then, to the extent that a continuum purportedly has a true potential for infinite divisibility, there must be some power that can actualize the potential infinity of divisions. If that potential is actualized, however, an actual infinity of divisions would be possible — just let the corresponding power actualize the potential — and yet according to the Aristotelians’ own position, an actual infinity is impossible. What gave rise to this impossibility is only the doctrine of a potential infinity and an analysis of true potential. Thus, the objection concludes, the purported infinite divisibility associated with a continuum simply is not something truly potential, and so must be rejected along with the accompanying notion of a continuum.

The seeming absurdity arises only when one conceives of infinite divisibility as making up the essence of a continuum. For Avicenna, however, the infinite divisibility of a continuum refers to a psychological process, which is in principle never-ending, of positing divisions within a continuous magnitude not to potential divisions existing within the continuum itself. Thus, contra the *mutakallimūn*, Avicenna can say that were this process ever completely actualized, then a process that in principle can go on without end must necessarily have had an end, a blatant contradiction now on the part of the detractors of the continuous. Avicenna has safeguarded the possibility of continua from the attacks of the atomists.

### III Atoms, the Continuity of Magnitudes and the Smallest Motion

Thus far I have only considered Avicenna’s defense of continua. Let me now look at his critique of atomism. Atoms are again purportedly indivisible magnitudes; however, recall that Avicenna identifies two kinds of division: physical and conceptual. He happily concedes that there might be bodies for which there are no physical means to divide them further. Thus, he recognizes that certain substances may as a physical fact be indivisible,

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24 *Cure, Physics*: III.3 (1).
4 Avicenna’s natural philosophy

and so in a literal sense are atoms. The philosophically dubious atoms by Avicenna’s lights are those that are not only physically indivisible, but also, and more importantly, conceptually indivisible. These are the minimal parts of Epicurus and the indivisible parts of the mutakallimîn (al-juz’ alladhî la yatajazzaz’u).\footnote{For Epicurus, see Furley 1967 and for the mutakallimîn, see Dhanani 1994: 90–140.} Despite the fact that these atoms are purportedly conceptually indivisible, their defenders nonetheless thought that they occupy space (mutahayîz). They held this opinion primarily because of a number of puzzles associated with infinity and the infinite divisibility of continua, such as the one mentioned in the preceding section, as well as Zeno-like paradoxes.

Suffice it to say that according to Avicenna, given a proper understanding of the nature of the continuous, the various arguments used to discredit its existence will be seen to be sophistries. The main task in front of Avicenna, then, is to test the cogency of the doctrine that there can be a magnitude that is not only physically indivisible, but also, and more importantly, conceptually indivisible. While Avicenna has a number of arguments against the conceptual indivisibility of atoms, I consider only one here.\footnote{Cure: Physics: III.4 (3) and Cure: Psychology: v.2, 211; see also Lettinck 1999.}

The argument is taken from the possibility of composition or aggregation (\(\textit{ta}`\textit{lif}^{\prime}\)).\footnote{See Dhanani 1994: 152–9 and Sabra 2006: 222–3, 247 and 264.} Ironically, the atomists had considered the fact of composition evidence for atomism. Avicenna clearly wants to turn the tables on them, complaining that in fact it is they who cannot explain the sensible bodies that we experience around us in terms of the composition of conceptually indivisible atoms. He argues thus: aggregation occurs when the parts composing a body are in some way joined together, where two things can be together by succession, interpenetration, contiguity or continuity. The mere succession of the parts, namely, that there are gaps between the parts, complains Avicenna, would not produce the sensible bodies that we see around us. If they interpenetrate, then one can aggregate as many atoms as one likes and the body will never be larger than a single imperceptible atom, and so, again, aggregation would not produce the sensible bodies that we experience.\footnote{While here Avicenna leaves out the possibility of partial overlap between two atoms, we can simply note that the overlapping part would be smaller than the supposed atom, which in principle is the purportedly smallest magnitude. Avicenna implies this line of response at Cure: Physics: III.4 (5).}

As for contiguity and continuity, they can be treated together, since the same argument holds for both of them. Again there is continuity when the
limit of two purported parts is in fact one and the same for both, as, for example, the top part of this page is continuous with its bottom part. In contrast, in the case of contiguity the limits of the parts are distinct. So, for instance, each page of this book has its own limits, for example, the page’s surface, and those limits can be in immediate contact with the limits of other pages so as to make up the thickness of the book.

Avicenna now has us imagine three atoms, \( x \), \( y \) and \( z \), joined together either by continuity or contiguity so as to form a line three atoms long like this:

\[
\begin{array}{c}
| x | y | z |
\end{array}
\]

Next, Avicenna observes that if \( y \) separates \( x \) from \( z \) so that \( x \) and \( z \) are not in contact with each other, then \( y \) must have one limit that is in contact with \( x \) and another limit that is in contact with \( z \), in which case \( y \) is at least conceptually divisible into what is contacting \( x \) and what is contacting \( z \), and these are not the same, but it was assumed to be conceptually indivisible and so there is a contradiction. If there are not two distinct limits separating \( x \) from \( z \), then \( x \) and \( z \) must interpenetrate \( y \), and yet interpenetration, as Avicenna has already argued, cannot account for the sensible bodies that make up our world.

Having shown to his own satisfaction that spatial magnitudes cannot have an atomic structure, at least in the sense of conceptually indivisible units, and having provided a defense of continua against the attacks of the atomists, Avicenna turns in book III.6 of the *Physics* to the interrelation among the magnitudes, distance, motion and time. The issues there are, first, to show that since the traversed spatial magnitude is continuous, so the motion and time must likewise be continuous, and, second, to address the question of whether there can be a first part of motion, which comes down to whether there is some smallest quantity of motion.

As for whether all magnitudes are continuous, that is, spatial, kinematic and temporal quantities, Avicenna following Aristotle\(^{29}\) maintains that if one magnitude is continuous, then they all must be so. One of his arguments for this conclusion assumes his earlier point that motion entails a traversal, and that a traversal involves a difference in place over a difference in time. He then appeals to his earlier conclusion that distance is continuous. Hence, assume that time, motion or both have an atomic structure. In the case of time, there would need to be some conceptually smallest unit of time, \( t \). Now during \( t \) some object, moving at a uniform velocity, can traverse a small distance, \( d \), of a given spatial magnitude. Since Avicenna

\(^{29}\) Aristotle, *Physics* vi 1, 231b18–232a22 and *Cure: Physics*: III.6 (1).
has shown that spatial magnitudes are continuous, the object in traversing $d$ during time $t$ can be posited as having passed through half of $d$. Assuming uniform velocity, however, the time that it takes to traverse half of $d$ must be less than $t$, namely, the time it takes to traverse the whole of $d$, but $t$ was posited as the smallest unit of time. This is a contradiction. Similarly, assume that there is some conceptually indivisible amount of motion, $m$, corresponding with the traversal of some distance, $d$. Since $d$ is continuous, when a motion covers only half of $d$, there would be half of $m$, but again $m$ was assumed to be conceptually indivisible, and so we have an absurdity.

Having argued that distance, motion and time are all continuous in the sense that they are not composed of conceptually indivisible units, Avicenna next turns to the question of whether motion might not have some first part. The question, in effect, is whether there might not be some physically or naturally smallest motion as opposed to merely a conceptually smallest motion. This issue arises because Avicenna, following Aristotle and his Greek commentators, admits that there are minima naturalia or natural minima. I return to this issue in the next section, but for now, minima naturalia are the natural limits of substances beyond which the substance cannot be physically divided. Given minima naturalia, there may be some physically, as opposed to conceptually, smallest spatial magnitudes. Consequently, since motion maps onto the traversal of some spatial magnitude during a period of time, if there are naturally minimum spatial magnitudes, so, one might reason, there must also be naturally minimum amounts of motion that map onto these naturally minimum amounts of spatial magnitude, where the initial traversal of the first minimum quantity of distance would correspond with the first part of a motion.

In iii.6, Avicenna in fact denies that there is some naturally smallest amount of motion; however, he also notes that a fully adequate response requires clarifying whether minima naturalia do indeed exist, and if they do, then understanding the way that they exist. Avicenna takes up these topics at Physics iii.12 to which I now turn.

**IV NATURAL MINIMA, ELEMENTAL CHANGE, AND THE SMALLEST MOTION AGAIN**

Aristotle introduced the idea of natural minima at Physics I 4, where he criticized Anaxagoras’ principle that “everything is in everything.” Aristotle’s thesis is that the parts that constitute natural kinds – parts such as flesh,
blood, bone, fruits and the like – have a definite limit with respect to their minimum and maximum size. Aristotle’s argument for this thesis – and I limit myself merely to the idea of minima – is straightforward enough. He took it as impossible that cats, for example, be indefinitely small. Thus, any premise that leads to the possibility of indefinitely small cats must be false. Now, if Anaxagoras is correct and everything is in everything such that it is possible, at least in principle, to extract from a given substance indefinitely small cat flesh, cat blood, cat tissue, etc., then these indefinitely small cat parts should, again in principle, be able to constitute an indefinitely small cat. Since the assumption is that indefinitely small cats are impossible, the premise that gave rise to the absurdity, namely, that there are indefinitely small traces of everything in everything, must be false.

By the time of John Philoponus (c. 490–570 CE), if not earlier, the focus of the discussion had shifted from Aristotle’s talk of natural substances and their parts to the form (eidos) of those substances and their parts. Thus, in Philoponus, Aristotle’s assertion that natural kinds cannot come in just any size is replaced with the new premise that there is a definite quantitative range required for the preservation of the form above or below which the form cannot be sustained. It is Philoponus’ presentation of the thesis that Avicenna takes up in Book III.12.

There Avicenna treats both the issue of whether there are minima naturalia and whether there is a naturally smallest motion. He begins by identifying the two kinds of species forms that are the primary focus of his discussion: the forms of the elements posited in ancient philosophy – namely, earth, water, air and fire – and the forms resulting from mixing those elements, mixtures like blood, bone and flesh, which will become important in the next section.

In order to appreciate Avicenna’s own, and indeed, unique proof for the existence of minima naturalia, however, we must first consider the theory of the elements and elemental change, which it presupposes. According to ancient and medieval elemental theory there are associated with each of the traditional four elements two primary qualities, one each from two pairs. These pairs include the primary qualities hot/cold and wet/dry. The element earth is associated with the qualities cold–dry, water with cold–wet, air with hot–wet and fire with hot–dry. For Avicenna, these primary qualities are related to the elements’ material cause. When these primary qualities are altered through a process of physical causation – that is, there is some motion or change in the element such as an increase or decrease in

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the degree of hotness, coldness, dryness or wetness – the alteration prepares or predisposes the underlying matter so that it is suited to receive a new substantial form. Immediately thereupon, the Giver of Forms – a concept virtually unique to Avicenna’s philosophical system – emanates upon the matter the new substantial form. So, for example, when water, which again is associated with a cold–wet combination, is sufficiently heated, the underlying qualitative disposition is no longer suited to the substantial form of water. Consequently, at some point in the heating process the matter receives from the Giver of Forms a new substantial form that is compatible with the matter’s new underlying qualitative disposition, namely, the matter receives the form of air. And, indeed, the steam produced from vigorously heating water does have a definite air-like quality. An account similar to the one just limned also applies to more complex cases of mixtures, like blood, flesh and seeds, which are involved in animal and plant generation.

Turning now to Avicenna’s proof for the existence of minima naturalia, he begins with the reminder that division is spoken of in two ways: physical division – which brings about an actual division, severance or fragmentation of the magnitude – and conceptual division – which involves a mere mental division or positing that leaves the magnitude intact. Concerning conceptual division, Avicenna again assures us that magnitudes have no smallest conceptual part, whereas for physical divisibility he contends that there are natural minima. He argues thus:

Whenever bodies become smaller, they are increasingly disposed to being more quickly acted upon by other [bodies]… So, apparently, when the body exceeds its degree of smallness and separates off from its collective kind, it would be impossible for it to retain its form at that time. Instead, as a result of the bodies surrounding it, it undergoes alteration into them and becomes continuous with them. As such it does not maintain its form until mixed.

“Collective kind” here refers to the elemental spheres of earth, water, air, and fire.

Bearing in mind the account of the elements and elemental change outlined earlier, Avicenna’s argument runs thus: The smaller the quantity a given substance is, observes Avicenna, the more apt it is to be acted upon by surrounding bodies. So, for example, all things being equal, it takes longer for a body of water to cool down a ton of molten iron than for that


36 Cure: Physics: iii.12 (8).

37 Avicenna discusses this point at length in Avicenna 1969: 1.4.
same body of water to cool down an ounce of molten iron, and similarly, a blast furnace is able to heat the same ounce more quickly than the ton. So again for Avicenna, the smaller the physical divisions of a given substance are the more disposed that reduced quantity of the substance becomes to the primary qualities of the surrounding bodies. Below a certain limit, maintains Avicenna, the ratio between the strength of the primary qualities of the surrounding bodies and those of the body being divided is such that the qualities of the surrounding bodies overcome those of the divided body. At that moment, the divided substance’s underlying qualitative disposition becomes altered so as no longer to be suitable to its elemental form, and the matter receives a new substantial form. So, for example, imagine a cup of water that is surrounded by hot, dry summer air. Now imagine half that amount of water, and then keep taking halves. At some point the amount of water is so small that the water simply evaporates as it were, instantaneously, or, as Avicenna would have it, the form of water in that minuscule physical quantity is immediately replaced with the form of air.

In short, for Avicenna the elements, as well as more complex mixtures, have natural minima beyond which they cannot be divided and still be capable of retaining their species form, for the primary qualities of the surrounding bodies so alter that body that it is no longer suitable for sustaining its initial form. There must, then, concludes Avicenna, be minima naturalia.

It should be stressed, however, that Avicenna does not think that these natural minimum quantities exist within either the elemental collective kind or more complex mixtures as actual and independent entities that are, as it were, juxtaposed to one another so as to form a collection of minima naturalia. Here Avicenna insists that if one considers some collection of, for example, earthly minima naturalia, the form of earth must spread uniformly (fāšīa) throughout the collection so that in fact the resultant is not a collection of units but a continuous whole without parts, albeit a continuous whole from which the units can be extracted again through a process of physical division. The same point holds, Avicenna continues, for mixtures of elements. Once the mixture has settled (istiqrār), the form of the mixture spreads uniformly throughout it, albeit again one can still extract naturally minimal quantities of the mixture through a process of physical division. Additionally, if one of those naturally minimal quantities of the mixture is divided further, one can extract from it the elements from which the mixture was initially composed.

As for whether these naturally minimum spatial quantities entail that there is some naturally shortest motion – the question that ended the previous section – Avicenna maintains that they do not. His argument begins by recalling that even natural minima are continuous. Moreover, he notes that during the course of any natural motion, the moving object could, at any instant, encounter some obstacle that physically arrests its motion. So, assume some naturally minimum quantity of distance, \( d \), which is traversed in some time \( t \), and that the traversal of \( d \) in \( t \) is the purportedly smallest possible motion. Avicenna next observes that in crossing \( d \) the moving object can, as noted, encounter some obstacle that arrests its motion at \( t' \), where \( t' \) is less than \( t \) – for again, time is continuous and so there is no absolutely indivisible unit of time. In that case, however, a distance less than \( d \) is traversed during \( t' \) and so there is a motion less than the purportedly smallest possible natural motion, which is absurd.

V PRIMARY MIXTURES AND THE NATURE OF THE ELEMENTS

Avicenna’s proof for the existence of minima naturalia, recall, relies heavily upon a theory of the elements and their association with the qualities hot, cold, wet, and dry. Moreover, Avicenna frequently reiterates that his account of minima naturalia applies not merely to the elements, but also to the mixtures of elements, such as blood, flesh, bone, seeds and the like. In fact, Avicenna’s theory of naturally minimum qualities is a crucial part of his theory of primary mixtures.

Like so many other issues in ancient and medieval physics, it was Aristotle who set the parameters for the topic. He presents his most thorough account of what is required for a true mixture of the elements in On generation and corruption i 10. There he lists at least four desiderata for an adequate theory of mixture (mixis):

1. **Potentiality:** The elements (or more generally, what are mixed (mixēthenta)) must no longer exist actually in the mixture, but do remain in it potentially.
2. ** Recoverability:** The elements can be extracted from the mixture.
3. **Uniformity:** The mixture cannot be a mere collection of distinct units such as a combination of salt and pepper, but must form a continuous whole, such that any portion of the mixture is the same as the whole.

Ibid. (10). For a discussion of Avicenna’s theory of primary mixture, see Stone 2008.

See also Aristotle, History of Animals i 1, 487a2–10; III 2, 511b1–10; Parts of Animals i 2, 640b18–29, II 2, 644b10–30; and Generation of Animals ii 6, 743a1–36.

Here I follow the labels suggested by Wood and Weisberg 2004: 683.
(4) Equilibrium: The primary qualities of what are mixed – for example, the hot, cold, wet or dry of the elements – must balance each other out or become settled such that if, for example, two elements were mixed, neither becomes the other, and yet the mixture has properties common to both.

Devising an account of mixture that does justice to all of these features turned out to be no mean feat, and gave rise to a number of competing accounts of mixture and interpretations of Aristotle.43

Perhaps the most pressing question concerned how the primary qualities, hot, cold, wet and dry, are related to the elements, since understanding the association between these qualities and the elements gives one a better purchase on how the elements undergo mixture. In general, the attitude of Aristotle’s commentators up to Avicenna was to view the primary qualities not just as any other accidental qualities, such as being soft or hard, but as ‘substantial qualities.’44 In other words, these qualities taken at their extremes were viewed as constitutive of the elements themselves. As such, the qualities functioned as the essential differentia that inform matter such that the matter becomes whatever element it happens to be. For example, if matter is informed by the extreme degree of hot and the extreme degree of dry, there is fire. When the elements are mixed, however, there is no longer the extreme degree of a given relevant substantial quality, and so a new substance comes to be. So according to Galen, for example, when all four elements are mixed such that their powers perfectly balance one another, there is the mixture that constitutes human flesh (Galen specifically mentions the flesh of the human hand).45 Furthermore, inasmuch as the mixture can be qualitatively altered, for example, heated and dried to the extreme degree, the elements, understood in terms of the substantial qualities, can be recovered, and so exist in the mixture potentially. While the above is more a composite of different accounts produced in the ancient Greek world, and a sketchy one at that, it hopefully provides some of the more salient features of the theory of mixture that Avicenna inherited.

In al-Kawn wa-l-fasād, Avicenna’s work most closely resembling Aristotle’s On generation and corruption, Avicenna attacks the aforementioned conception of the nature of the elements and mixtures.46 He has two criticisms, one specific to the idea that the elements are identical with the extreme degrees of the primary qualities, and a more general one against

44 Stone (ibid.: 104) mentions Porphyry as the originator of this strategy.
the view that the qualities can be essentially constitutive of any substance, whether an element or a mixture.

Concerning the specific argument, Avicenna observes that there is some latitude with respect to the given qualities associated with the various elements, and that this latitude rules out a simple identification of the elemental form with those qualities.47 For example, heat some water to the extreme degree such that it is boiling. Were water identical with being cold and wet, and yet at the boiling stage no cold remained in the water, then boiling water could not be water, which Avicenna points out is a patent absurdity. Similarly, when water is frozen solid, no fluidity remains – where fluidity for the ancient and medieval natural philosopher is a necessary concomitant of wetness. In that case, however, frozen water could not be water – for there is no longer any wetness in it – which again Avicenna observes, is patently absurd.

More generally, Avicenna complains that the earlier commentators simply failed to distinguish between species forms and accidental forms, such as qualities. For Avicenna and the entire Aristotelian tradition, accidents are essentially or ontologically dependent upon the actual existence of the substances in which they inhere, while the actual existence of a substance is essentially or ontologically dependent upon its form, which actualizes the matter. For Avicenna, it is simply ad hoc to say that hot, cold, wet and dry are ‘special substantial qualities’ different from other accidents. So, Avicenna’s complaint continues, if the form of the elements is identified with pairs of the qualities hot/cold and wet/dry, and again qualities are accidents, the earlier theory of the nature of the elements has committed itself to self- or circular causation: qualities exist because the substances in which they inhere exist, and substances exist because their substantial forms exist, and the substantial forms of the elements (at least according to the present theory) exist because the qualities that constitute them exist, and one finds oneself at the beginning, since qualities are again accidents.

For Avicenna, the forms of the elements cannot simply be identified with any of the sensible properties of the elements; rather, the elemental forms are the principles of those properties, whether the property is, for example, the hot–dry qualities of fire or fire’s natural tendency upward.48 Moreover, since the existence of substantial forms cannot be explained in terms of any sensible or natural properties (nor can elemental change be explained in terms of any physical change with respect to those properties), the existence of substantial forms must be accounted for by some agent outside

47 Ibid. 130. 48 Ibid. 129 and 131.
the physical order acting through a process of metaphysical causation or emanation. Avicenna dubs this agent the Giver of Forms (and sometimes Giver of Powers). As for what the form or essence of a given element itself is, Avicenna, at least in his physical writings, does not even hazard a guess, but then neither should he, for, according to him, the physicist must simply posit that there are forms and leave the fuller investigation of them to the metaphysician.

Given Avicenna’s rejection of the traditional account of the nature of the elements, he is now in a position to offer a new theory of mixtures. He begins by reinterpreting Aristotle’s potentiality criterion. Again the criterion (traditionally) is that in a mixture the elements, or more exactly what is mixed, remain potentially. ‘Potentially’ here translates the Greek dunamei, which is the dative of dunamis, Aristotle’s term for power and potentiality. In Avicenna’s version of On generation and corruption the Greek was translated bi-l-quwwa, which can mean both ‘potentially’ and ‘in power,’ and in fact Avicenna takes Aristotle’s text to read that it is the power of the elements that remains in the mixture.

Moreover, Avicenna identifies the power that is preserved in the mixture not with the qualities or any other properties that are brought into existence by the form, but with the species forms of the mixed elements themselves. The species forms must be preserved in the mixture, continues Avicenna, since if the elemental forms were replaced with a new substantial form such that the elemental forms themselves no longer existed as actual within the mixture – for example, the form of flesh replaced the forms of the elements making up the flesh – then the elements have undergone corruption. That is because corruption involves a substance’s underlying matter losing its initial species form and in turn receiving a new species form. Since mixture is not an instance of corruption, and Aristotle is adamant on this point, there is at least some merit in Avicenna’s reading here. In short, for Avicenna, within a mixture there must exist not only the new substantial form of the mixture, but also the elemental substantial forms. Avicenna’s theory of mixtures, thus, can accommodate Aristotle’s potentiality criterion, at least as Avicenna understands that criterion.

49 See n. 35 above for references.
50 See, for example, Cure: Physics: i.2 (5) and (11). For his metaphysical account of form, and the closely related notion of quiddity, see Cure: Metaphysics: v.1, v.1.1, and v.1.4.
51 Avicenna seems to have had two translations of Aristotle’s text, one which reads al-muntazijat thabitat bi-l-quwwa “the ingredients of the mixture persist in power/potentially” and another muntazijat quwwatu thabitat “the power of the ingredients of the mixture persists”; Avicenna 1969: 6, 127.
52 Ibid. 53 Ibid. 124 and Cure: Physics: i.2 (19).
54 Aristotle, On Generation and corruption i.10, 327a34–b10.
Furthermore, given that Avicenna understands the potentiality criterion for mixtures to mean that the elemental forms must remain as actual within the mixture, he can easily account for the recoverability criterion, for the elements are actually in the mixture so as to be recovered. Also, given that the elemental forms are the principles of the primary qualities and that Avicenna allows for a certain latitude in those qualities that is consonant with the existence of a given elemental form, the qualities in a mixture can balance one another out so as to reach a settled state. Consequently, the equilibrium criterion is met.

Only the uniformity criterion is left, and unfortunately it was just on this point that most subsequent natural philosophers, certainly in the Latin West, would find Avicenna’s account wanting. Again the criterion states that the mixture cannot be a mere collection of distinct units, but must form a continuous whole such that any portion of the mixture, regardless of how small, is the same as the whole. Anneliese Maier, who canvassed a number of the Church Schoolmen and their criticisms of Avicenna’s theory, relates that the primary concern among Avicenna’s Latin predecessors is that the various elemental forms within the mixture must be informing different bits of matter so that earthy, watery, airy and firey parts are merely being juxtaposed to one another. In this case, however, there would not be a true mixture but a collection of parts, like a pile of sand. Thus Avicenna’s account, at least according to the Latin Schoolmen, cannot explain the uniformity of a mixture, namely, that no matter how small a part one takes, that part must have the same species form as the whole.35

While, admittedly, Avicenna does not explicitly address this problem when discussing mixtures, in some sense he does not need to, since his answer is already in his theory of *minima naturalia*, which ideally anyone reading his account of mixture would have read first. Unfortunately, the Latin translators of Avicenna’s *Physics* did not translate the last part of Book III where Avicenna discusses *minima naturalia*, and so they were unaware of a crucial piece in his overall theory of mixture.

Recall that for Avicenna, when there are quantities of either the elements or mixtures that are equal to or greater than the naturally minimum quantity required for that substance, the form spreads uniformly throughout the substance such that the substance is a continuous whole. Inasmuch as there is a continuous whole, one can conceptually divide the substance as small as one likes, even below the naturally minimum quantity, and the substance remains uniform throughout. Thus, the uniformity criterion is

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in fact safeguarded. It is only when the substance is *physically* divided, such that the parts are literally separated from one another, that the mixture is destroyed and the ingredients of the mixture emerge once again. Thus Avicenna’s theory of *minima naturalia* with its reliance on two types of divisibility not only lets him account for the uniformity of mixture, but also provides him with the mechanism for explaining recoverability.

Underdeveloped and even problematic elements in the natural philosophy of Aristotle, as well as aggressive attacks on Aristotelian physics by Muslim *mutakallimūn*, led Avicenna not only to push the innovations made by Aristotle’s later Greek and Arabic commentators in new ways, but also at times to make fairly radical breaks with the Aristotelian tradition. Such instances include, but are certainly not limited to, his conception of motion at an instant, the psychological nature of infinite divisibility and its relation to continua, and even his justification for distinguishing between physical and metaphysical causation, which arose in partial response to the physical problem of mixture. Moreover, this same physical problem gave rise to the Avicennian notion of a Giver of Forms. In short, while Avicenna’s physics might have begun in the Aristotelian tradition, it ends in an Avicennian tradition – a unique mixture of Greek *philosophia*, Islamic *kalām*, and a generous helping of plain and simple Avicenna.
Avicenna emerged as the towering figure not only in medieval Arabic philosophy, but also in medicine. Just as one might divide philosophy in Arabic into an age before and after Avicenna, so one could periodise medical history into the time before and after the *Canon of Medicine*. For Avicenna’s *Canon* exerted such an influence that it dominated medical teaching, and medical discourse more generally, not only in the Arabic-speaking world, but also the Latin West and the Persian- and Urdu-speaking East. On the face of it, this seems surprising, since Avicenna viewed medicine as a derivative and vocational branch of knowledge that can be studied easily. And yet, he wrote not just the massive *Canon of Medicine* (*Al-Qānūn fī l-ṭibb*) in five books, but also the highly influential *Poem of Medicine*, as well as at least a dozen other, shorter works on various medical topics.

Long before Avicenna, different authors had insisted on the close connection between medicine and philosophy, not least Galen of Pergamum (d. c.216), who wrote a treatise with the programmatic title, *That the Best Physician is Also a Philosopher*. Given the focus of the present volume, I decided to explore three subjects in particular in which medicine and philosophy intersect. First, I shall consider Avicenna’s attitude towards medicine. Did he really disdain this topic? Or should one see some of his comments in his autobiography as rhetorical hyperbole? In the first section, I will also provide a brief overview of what medical works Avicenna composed. Then I shall turn to the question of medical theory and practice. How does Avicenna approach the problem of medical epistemology? What role does experience play for him in the gathering of medical knowledge, and in determining how drugs work? In this context, I shall also consider the conundrum of whether Avicenna actually did practice medicine, or whether his contribution to the subject is largely theoretical. And finally, I shall investigate how Avicenna’s views about the functions and workings of the brain relate to his ideas on psychology that he develops in his philosophical works.
The principal source for our knowledge about Avicenna’s life is the biographical remarks preserved in a thirteenth-century source, Ibn Abī Usaybi’a’s *Sources of Information on the Classes of Physicians* (*Uyūn al-Anbā’ fī ṭabaqāt al-ṭibbā’*). These remarks are divided into two parts: the first is narrated in Avicenna’s own voice in the first person (Gohlman 1974: 16–43); and the second is told in the third person by Avicenna’s pupil al-Jūzjānī (ibid.: 45–89). In the first part, Avicenna boasted of having been able to master medicine at a young age:

I endeavoured to obtain (*tahṣil*) books on physics (*tablīyyāt*) and metaphysics (*ilāhiyyāt*) – both texts and commentaries (*min al-fusūs wa-l-shurūḥ*). Various topics of knowledge (*abwāb al-ilm*) began to open in front of me. Then I desired to study the science of medicine (*ʿilm al-tibb*), and read books devoted to this topic. The science of medicine is not a difficult one. Therefore I became outstanding in it after a very short period of time, so that excellent physicians began to study the science of medicine under me.

Leaving aside the question of whether or not these are Avicenna’s own words, it is clear that this passage must contain an element of exaggeration. For instance, we have independent evidence for Avicenna having studied medicine with a teacher, rather than having taught the subject to “excellent physicians (*fudālā’ al-ṭibbā’*)”.

For the word *tahṣil* does not mean “studying” here, and the expression “physics and metaphysics” is practically a *schēma kata merismon*, in the sense that Avicenna first obtained books on all the higher topics; then he studied them, beginning with medicine.

Be that as it may, this characterisation of medicine as not belonging to the “difficult sciences (*al-ʿulūm al-ṣaʿbā’*)” raises the question of...
where medicine belongs in the hierarchy of knowledge. Avicenna’s autobiographical remarks are organised according to an Aristotelian model. He began with studying the basics of grammar and rhetoric (through the topics of the Qur’an and literature (adaḥ), and logic (jurisprudence (fiqh); Porphyry’s Introduction (Eisagōgē)), and then turned to arithmetics (partly with a greengrocer), geometry (Euclid), and astronomy (Ptolemy). Thus equipped, Avicenna started to collect works on higher subjects. But he began with the easiest of the higher topics, namely, medicine. Only afterwards did he turn to philosophy proper and ended his studies in the most sublime subject, metaphysics.7

In his autobiography, Avicenna seems to classify medicine under the heading of physics (tabi‘iyya). This chimes with what Avicenna says about medicine in his Epistle on the Division of Sciences (Risāla fi Aqsām al-‘ulūm). There he classed medicine as a derivative natural science (al-ḥikma al-tabi‘iya al-far‘iyya).8 Other derivative natural sciences include astrology (ahkām al-nujūm), dream interpretation, and the production of talismans and amulets. It is, however, noteworthy that Avicenna listed medicine as the first of the derivative sciences. In the philosophical encyclopedia called The Easterners (al-Mashriqiyyūn), which he wrote later in life, he further downgraded medicine, ranging it with astrology and agriculture as a corollary science.9

This begs the question of how Avicenna conceived of medicine within his medical (as opposed to his philosophical) writings. Here the introductory chapter of his Canon of Medicine is quite revealing.10 In it, Avicenna argues that although medicine (al-tibb) encompasses both theory and practice, he is more interested in the science (‘ilm) of medicine which consists of a theoretical (nazarī, ‘ilmī) and a practical (‘amalī) part; however, even the practical part deals with the theory of practice, or, as Avicenna puts it, medicine “is a theoretical science and a practical science, even if it is never practiced (ilmun ‘ilmīyyun wa-ilmun ‘amaliyyun wa-ibdā lam yu’mal qaṭṭu).”11 To be sure, there is also the actual practice of medicine (mubāshāra), but this is not a topic with which Avicenna concerns himself in the Canon of Medicine. To put it differently, Avicenna recoils from the prospect of merely engaging in practical matters. We shall return to this point when discussing whether or not he actually practiced medicine.

7 See Chapters 2 and 1 by Gutas and Reisman, respectively, in the present volume.
10 See also, ibid. 149–52. 11 Avicenna 1593: 1.17–18; 1877: vol. 1, 3, lines 5–4 from the bottom.
Avicenna continues in the second part of the chapter by explaining what falls within the remit of medicine, and what belongs rather to other sciences. He states:\textsuperscript{12}

Medicine considers the elements (\textit{al-arkān}); mixtures; humours; simple and compound parts [of the body]; pneumas and their natural, vital and psychic faculties; actions; states of the body such as sickness, health and the middle state; their causes such as food, drink, airs, waters, places, dwellings, evacuation and constipation, professions, habits, bodily and psychic movements, rest; age; gender; strange things that occur to the body; regimen through food, drink, choice of air, choice of movement and rest; treatment; drugs; and surgery, [all] to preserve health and to cure each disease.

Physicians will therefore obviously deal with elements and mixtures (they appear here at the head of the list). Yet certain questions about elements and mixtures clearly fall outside the remit of medicine. Physicians do not enquire “whether elements exist and how many they are; whether mixtures exist, what they are, and how many they are; and likewise whether humours exist, what they are and how many they are,” and so on.\textsuperscript{13} Put differently, the fundamental questions of how the universe is structured belong to a higher science, that of physics, rather than medicine.

Even if medicine occupies a fairly low rung of the ladder of knowledge, so to speak, Avicenna devoted significant energy to composing works on this topic. In them he certainly dealt with both the theoretical and the practical aspects of medicine. And, importantly, he clearly had didactic ends in mind. His output in this area is considerable, even if it is not as vast as his philosophical œuvre.\textsuperscript{14} His most important and influential work was the \textit{Canon of Medicine}, from which we have already quoted.\textsuperscript{15} In composing it, he drew on two trends already popular in the late antique medical lecture halls: to summarise knowledge; and to organise it by dividing and sub-dividing.\textsuperscript{16} The resulting encyclopedia is thus divided into five books (\textit{kitābs}), and then further sub-divided into \textit{fāns}, \textit{jumlas}, \textit{fāsils} and \textit{maqālas}. The first book on the “generalities (\textit{kulliyāt})” deals with the basic concepts of medicine, including anatomy. Books two and five are devoted to simple and compound drugs, respectively, whereas books three and four deal with

\textsuperscript{12} Avicenna 1593: 1, line 5 from the bottom–last line; 1877: vol. 1, 4, line 4 from the bottom–5.3.

\textsuperscript{13} Avicenna 1593: 2.7–8; 1877: vol. 1, 5.11–13.

\textsuperscript{14} See Ullmann, 1970: 152–6, 191, 195, 200 for a list of his extant works. It is amazing that this appears to be the most recent survey of Avicenna’s medical writing. See also, Musallam 1987 in \textit{Encyclopaedia Iranica} at www.iranicaonline.org/articles/avicenna-x; printed edition at Yarshater 1987, vol. 1, 94–9.

\textsuperscript{15} Avicenna 1593; 1877; 1981–96; 1993–. 16 Pormann 2010.
diseases located in one part of the body (e.g. a headache) and other diseases (e.g. fevers, skin conditions).

Avicenna’s other works can be divided into treatises on individual topics and didactic poems. Among his extant works, the former include a Treatise on the Principles of Cardiac Drugs (Maqāla fī Abkām al-adwiya al-qalbiyya); an Epistle on Natural Powers (Risāla fī l-quwwa l-ṭabī‘iyya); an Epistle on Phlebotomy (Risāla fī l-Faṣd); an Epistle on Urine (Risāla fī l-Bawl); an Epistle on Intermittent Fever (Fī Shatr al-ghibb); an Epistle on Colics (Risāla fī l-Qawlanj); an Epistle on the Number of Intestines (Risāla fī l-‘adad al-am‘ā); a Book on Protecting the Human Body from General Damage (Kitāb Da‘ al-maḍārr al-kulliyya ‘an al-abdān al-insāniyya); an Epistle on Sexual Intercourse (Risāla fī l-Bāh); a Book on Oxymel (Kitāb fī l-Sikanjubīn); and a Treatise on Endives (Maqāla fī l-Hindibā). His didactic poems deal with medicine in general (al-Urjūza fī l-Ṭibb), as well as specific topics such as Sexual Intercourse (al-Urjūza fī l-Bāh) and dietetics according to the seasons (al-Urjūza Tadbīr al-fuḥūl fī l-uṣūl lit. “poem on the regimen of great men during the seasons”). He also composed a shorter Subtle Poem on the Twenty-Five Deadly Occurrences of Hippocrates (Urjūza latīfa fī l-qadāyā Abuqrāṣ al-khams wa-l-‘izrīn), which lists twenty-five symptoms that lead to the death of the patient; and a Poem on the Preservation of Health (Urjūza fī ḥīfẓ al-ṣīḥba).

The vast majority of the texts mentioned above have not been edited critically. Even for the Canon of Medicine we only have a modern edition that is based on a few manuscripts and has been extremely badly distributed, so that it is available in very few university libraries. The Canon has only recently been translated into English on the basis of the Arabic text. And apart from the Canon and the Poem on Medicine (al-Urjūza fī l-Ṭibb), few of the texts mentioned above have appeared in printed editions. This highlights the neglect from which Avicenna’s medical work has suffered; this is extremely surprising, given that he was arguably the most influential physician after Galen. For this reason, these remarks can only be preliminary. This said, it is still interesting to explore how Avicenna approached the intricate problems of medical epistemology and cognitive functions.

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17 Brockelmann 1937–49: vol. 1, 823–7; suppl. vol. 1, 596–9; Anawati, in Avicenna 1950: 170–220, lists 43 medical treatises that are extant (items 111–53 in his survey of Avicenna’s works). Some of them, though, may well not be authentic.
19 Avicenna 1999.
21 Avicenna 1993–. Previously, only the Generalities, that is, the first book of the Canon, was available in English, but the translations were based, respectively, on the Latin version (Gruner 1930) and the Urdu version (Shah 1966).
Avicenna insisted that his *Canon of Medicine* dealt with medical theory and practice in a theoretical way, as we have seen. This begs the question whether Avicenna actually practiced medicine, or, to put it in his terms, whether he engaged in “practical practice.” By his own account and that of his student al-Juzjānī, he did. Avicenna mentioned in his autobiography, just after the passage quoted above that he treated patients,

I cared for the sick, and there opened up to me indescribable possibilities of therapy which can only be acquired through experience (*al-muqtabasa mina l-tajribati*).

Moreover, al-Juzjānī relates that Avicenna joined the service of Nūh ibn Maņṣūr, the Şultan in Bukhārā, because of his skill as a physician. More importantly, though, al-Juzjānī reports that Avicenna “carried out many experiments in his medical practice which he decided to record in the *Canon [of Medicine]*. (*Wa-kāna qad haṣṣala taǧāriḥa kathīrata tanī bāsharaḥū mina l-mu’alajātī wa-azama ‘alā tadwīnihā fi kitābī l-Qānūnī*).” Unfortunately, these notes were lost, so that Avicenna did not incorporate them into his *Canon of Medicine*. Interestingly, al-Juzjānī employs the same word “to practice (*bāshara*)” here as did Avicenna at the beginning of his *Canon* when distancing himself from the “practical practice” of medicine.

There are also some other accounts of Avicenna as a practicing physician, for instance, by the Persian intellectual Nizāmī ‘Arūdī Samarqandi (d. after 1152), the author of the famous *Four Discourses* (*Chahār maqāla*).

The latter tells the tale of Avicenna coming to Gurgān with the intent to work for the king, Qābis ibn Vushmagir. Such was his skill as a physician that people brought many sick to be treated by him, and he did so with great success. His fame reached the king, and when one of his relations fell ill with an apparently incurable disease, he sent for Avicenna to treat the relative. Through clever questioning, he deduced that the patient actually suffered from lovesickness.

Cristina Álvarez-Millán has subjected this account to critical scrutiny, along with the remaining evidence for Avicenna’s being a practicing physician. She rightly points out that the story of the lovesick patient has many Greek antecedents; it originally occurred in Galen.

It therefore represents a literary topos rather than an account of what really happened. One should point out, however, that Avicenna discusses this condition (called *‘ishq* in

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Arabic) in a separate chapter in his *Canon of Medicine*, and that his advice about the condition, how to detect it and how to treat it, matches Niğāmī ‘Arūdī’s account fairly well. Moreover, Avicenna states there explicitly:27

One method is to mention many names repeatedly, whilst one has the hand on the pulse. When it changes dramatically, and appears as nearly having stopped, and then returns – *I have tried this a number of times* (mirāran) – then I knew that it is the name of the loved one.

He goes on to say that one can also deduce the place where the loved one lives by mentioning various locations, streets, and neighborhoods. Then Avicenna insists again:28

We have tested this and derived benefit from what we have thus established. Then if the only treatment that you can find is to bring the two together in a way that religion and law allow, do it. For we have seen [patients] to whom health and strength returned.

Now, it may well be that Avicenna simply lied about his experience with lovesick patients here, but this seems unnecessarily uncharitable. If we take him at his word, then that puts a different complexion on the anecdote in the *Four Discourses* regarding the lovesick patient. Rather than Niğāmī inventing this episode because it was a popular story, Avicenna could have been influenced in his clinical behaviour by Galen’s account and acted accordingly. In other words, Niğāmī’s topical account may well contain a grain of truth, although, as prose literature, it has certainly been embellished. Moreover, Álvarez-Millán argues that the cases in Avicenna’s biography do not provide many medical details and sometimes end in failure. Therefore, Avicenna’s reputation as a great clinician is rather overinflated according to her.

On the basis of the current evidence, we should probably suspend judgment about the question of how large Avicenna’s actual medical practice was. We do, however, find quite a large number of cases where Avicenna does speak about his experience in the *Canon* (I shall return to this point below). He must therefore have practiced some medicine, but it is also evident that he valued theoretical learning much more than hands-on practice. Yet, interestingly, like Galen before him, he accorded an important place to the notion of experience in his medical epistemology. This can best be illustrated by the example of drug therapy. In order to understand the

underlying issues, it is necessary briefly to outline certain ideas in the earlier Greek tradition.

Galen insisted that qualified experience (called διήριστη πείρα in Greek) is necessary to determine the effectiveness of drugs. 29 Basically, a number of conditions need to be fulfilled in order for the experience to yield reliable results. Galen does not give us a comprehensive list of what these conditions are, but rather, we have to reconstruct his theory from examples that he provides. For instance, in his On Critical Days, he specifies three conditions that need to be met in order for the experience to be valid. 30 First, one has to choose patients about whom one can be certain; second, one needs to ascertain the beginning of a crisis not by reasoning (ἐκ λογού τίνος; μίαν γιώτασιν), but through clear perception (ἐκ αυτῆς τῆς ενεργείας; μία νάσι η-ήσι); and third, one needs to be able to distinguish exactly which day is that of the crisis.

Avicenna does not refer directly to this concept of qualified experience, for which Galen does not offer a detailed theoretical discussion in his extant works, but he clearly took his cue from Galen here and developed it further. This can be seen from the beginning of the second book of the Canon of Medicine, dealing with simple drugs. He states there that “one can ascertain the faculties of drugs in two ways: (1) through logic (qiyaṣ); and (2) through experience (tajriba).” 31 He devotes a full chapter to each way, and it is that on “How to ascertain the faculties of the mixtures of drugs through experience” that particularly concerns us here. 32 Avicenna begins by stating that “experience is directed at knowing the faculty of a drug with confidence (بِ-الثِّقَة) after having observed certain conditions.” 33 In the following, he specifies seven such conditions (شَرَّاَئِتِ, sg. شَرَّاَة): (1) “it should be free from any acquired quality”; (2) “the experience should be conducted on a simple illness (الْمَعْرَّدَة)” ; (3) it should be tested on a drug and its opposite as well; (4) the strength in the drug (الْقُوَّةُ فِي الْمَعْرَّدَة) should correspond to the strength in the illness; (5) the time that the drug requires to take effect should not be too long; (6) the effect should be constant (يُتَّبَعُ فِي الْمَعْرَدَة); and (7) the human body should be used for testing (الْمَعْرَدَةِ الْجَانِبِ الْإنسَانِيِّ), and not that of animals.

29 See van der Eijk 1997.
31 Avicenna 1593: 115.25.
32 It has been translated and studied by Nasser et al. 2007.
The conditions stipulated by Avicenna for testing drugs are much more detailed than those found in Galen’s extant works. Therefore, Avicenna further develops the concepts that he inherited from the Greek medical tradition, as well as earlier physicians in the medieval Islamic world. For instance, when discussing the second condition – that experience should be conducted on a simple illness – Avicenna says:

Second, what is tested (al-mujarrab ‘alayhi) should be a simple disease (‘illa mufrada). For if it were a compound disease and contained two aspects that require opposite treatments, and if one tried a drug against them [these two aspects] and it were useful, one would not know the true reason for this. For instance, if someone suffered from a phlegmatic fever, and we gave him agaric to drink, and the fever ceased, then one should not judge the agaric to be cold just because it helped against a warm disease, that is, fever. It may perhaps be the case that it helped because it dissolved the phlegmatic [disease] matter or purged it. For when the [disease] matter is depleted, the fever ceases. This is really essentially a benefit (nafa’ bi-l-dh¯at), but [also] something mixed that is beneficial accidentally; essentially in relation to the [disease] matter, and accidentally in relation to the fever.

This distinction between accidental and essential qualities of diseases and drugs is fundamental for Avicenna. In case of a mixed (makhl¯ut) or compound (murakkab) disease, it is difficult to know what aspect of the disease is affected by the drug. We might compare a debate over the nature and existence of septan and nonan fever that took place in the early tenth century: if a fever recurs on every seventh or ninth day, how can we be sure that it is still the same fever and not a different one?

Be that as it may, it becomes clear that Avicenna valued experience when determining the effectiveness and appropriateness of drugs. How does this chime with Avicenna’s own medical practice? Did he test drugs according to these seven criteria? We cannot say with confidence that he did so, as Avicenna does not provide us with an example of a drug test in which he applied all these criteria consistently. We have one case, however, where Avicenna appears to have applied one of his conditions, that of testing opposites (number three in the list above). When discussing the use of creams for cancer, he states: “In order to assuage the pain, I tried...”

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35 Retaining the reading of manuscripts alif, rá’, tā’: makhlūṭun yanfa’u bi-l-‘araḍi.
36 Avicenna’s point is that the agaric has a beneficial effect on the phlegmatic disease matter, and this is part of its essence. In other words, it will always help with phlegmatic disease matter. But it only benefits the fever accidentally; put differently, there are many fevers which it will not help.
37 See Pormann 2008: 100–3.
(jarrabtu) warm and cold drugs together, so as to apply what is the most appropriate.”

The Canon of Medicine contains, moreover, a significant number of instances where Avicenna talks about having “tested (jarraba)” both simple and compound drugs. Examples of the former include cloves: they should be administered in different ways to help children who vomit. At the end of the section on this topic, he remarks that “these are things proved by experience that we ourselves have tested (wa-hādhīhī mina l-mujarrabātī llatī jarrabnāhā nahnu).”

Avicenna extols camel milk (laban al-liqāh) as being beneficial for a good regimen; and he adds: “we have tried it a number of times, and it is useful (jarrabnāhām i rāran wa-nafa’).”

Camels are, of course, much more frequent in the Middle East than in Greece, and this example therefore reflects the practical situation on the ground. He quotes “seed of roses (bizr al-ward)” and “sesame oil (duhn al-sīraj)” as useful against, respectively, “scraping (sahj)” (i.e. a form of diarrhoea in which parts of the intestines are secreted) and tenesmus (zahir), citing his own experience. In the latter case, Avicenna comments: “The ancients mentioned this regimen, and some modern authors adopted it; we have tried it: it is extremely useful (wa-qad jarrabnahu wa-huwa shadīdu l-naf’).”

Interestingly, there are quite a few stomach conditions for which Avicenna reportedly resorted to experience. He “experienced (jarrabnahu)” that putting cupping glasses on the patient’s belly stops diarrhoea; and giving goat milk into which a heated stone has been thrown is also helpful against this. Moreover, he lists a recipe for a compound drug against “passing one’s food undigested (zalaq al-‘amā; corresponding to Greek leienteria),” saying that “we ourselves have tried it (wa-qad jarrabnahu nahnu).” He recommends other compound drugs “that we ourselves have tested (jarrabnahu nahnu),” that are “opening (mufattih)” and “that we

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38 Avicenna 1593: 593.21; 1877: vol. ii, 599.20.
39 Avicenna 1593: 452, lines 21–20 from the bottom; 1877: vol. ii, 343, line 5 from the bottom.
40 Avicenna 1593: 476, line 17 from the bottom; 1877: vol. ii, 392.7.
41 Another physician, al-Kaskari (fl. 920s), also mentions camels specifically in his Medical Compendium; see Pormann 2003: 212.
42 Avicenna 1593: 499, line 8 from the bottom; 1877: vol. ii, 439, line 11 from the bottom.
43 Avicenna 1593: 504, lines 14–13 from the bottom; 1877: vol. ii, 449.11–12.
44 Avicenna 1593: 495.2; 1877: vol. ii, 430.6.
47 Avicenna 1593: 497.16; 1877: vol. ii, 434, line 6 from the bottom.
48 Avicenna 1593: 536, line 10 from the bottom; 1877: vol. ii, 505.2.
have tried a number of times (jarrabnāhu mirāran); or that are purging “that we have also tried (mimmā jarrabnāhu ’aydān).”

Occasionally Avicenna also reviews previous medical ideas critically. For instance, he criticises the belief of “some people [who] claim that a colic never begins on the left side. This is not correct. I experienced the opposite.” And he confirms previous medical knowledge through experience in another case. He reports first that Rufus of Ephesus recommended bathing in sulfur waters against bladder stones. Avicenna affirms that this works: “we have experienced something like this.”

A recipe against strangury is “one of the things that we tried (mimmā jarrabnāhu).” Here again we find some local flavour, as it contains drugs from the East such as “myrobalan from Kabul (al-halīlaj al-Kābulī)” and “behen (bahman).” These drugs were unknown to the Greeks, but became integrated into the Arabic pharmacopoeias. Avicenna also lists a number of simple drugs for problems with the testicles and scrotum that he has “tried (jarrabnāhu).” And he refers twice to his own experience in the context of women’s diseases. In one instance, he provides a recipe for an abortive drug, saying: “we have tried this a number of times (wa-bādhā qad jarrabnāhu nabhnu mirāran).” In another case, he gives the recipe for a pessary (hamūl) which stimulates menstruation; then he adds: “we ourselves have tried this pessary that we mention here (ḥādha l-ḥamūlu lladhī nadkuruhū hunā qad jarrabnāhu nabhnu).” Moreover, Raphaëla Veit has collected instances in which Avicenna commented on various drugs such as henna or jujube berries in a way that suggests some familiarity with how they are used in practice. In one instance, Avicenna commented on a mushroom typically available in Transoxania and Khurasān. Some of the remarks quoted above, moreover, cannot merely be seen as topical expressions that a drug is tried and tested.

Quoting these instances in this way can perhaps give a wrong impression. Within the massive Canon of Medicine, they are relatively rare. Therefore, Cristina Álvarez-Millán’s conclusion that Avicenna was primarily interested

49 Avicenna 1593: 483.27; 1877: vol. ii, 406, line 11 from the bottom.
51 Avicenna 1593: 508.3–4; 1877: vol. ii, 455, line 13 from the bottom.
52 Avicenna 1593: 537.26–7; 1877: vol. ii, 506.8–11; quotation in line 11.
53 Avicenna 1593: 547, line 4 from the bottom; 1877: vol. ii, 524.17–18. 54 Pormann 2011.
55 Avicenna 1593: 564.17; 1877: vol. ii, 551.10.
56 On this topic, see Pormann 2009.
57 Avicenna 1593: 578, lines 4–3 from the bottom; 1877: vol. ii, 576.7.
58 Avicenna 1593: 590.3–4; 1877: vol. ii, 593, line 3 from the bottom.
59 Veit (forthcoming); I would like to thank Dr. Veit for giving me advance access to her work in progress.
in theory is not invalidated. But this survey shows—not surprisingly, one may add—that Avicenna had both a theoretical interest in experience and did resort to it in practice. Moreover, in at least one case he reports specifically that he applied one of his criteria for using experience correctly in the case of drugs. Let us now leave the realm of medical experience in order to explore how Avicenna’s ideas about the anatomy of the brain impacted on his conception of the soul and how it interfaced with the body.

### III Common Sense and Estimation: The Faculties of the Soul Seated in the Brain

Avicenna produced highly original ideas. In the area of psychology, the study of the soul, he acquired fame for his notions of the common sense (al-hiss al-mushtarak, sensus communis) and estimation (al-wahm, aestimatio). Both these faculties are part of the internal senses (al-hawāss al-bātīna, sensus interiores).60 Avicenna discusses them in both his philosophical and his medical works.61 In the following, I shall focus on how Avicenna deals with this topic in the Canon, and compare it to his discussion in his philosophical encyclopedia, entitled The Cure (al-Shifā’). But in order to understand the underlying issues and where Avicenna is coming from, it is necessary to give some background.

Galen remained ambivalent about the relation between the soul and the body, and especially about the exact seat of the soul’s various functions. He had no doubt, however, that the brain controlled many of the functions of the body, and proved this through various animal experiments.62 Posidonius, a medical author of the late fourth century AD, had already located various functions of the soul in specific parts of the body according to an excerpt quoted in Aëtius of Amida’s Medical Books.63 Likewise his

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60 On internal senses, see Wolfson 1935; this is still fundamental, although his analysis of al-Fārābī’s writings needs to be corrected (see Black 2000: 69–70, n. i). See also, Strohmaier 1988. On estimation in Avicenna, see Black 1993, and, more generally, 2000.

61 Ibid.: 70 n. 4.

62 Rocca 2003; see, especially, his Appendix 1 on the location of the faculties of the soul.

63 Book vi, ch. 2 (ed. Olivieri vol. ii, p. 125.16–20): “When the front part of the brain is damaged, the imaginary [faculty (to phantasitikon)] alone is injured; when the middle ventricle of the brain is damaged, the rational [faculty (to logistikòn)] becomes confused; and when the rear part of the brain along the occiput is damaged, the memory [to mnèmoneutikon] is lost, and together with this also the [other] two [faculties] (τού μὲν οὖν ἑμπροσθίου μέρους τοῦ ἐγκεφάλου βλαβέντος τὸ φανταστικὸν μόνον ἡδίκηται, τῆς δὲ μέσης κοιλίας τοῦ ἐγκεφάλου βλαβεῖσθαι παραβατρητῇ γίγνεται τὸ λογιστικὸν, τοῦ δὲ κατὰ τὸ ἱνων ὁπίσθιου ἐγκεφάλου βλαβέντος ἀπόλλυται τὸ μνημονευτικὸν, σὺν αὐτῷ δὲ ὡς ἐπίταξαι καὶ τὰ ἔτερα δύο).” This Posidonius should not be confused with the famous Stoic philosopher of the second century BC.
contemporary, Nemesius of Emesa, a Christian bishop active around AD 400, firmly linked the three functions of the soul – namely, imagination, thinking, and memory – to specific locations in the brain. In the subsequent Arabic medical tradition, we often find this idea of the three faculties being located in the front, middle, and rear parts of the brain, respectively.

In his philosophical works, Avicenna developed the theory of the internal senses. It can be sketched as follows. The inner senses consist of the common sense and receptive imagination, located in the front part of the brain; the active imagination, estimation and thinking, located in the middle part of the brain; and the active and passive memory, located in the rear part of the brain. The common sense is the inner organ that serves as an interface between the five outer senses (sight, hearing, smell, taste, touch) and the soul; only through it can we perceive with different senses at the same time; in other words, we can hear a car approach and see it simultaneously (hoping not to have to use the sense of touch), to use an anachronistic example. The imaginative faculty is divided into one that receives images and another that combines them. The latter is associated with thinking. Estimation is a faculty that animals and humans both possess; it allows them to make instinctive judgments, for instance that a wolf is dangerous, or a baby loveable. Finally, Avicenna divides memory into the ability to store information (al-ḥāfīṣa) and the ability to recall it (al-mutadhakkira).

Let us now look more specifically at how Avicenna develops this theory of the internal senses in his *Cure*, namely, in maqāla four, chapters one to three of the section “On the Soul.” Avicenna defines the common sense in the following manner:

This is the faculty called “common sense (al-ḥiss al-mushṭarak).” It is the centre of the senses. The shoots (al-shu‘ab) branch out from it, and the senses lead to it. It is really the [faculty] which senses. But this [faculty] grasps the things that it comprehends because of [another] faculty called “imagination (khayāl),” “imagining (al-muṣawwira),” and “imaginative (al-mutakhayyila).” The difference between “imagination (khayāl)” and “imaginative (al-mutakhayyila)” is perhaps only terminological.

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64 Nemesius of Emesa 2008: chs 6 (“imagination”), 12 (“thought”), and 13 (“memory”).
67 The common sense (koinē aisthēsia) is discussed in Aristotle’s *On the Soul* 111.1.
68 Avicenna 1956: 157–89. 
69 Ibid.: 159.8–12.
Avicenna depicts the common sense here as being linked to the five external senses through “shoots (ṣuʿāb; sg. ṣuʿaḥa).” In this, he is perhaps, if indirectly, influenced by the Stoic notion of the faculties of the soul. For instance, Aëtius, the doxographer from the first century AD, reports that the Stoics conceive of the ruling part of the soul (to ἑγεμονικόν) as occupying the highest position; from it, the five senses, as well as semen ( sperma) and voice ( phōnē), stretch out “like the tentacles of an octopus.” In this, he is perhaps, if indirectly, influenced by the Stoic notion of the faculties of the soul. For instance, Aëtius, the doxographer from the first century AD, reports that the Stoics conceive of the ruling part of the soul (to ἑγεμονικόν) as occupying the highest position; from it, the five senses, as well as semen ( sperma) and voice ( phōnē), stretch out “like the tentacles of an octopus.” Similarly, we have to imagine Avicenna’s common sense to be the source from which the five senses – like branches – stretch out, and to which information is conveyed in return. Moreover, he justifies using various terms for imagination by saying that it is a distinction in words only, not in the subject matter. Avicenna specifies after this extract that imagination “does not make any judgments at all (layṣa laḥā ḫumūni l-battata).” Furthermore, the ability to combine and separate forms without affirming whether or not they exist “is called ‘thinking (al-mufakkira),’ when the intellect ( al-ʾaql) uses it, and ‘imaginative (al-mutakhayyila)’ when an animal faculty ( quwwa ḡayāwaniyya) uses it.” Certain concepts such as “enmity” and “badness” are not the result of sensation. For instance, a sheep makes the judgment to avoid a wolf. The faculty to grasp these concepts is called “estimation (wahm).” He further explains “estimation” at the beginning of chapter three “On the actions of the faculties of memory and estimation:”

Estimation is the greatest judgment in animals. It judges by way of an imaginary impression (inbiʿāth takhayyuli) without this being affirmed as true. An example of this is the fact that one regards honey as abhorrent, because it resembles bile. The estimation judges that it [honey] is according to this judgment, and the soul follows this [judgment], even if the intellect declares this to be false. In their actions, animals and human beings who resemble them only follow this judgment based on estimation which lacks rational discernment; rather, it [estimation] only takes place by way of a certain impression (inbiʿāth).

Avicenna obviously felt the need to introduce estimation in order to explain the ability of animals to make certain judgments which we may well call instinctive. (The English term estimation, derived from the Latin translation aëstimatio for wahm, does not, perhaps, convey the meaning of this concept fully.) Both humans and animals possess this estimation, but in animals it is the highest form of judgment of which they are capable. Humans obviously possess the faculty of rational thought, a defining feature of what it is to be human.

Estimation did not figure in the Arabic tradition prior to Avicenna. Averroes (Ibn Rushd, d. 1198) is keenly aware of Avicenna’s intellectual independence in this matter, saying: “He [Avicenna] differs from [other] philosophers in that he posits a faculty in animals that is not the imaginative faculty, which he calls ‘estimation (al-wahmiyya),’ corresponding to the [faculty] of thought (al-fikriyya) in man.” A fortiori, the previous Arabic medical tradition does deal with this Avicennian concept. Therefore, when Avicenna dealt with the faculties of the soul in his *Canon of Medicine*, he had to find a way to combine the previous medical tradition with his own philosophical ideas. He does so by resorting to the distinction between medical and philosophical knowledge that we have already encountered at the beginning of this chapter.

In the *Canon of Medicine*, Avicenna resorts to the method of division to a greater extent than he does in his philosophical works. He thus divides the faculties of the human being into psychic (*nafs*-*an*-*iyya*), natural (*ta*b*-*iyya*), and vital (*hayaw*-*an*-*iyya*); he further divides the psychic faculties into cognitive (*mudrika*) and motive (*mu*-*harrika*); then he further divides the cognitive faculties into internal (*fi l-bātin*) and external (*fi l-zābir*). These internal faculties correspond to the internal senses that we have already discussed, whereas the five external faculties are the five senses, sight, hearing, touch, smell, and taste. It is obviously the internal faculties that are of particular interest to us here.

Generally speaking, when discussing these various faculties, Avicenna distinguishes between the opinions put forward by philosophers and physicians. He also does so when explaining the internal cognitive faculties. According to Avicenna, physicians divide them into three, namely, (1) imagination, (2) thinking, and (3) memory. These three faculties are located, respectively, in the front, middle, and rear section of the brain. Therefore here we find the familiar division going back to Nemesius of Emesa and his contemporary, Posidonius. But Avicenna also talks about philosophers dividing these faculties into five. By philosophers, he obviously means, first and foremost, himself. This number of five remains somewhat problematic in the *Canon*, as it is not entirely clear exactly which faculties count towards it; in the case of memory, he even says that it is the fourth or fifth faculty.

Be that as it may, Avicenna continues his discussion by further distinguishing between physicians and philosophers. According to the latter, imagination is divided into two, namely “the common sense (*al-hiss al-mushtarak*)” and “imagination (*al-khayal*).” Thinking can be further divided into the “thinking [faculty] (*al-mufakkira*)” and the “imaginative [faculty] (*al-mutakhayyila*).” We should remember here that
Avicenna had used “imagination (al-khayāl)” and “imaginative [faculty] (al-mutakhayyila)” synonymously in his *Cure*, whilst maintaining that passive imagination (reception of images) is located in the front part of the brain and active imagination (the combination of images) in the middle part. Then Avicenna turns to “estimation (wahm),” and explains how it relates to imagination:

This faculty (sc. imagination) serves as an instrument (āla) for a faculty that really is the internal cognitive [one] in the living being, namely estimation (wahm). It is the faculty in the animal that judges that a wolf is an enemy, whereas a child is a loved one, and that the person who promises fodder is a friend from whom one does not flee – and this in a non-rational way. Enmity and friendship cannot be perceived, nor does sensation of the animal comprehend them. Therefore, it must be a different faculty that judges and comprehends them, even if this is not an act of rational comprehension (al-idrāk al-nuṭqī). It must therefore, by necessity, be a certain act of comprehension that is not rational. This faculty (i.e. estimation) is different from imagination (al-khayāl), because imagination regards the objects of sensation as authentic, whereas this [faculty, i.e., estimation] makes judgments about the objects of sensation through concepts that are not objects of sensation. It [the faculty of estimation] also differs from that called “thinking (al-mufakkira)” and “imaginative (al-mutakhayyila)” [faculties] insofar as the actions of the latter are not followed by any judgment, whereas the actions of the former are followed by a certain judgment, or even judgments. The actions of the latter are composed of objects of sensation, whereas the action of the latter is a judgment about an object of sensation on the basis of a concept that goes beyond sensation.

This short extract illustrates how closely Avicenna follows his explanation in the *Cure* here. For instance, the example of an instinctive intuition that the wolf is an enemy is also given in the *Cure*, although it is more specific there, as Avicenna mentions the sheep (al-shāb) avoiding the wolf. At the end of his explanation about estimation, Avicenna concludes:

The physician does not object to acknowledging this faculty [sc. estimation], because the damage to its functions result from the damage to other lesser faculties such as imagination (al-khayāl), imagining (al-takhayyul), and memory [. . .]. The physician (al-tabīb) only considers the faculties that are affected by damage in their functions, this being a disease.

In other words, the physician has no real call to investigate estimation, but nor is he opposed to acknowledging that it exists. Then Avicenna turns to memory: it can perhaps be further divided into storing (al-hāfiza) and recollecting (al-mudhakkira); whether they are one or two, however, “does

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73 Avicenna 1593: 35, lines 16–10 from the bottom; 1877: vol. 1, 72.2–10.
not concern the physician.” Finally, Avicenna mentions another faculty that lies outside the purview of the physicians:

The remaining cognitive faculty of the soul is the faculty of human reason (hiya l-ɪnsâniyyatu l-नâtiqatu). Since the physicians do not consider the faculty of estimation (al-quwwa l-wahmiyya) for the reason that we have explained, they consider even less this faculty (sc. of human reason). Moreover, their investigation is limited to the actions of the three faculties, but no other ones.

Here again, Avicenna insists on the difference between physicians and philosophers. The highest faculty, that of rational thought, does not concern them directly. But for philosophers, it is, of course, of prime importance. After all, Avicenna invested much energy in explaining the workings of the human intellect and how it relates to other entities.

It is therefore clear that Avicenna’s medical ideas were heavily influenced by his philosophy. This, of course, is not in and of itself very surprising, but it challenges the image of Avicenna merely compiling previous knowledge in his Canon of Medicine. More than twenty years before, Musallam had shown that large parts of Ibn Sīnā’s biology in the Cure are identical to his explanations in the Canon. When dealing with the functions situated in the brain, Avicenna accepts that the traditional tripartite division found in medical texts has some merit and can be used to explain disease. But he also integrates his own innovations, notably the inner senses, into the previous system. The common sense is located in the front part of the brain and fulfills functions which other authors may well have attributed to imagination. And the estimation is situated in the center of the brain where it sits in close vicinity to thinking.

IV CONCLUSIONS

We can draw three main conclusions from this short overview of Avicenna’s medical writings. First, these works, and especially the Canon, offer rich pickings for philosophers. In them, Avicenna addresses issues that have direct relevance to philosophical debates. The role of experience in gaining medical knowledge is one such question; another is the function of the soul and how it interfaces with the brain.

74 For instance, Álvarez-Millán 2010: 209 characterises the Canon of Medicine by saying that it “not only made available an extensive systematization of medical knowledge, but also synthesized the dispersed and fragmentary medical literature existing at the time, mainly Galenic treatises blended with Aristotelian natural philosophy.”
75 See Musallam 1987, cited in n. 14 above.
Second, it is clearly wrong to characterise Avicenna’s *Canon* merely as a well-arranged collection of previous medical knowledge with some Aristotelian philosophy thrown in for good measure. In the *Canon*, Avicenna’s contribution is not limited to organising information. We have seen that he is innovative in three ways: he further developed Galen’s concept of “qualified experience”; he draws at least occasionally on his own experience as a clinician; and he incorporates his own innovative philosophical ideas about the inner senses into his medical discourse.

Third, one can only marvel at the relative neglect with which medical historians and philosophers alike have treated Avicenna’s medical writings.\textsuperscript{76} We now have a somewhat critical edition and English translation of the *Canon*, although it is barely known in the West. And although some scholars such as Cristina Álvarez-Millán and Raphaela Veit have tried to address certain aspects of Avicenna’s medical theory and practice, much more remains to be done. It can only be hoped that future historians of philosophy and medicine will close this conspicuous gap, and investigate Avicenna’s medical œuvre much more fully.

\textsuperscript{76} Apart from the works by Álvarez-Millán and Veit already mentioned, Danielle Jacquart is a notable exception, although her focus lies mostly on the transmission of Avicenna to the Latin West and his impact there; see Jacquart 1996, 1998; Micheau 1990.
Modern interpreters of Avicenna’s epistemology and psychology are divided about his theory of intellectual knowledge. Those who emphasize the Neoplatonic character of Avicenna’s position say that all intellectual knowledge comes from the emanation of the active intellect, which is the lowest of the celestial intelligences. Those who emphasize the Aristotelian character of Avicenna’s philosophy argue that for Avicenna, intellectual knowledge depends upon the human capacities of abstracting, thinking, and intuition. An example of the first tradition is Fazlur Rahman’s reading of Avicenna. He argued in 1958 that Avicenna’s language of abstraction is only a metaphor for emanation. Since the intelligible forms emanate directly from the active intellect and since human thinking only has the limited function to dispose the soul for the reception of emanation, the abstraction of the form “for Avicenna is only a façon de parler.”¹ Other scholars have also proposed that Avicenna should not be taken literally on abstraction.²

The opposing interpretative tradition emphasizes the human intellect’s capacity to know intelligibles at will. Dimitri Gutas has argued that Avicenna’s term “emanation” and the phrase “to come into contact with the active intellect” are nothing but metaphors for the syllogistic, cognitive process, which leads to new knowledge.³ I have supported this line of interpretation in an article which presents translations of many passages on abstraction from various works of Avicenna, in an attempt to show that Avicenna in his middle and later period, in spite of gradually increasing the passive role of the human intellect and the active role of the active intellect,

¹ I am grateful for the advice of Katrin Fischer and Andreas Lammer.
² Rahman 1958: 15.
³ Davidson 1992: 94: “Language to the effect that man abstracts thought or that the light of the active intellect transforms potential thoughts into actual thoughts is also not to be taken literally, for the actual thoughts in fact come from the emanation of the active intellect.”
continues to emphasize the human intellect’s capacity to abstract forms from matter. As a consequence, not to take Avicenna literally on abstraction would be hermeneutically dangerous. Other interpreters, however, disagree, and insist on the emanationist reading of Avicenna.

In the present chapter, I shall propose a way out of the antagonism of interpretation by arguing that the opposition between abstraction and emanation is foreign to Avicenna’s philosophy and also problematic in itself. Before I embark on this, I will first turn to two recent interpretations of Avicenna’s intellect theory which I find helpful for understanding the issues at stake.

(1) The first interpretation is offered by Cristina D’Ancona. She draws attention to a passage in the Pseudo-Aristotelian Theology of Aristotle, the Arabic adaptation of Enneads iv–vi: “Often I have . . . become as if I were naked substance (jawhar mujarrad) without body.” This passage Avicenna knew well, as can be seen from his own commentary on it. D’Ancona argues that Avicenna does not draw on the Aristotelian, but on the Plotinian tradition when using the vocabulary of mujarrad (“abstracted”) and tajrīd (“abstraction”) and that, as a consequence, Avicenna’s theory of abstraction rests on the assumption that the soul by nature is able to reach the intelligible realm and, in particular, to make contact with the active intellect, where the forms lie entirely free of matter – in contrast to Aristotle, who does not recognize separate forms. “Abstraction” in this sense is not the production of a concept out of sensible forms, but the soul’s becoming like forms, argues D’Ancona. For Avicenna, the Theology was a work by Aristotle, or of the Aristotelian tradition (even though he seems to have been aware of the authenticity problem), and in his commentary on the Theology, he takes recourse to Aristotle’s De anima and De sensu et sensato. This, D’Ancona says, could explain the fact that Avicenna ends up

5 Black 2005: 319–20: “The function of the agent intellect in this process is therefore not to illumine the sense images so that universals can be abstracted from them. The ultimate cause of the production of new intelligible concepts in individual minds is not an act of abstraction at all, but, rather, a direct emanation from the agent intellect.” Taylor 2005: 182: “Simply put, intelligibles in act exist in the separate Agent Intellect which is itself wholly in act and so cannot be a recipient of abstractions from the data of sense perception. Moreover, the unity of intersubjective discourse requires the unity of intelligible referents in the Agent Intellect. Abstraction or tajrīd, then, is less a description of an idea or an intelligible than a façon de parler denoting a linking to intelligibles in act in the Agent Intellect so that individual human beings may in some way be called knowers.”
7 Avicenna remarks in the letter to Kiyā: “I commented clearly on the difficult passages in the original texts up to the end of the Theologia Aristotelis, despite the fact that the Theologia is somewhat suspect” (Gutas 1988: 63–4).
combining two incompatible modes of intellection: Aristotelian abstraction and Plotinian direct grasping of intelligible forms.

D’Ancona’s interpretation clearly shows that Avicenna got to know abstraction terminology also from Neoplatonic sources and that he inadvertently fused Plotinian and Aristotelian epistemology. However, I am not convinced of her conclusion that the source of Avicenna’s doctrine of tajrid cannot be the Graeco-Arabic translation of Aristotle’s De anima, where, as D’Ancona argues, the term does not appear, but that the source instead is the pseudo-Theology. First, because Avicenna himself in his commentary refers to “the procedures of abstraction which are explained in the De anima and De sensu et sensato.” Second, because Greek texts were not the most important sources on abstraction terminology for Avicenna, given that the usage of jarrada and mujarrad was already well established in Arabic philosophy in Avicenna’s time. In fact, Avicenna’s usage of abstraction terminology seems to owe much to al-Fārābī, who repeatedly employs the term jarrada for the active intellectual operation of freeing a form from attachments.

D’Ancona’s interpretation makes us think again about the extent to which Avicenna’s philosophy can be called Neoplatonic. There is no question about the fact that Avicenna often speaks about the intellect’s turning towards the upper realm and about receiving intelligibles from there. Also, Avicenna contends in Neoplatonic fashion that there exist separate forms, namely, in the active intellect. However, this is only one half of the story. There is an important difference between Avicenna’s and the Greek Neoplatonists’ doctrine of forms. Avicenna maintains that the forms emanate from the active intellect into the sublunar world. As a result, the same essences exist both in the active intellect as universal forms and in the sublunar substances as particular forms. It is true Avicenna acknowledges the separate existence of forms, but he also advocates an Aristotelian realism regarding immanent forms. For epistemology, this means that in principle there could be two ways to acquire universal forms: either by abstraction from particular forms, or by directly receiving them from the active intellect. Hence, it misses the point to say that “abstraction” for Avicenna is a façon de parler because the “proper place” of the intelligible

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9 Avicenna, Commentary on the Theology, p. 40. Translated in D’Ancona 2008: 64.
11 See Adamson 2004a: 87–111, who shows that Avicenna’s most important epistemological borrowing from the Neoplatonic Theology is his recognition of a non-discursive kind of thinking, i.e. the intellectual understanding of God through revelation, which Avicenna likens to the non-discursive grasp of intelligibles.
forms is the active intellect. Since the forms also exist in the sublunar world, Avicenna could have designed an epistemology that did not involve the active intellect altogether.

(2) The second interpretation to be considered here comes from Jon McGinnis. He has suggested that we may solve the puzzle of Avicenna’s theory if we understand how Avicenna modelled the act of thinking upon the act of seeing. In several passages, notably in chapter V.5 of *De anima* (the *Kitāb al-nafs* of *al-Shifā*’, c.2 1022–4 CE), Avicenna compares the active intellect to the sun, the rational soul to the eyes and the particular forms in the imaginative faculty to potential objects of vision. The soul’s cognitive attention to the imaginative forms is likened to the perceiver’s turning towards a potential object of vision, and the abstract intelligible forms imprinted in the rational soul are likened to the objects actually seen. The active intellect’s effect upon the forms in the imaginative faculty corresponds to the sun’s light falling upon a potentially visible object. These parallels are all explicit in Avicenna’s text. But what is the intellective counterpart to the sun’s light, which causes the air to be transparent? Apparently, the equivalent has to be the forms which emanate from the active intellect. McGinnis claims that the exact equivalent is not the intelligible forms proper, but something that makes the abstractions intelligible to the rational soul: “intelligible accidents” or “intellectualizing forms,” that is, accidents that determine the abstract essence when it is being conceptualized. Examples of such accidents are: being a subject, being a predicate, universality and particularity in predication. Avicenna mentions these accidents in his *Introduction to al-Shifā*’, where he says that the essences of things can be considered in three ways: first, in itself, without respect to existence or non-existence, universality or particularity, unity or plurality, second, as existing in concrete particulars, and third, as existing in an intellect, that is, as conceptualized. In the latter case, the essence is determined by the mentioned accidents. McGinnis maintains that the intelligible accidents, once emanated, “mix” with the abstracted form in the imaginative faculty, so that there comes about an intelligible form in the human mind.

This is an intriguing interpretation, but there is a problem with the textual evidence. The distinction between abstract forms (or essences)

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12 Cf. the quotation from Taylor in n. 5 above.  
14 I am not convinced of the alternative interpretation proposed by Meryem Sebti, according to which Avicenna compares the rational soul [i.e. the human intellect] to the translucent medium (Sebti 2006: 20). Avicenna’s formulation is unambiguous on this point: “Its [i.e. the active intellect’s] relation to our souls is that of the sun to our eyes” (*Cure: Psychology* v.5, 234.19).  
and intellectualizing forms (or accidents) does not have a textual basis in Avicenna’s psychological works – nor does the idea of a “mixing” of emanated intellectualizing forms and abstracted forms. Avicenna uses the terms *al-ma‘qūlāt* (the intelligibles), *al-ṣūwar al-ma‘qūlāt* (the intelligible forms) and *al-ṣūwar al-‘aqliyya* (the intellectual forms) interchangeably in *De anima* v.5–7. These forms are “in the active intellect,” from which they flow into the soul. Avicenna does not differentiate terminologically between two kinds of forms and he does not mention a “mixture” of the two components. Rather, the accidents of universality or particularity “follow upon” or “attach to” (*lahiqa*) the essences if they exist in the intellect or in the material word.

Even so, McGinnis’s interpretation clearly demonstrates that an adequate interpretation of Avicenna’s epistemology has to integrate Avicenna’s ontology of essences and his understanding of vision. Let us briefly turn to these two issues. As to ontology, how does Avicenna’s theory of intellect relate to his distinction between essences and existence? Essences exist either in the external world or in the intellect. The material forms in the sublunar world, which are the objects of the activity of abstraction, are particular forms. The intelligible forms in the mind, which are abstracted and received from the active intellect, are universal forms (*Metaphysics* v.1). What is the ontological status of the intelligible forms in the active intellect? Avicenna obviously thought that they exist, and since the active intellect is an intellect, they cannot but exist in the way of conceptualization, that is, as universals. The forms which are in the active intellect already have the two components: essence and the mode of conceptual existence. As to the process of emanation, the active intellect not only gives the mode of existence to the soul (that is, conceptualizing accidents) – this would be impossible, since in reality essence and mode of existence cannot be separated – but the conceptualized, universal forms as a whole, as they exist in the active intellect. Otherwise Avicenna would not use expressions such as: “the forms in the active intellect are imprinted on the soul,” or: “the theoretical faculty receives an impression of universal forms.”

As to the theory of vision, it seems to me that Avicenna’s analogy has the limitation of all allegories: they explode if spelled out too far. Light flows from the sun, and forms flow from the active intellect, but forms are not

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16 *Cure: Psychology* v.7, 249.21.
19 I am grateful to Katrin Fischer for discussion of this point.
20 *Cure: Psychology* v.7, 249.21.
21 Ibid. 1.5, 48.1.
equivalent to light in Avicenna’s simile. As Avicenna puts it: forms appear in the soul “through the mediation of illumination by the active intellect” or “due to the light of the active intellect” (De Anima v.5). In fact, nothing replaces light on the epistemological side of the simile. Rather, Avicenna uses “light” (daw) or “illumination” (ishrāq) on both sides of the analogy. Moreover, there is no equivalent to the emanation of forms on the visual side: visual forms do not flow from the sun, as intelligible forms do from the active intellect. Avicenna mitigates the imperfection of the comparison by saying that not only forms emanate from the active intellect, but also “the capacity for abstract intellec tion” (quwwa al-aql al-mujarrad), or “a power” (quwwa). This is why Avicenna calls the actually knowing intellect “acquired intellect” (al-aql al-mustafīd), that is, acquired from the active intellect. Hence, there is at least some sense in the comparison of emanation and light, since it is due to light that we have the capacity of vision, and due to an emanation that we have the capacity of abstract thinking. But the analogy as a whole has its severe limitations.

Now we are at the point to face directly the problematic issues of Avicenna’s theory of intellec tion. It has puzzled interpreters of Avicenna (including myself) that he seems to combine two incompatible notions in one theory: Is the intelligible abstracted by the soul or does it flow from the active intellect? I suspect that the difficulties of interpretation arise because the question is improperly asked. For Avicenna, abstraction and emanation do not seem to exclude each other. Why? Because abstraction is his solution to an epistemological problem, emanation to an ontological problem. Let us see how Avicenna introduces abstraction in De Anima i.5:

As regards the theoretical faculty, it is a faculty of the sort that it receives an impression of universal forms which are abstracted from matter. If (these) forms are abstract in themselves, the faculty’s grasping of their form in itself is easier. If they are not, they become abstracted by force of the faculty’s action of abstracting them so that no attachments of matter are left in them; we will explain how (this happens) later on.

Avicenna turns to this explanation in De Anima ii.2. There again he differentiates between the forms of immaterial objects – he does not give examples, but apparently thinks of the supralunar intelligences and

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22 Ibid. v.5, 235.12 and 236.1. 23 Ibid. v.6, 247.9.
God\textsuperscript{28} – and the forms of material objects. The former can be perceived by grasping them as abstract, whereas the latter still have to be abstracted by the soul:

As to what exists in matter, either because its existence is material or because it is by accident material, [this faculty] abstracts it both from matter and from their material attachments and grasps it in the way of abstraction, so that it will be like “man” which is predicated of many, to the effect that [the faculty] grasps the many as one nature, divesting it of all material quantity, quality, place, and position. If it did not abstract it from these, it could not be truly predicated of all.\textsuperscript{29}

What is true of Avicenna’s example “man” is true also of all other forms that the sublunar world receives by emanation from the active intellect, hence of all genera and species: they are in matter accidentally and have to be abstracted. Or, to phrase it differently: material forms need to be abstracted, whereas immaterial forms such as God and the intelligences are grasped directly. The first process is more cumbersome, the second is direct and “easier.” The process of abstraction is later described in the well-known passage in \textit{De Anima} v.5, where the above-mentioned simile with vision is used: the intellectual faculty considers the particulars stored in the faculty of imagination, which are transformed into intelligible forms.\textsuperscript{30} Thus, for Avicenna, the alternative to abstraction (\textit{tajrid}) is not emanation; the alternative is the direct grasping of an object abstract in itself, or as Avicenna puts it: “grasping in an abstract manner” (\textit{akhadha akhdban mujarradan}).\textsuperscript{31} Abstraction is Avicenna’s answer to the epistemological question of how we perceive universal forms that are not by themselves separate from matter – that is, the great majority of universal forms.

If emanation is not the alternative to abstraction for Avicenna, what is it, then? It is an answer to an ontological question. Avicenna says that both separate forms and those that need to be abstracted are received as an impression (\textit{intaba’ǎ}) from the active intellect. Epistemologically, the normal way to acquire universal forms is abstraction from particulars, but ontologically the forms come from the active intellect. Why does Avicenna not maintain that the forms come from the sublunar world, after having been separated from matter? The reason is not Avicenna’s alleged

\textsuperscript{28} In the \textit{Introduction} to \textit{al-Shifā’}, Avicenna differentiates beings mixed with motion (matter) from those unmixed, for which he gives “the intellect and God” as examples. He further differentiates beings always separate from motion from those that may be separate, “such as being, unity, plurality and causality.” See \textit{Cure: Introduction}: 12.13 and 13.5. Cf. McGinnis 2010: 36–7. On Avicenna’s concept of “direct vision” (\textit{mushhada}), which results in knowledge that is structured syllogistically, as is all knowledge for Avicenna, see Adamson 2004a: 87–111 and Gutas 2006a: 351–72.

\textsuperscript{29} \textit{Cure: Psychology}: ii.2, 61.10–14. \textsuperscript{30} Ibid. v.5, 234–5. \textsuperscript{31} Ibid. ii.2, 61.8.
Neoplatonic ontology, as was pointed out above. Most forms in question exist both as immanent in the sublunar world – this is the Aristotelian part of his ontology – and in the separate active intellect – this being the Neoplatonic part. The principal reason, as I want to show, is that emanation theory solves the problem of intellectual memory. This is how Avicenna introduces the problem in *De Anima* v.6:

What, then, are we to say now about the human souls and the intelligibles which they acquire and [then] disregard to turn to others: do they exist in them with complete actuality so that [the souls] would inevitably be thinking them with complete actuality, or do they have a depository in which they store them, this depository being either themselves or their bodies or something bodily that pertains to them?  

Avicenna proceeds to discard the possibility of a bodily depository, since the intelligibles would then cease being intelligible. He also discards a theory of separate forms existing by themselves to which the soul, like a mirror, turns or does not turn, so that sometimes they appear in the soul and sometimes not – that is, Avicenna discards a version of Plato’s theory of forms. The alternative left is emanation theory:

Or [are we to say that] the active principle makes form after form flow upon the soul in accordance with the soul’s demand, and that when it turns away from the [principle], the effluence ceases? . . . We say that the latter alternative is the truth. The reason is that it is absurd to say that this form exists in the soul in perfect actuality, [but] that the soul does not know it in perfect actuality; because the meaning of [the phrase] “[the soul] knows it” is nothing else than that the form exists in it . . . It remains that the correct alternative is the last one, [according to which] learning is seeking the perfect disposition for establishing contact with [the active principle], so that there results from it the intellecction which is simple and the forms flow from it in a differentiated way into the soul through the mediation of thinking.  

These passages show why Avicenna did not maintain that the intelligible forms come from the sublunar world. For, if the forms originate in the sublunar world, one could not explain where the forms are if you do not think them in actuality. They cannot stay in the intellectual soul, because then you would continuously think them. The faculty of memory (*dhikr*), in turn, is a bodily faculty, located in the rear ventricle of the brain (*De Anima* 1.5 and iv.1), and intelligibles cannot be stored in memory without ceasing to be intelligibles. Avicenna thus opts for the emanation of forms from the active intellect whenever the soul wishes. The forms disappear

32 Ibid. v.6, 245.5–9.  
33 Ibid. 245.18–247.5.
from the intellectual soul when they are not thought in actuality, but the disposition to think the form remains, which explains why we do not have to learn everything again from the beginning. In contrast — and this is a point which Avicenna does not spell out, but which seems clear enough — if the forms were won by separating them from sublunar matter, they would have to be retrieved by abstraction again and again. But this is in conflict with the evident fact that we are capable of remembering what we have learned, without a new process of empirical inquiry.

In sum, the form (or more precisely, the material form, since the immaterial form is grasped directly without abstraction) has to be grasped by way of abstraction, but it nevertheless comes from the active intellect, as soon as the abstraction process is completed and the perfect disposition for receiving the form is reached. This is possible since the essences of material forms exist both as universals in the active intellect and as particulars in the sublunar world. But abstraction is only needed for the first acquisition of a form. After that, the rational soul can make the form be present in the mind whenever it wishes: “The first learning is like the cure of an eye,” as Avicenna puts it.¹³⁴

Hence, there is no need to call either side, abstraction or emanation, a metaphor. Avicenna is not metaphorical when saying about abstraction that particulars “are transformed (istahāla) into something abstracted from matter” and that “the imaginable things, which are intelligible in potentiality, become (sāra) intelligible in actuality, though not themselves, but that which is collected (iltaqatā) from them.” And, likewise, he is serious about emanation when saying that “abstracted forms flow upon the soul from the active intellect” (De Anima v.5).¹³⁵ Epistemologically, universal forms are either abstracted from particular forms if intellected for the first time, or grasped directly if intellected again. Ontologically, they always come from the active intellect. For Avicenna, this is not a contradiction. We get to know the universal form by looking at the sublunar world and engaging in abstraction, but we do not separate the form ontologically from the world, but receive it from above.

It seems sensible, therefore, to drop the misleading opposition between abstraction and emanation. This is also suggested by the fact that, in the history of epistemology, the common alternative to abstraction is not emanation, but illumination. One could show this by turning to Augustine or to al-Suhrawardi, but a more instructive point of comparison is Henry of Ghent (Henricus Gandavensis), the late thirteenth-century Christian

¹³⁴ Ibid. 2.47.11. ¹³⁵ Ibid. v.5, 234–5.
theologian and philosopher. His epistemology is comparable to Avicenna’s because he draws amply on Aristotle, but modifies Aristotle’s theory by adding illumination. Moreover, Henry of Ghent’s example is instructive, because it will bring to the fore Avicenna’s epistemological optimism.

In the first three quaestiones of the Summa quaestionum ordinariae, dating from c.1276 CE, Henry of Ghent argues that for grasping the truth in an eminent way – that is, for grasping the essence of something – one needs an exemplar. Aristotle maintained that the exemplar could be won by abstraction, that is, by abstracting the concepts of species and genera from the particulars. But such an exemplar, argues Henry, does not lead to full certainty (certa cognitio), but only to incomplete and obscured truth, for three reasons: the material objects are in constant change; the soul is in constant change and is liable to error; the exemplar may refer to non-existent things, as in dreams. In view of these arguments, which are all drawn from the skeptical tradition, Henry postulates that certain truth can only be reached by recourse to an eternal exemplar. For this we need special illumination, which is granted by the grace of God. By way of illumination through the divine truth, the imperfect concepts in our memory are transformed according to the eternal exemplar (necesse est ergo quod illa veritas increata...conceptum nostrum transforment). As a result, we are able to grasp precisely the universals which are lurking in the confused mass of imaginative forms.

The contrast between Avicenna and Henry of Ghent is considerable, even though both maintain that the soul is receiving an impression from a higher principle. For Avicenna, the universal forms which the soul arrives at by abstraction are in no way deficient. By exerting the activity of abstraction, the soul reaches the perfect disposition to make the universal form appear in it. The disposition triggers the emanation of the form from the active intellect into the soul. The active intellect is always in actuality, but is not active in the sense that it initiates or transforms anything in the epistemological process. Its sole function is to serve as a source of intelligibles for the soul, which is always available: it “makes form after form flow upon the soul in accordance with the soul’s demand.”

Divine illumination in Henry of Ghent’s theory has a very different function; it has recently been compared to an automatic spelling correction on the computer (which is a sensible comparison, since Henry modifies his statement that illumination is a gift of grace by saying that this gift, as a

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38 Cure: Psychology: v.6, 245.18–19.
rule, is given to everybody): the deficient concepts in the human mind are automatically corrected against the divine exemplar. In Avicenna’s epistemology, there is no need for a correction program. In principle, human beings are fully capable of acquiring perfect knowledge by themselves, granted that there are great differences between people in their ability to acquire knowledge. The active intellect resembles an external hard disk, in the sense of an intellectual depository which delivers upon demand.

At the bottom of all this is a fundamental difference between Avicenna and Henry of Ghent: Avicenna does not share Henry’s skepticism about the limits of human knowledge by purely natural means. For Henry, the most eminent form of knowledge can only be reached with divine help. For Avicenna, the human soul does not need to be helped by a second player. Whether the soul is able to get in contact with the active intellect or not is entirely up to itself. In the epistemological process, there is only one activity and one achievement: that of the human soul. In fact, Avicenna even claims that there are no limits to natural knowledge. The most intelligent of human beings are fully capable of knowing everything knowable by their own virtue: “There might be a person whose soul has been rendered so powerful through extreme purity and intense contact with intellectual principles that he blazes with intuition – i.e. with the ability to receive them in all matters from the active intellect –, and the forms of the things contained in the active intellect are imprinted on his soul either at once or nearly so.”

This is why Avicenna does not develop a theory of illumination in the sense that the human being is helped in the process of knowing: Avicenna exhibits a deep-rooted epistemological optimism.

It is true that, for Avicenna, considering the particulars disposes the soul for the emanation of a universal form. But Avicenna’s phrase “disposes” is not at all meant as a limitation of the soul’s intellectual powers. Avicenna does not say that considering the particulars “only” disposes for an emanation. The soul is fully capable of acquiring universal forms all by itself: it is able to do all that is necessary to make a form flow from the active intellect upon it.

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Certitude, justification, and the principles of knowledge in Avicenna’s epistemology

Deborah L. Black

Like most ancient and medieval philosophers, Avicenna did not identify any branch of philosophy that would map neatly onto the contemporary field of epistemology. In particular, he does not worry much about global skeptical doubts. Nonetheless, Avicenna gave considerable attention to many of the problems that we now deem to be central to epistemology. Like other authors within the Aristotelian tradition, his discussions of epistemological topics often occur as part of his interpretation of Aristotle’s theory of demonstration in the *Posterior Analytics*. In response to his intellectual rivals, the dialectical theologians (*mutakallimūn*), Avicenna also gives extensive consideration to the nature of the principles of knowledge, appropriating the theologians’ distinction between our natural knowledge of principles and knowledge acquired inferentially and incorporating it into the framework of Aristotelian logic. Many of the most original elements in Avicennian epistemology can be traced to Avicenna’s interest in the relation between the principles of knowledge and the degree of certitude to which different types of principles give rise. As a part of his project of classifying the principles of knowledge according to their epistemic force, Avicenna develops new accounts of the ways in which sources of cognition as diverse as sensation, introspective reflection, experience, and testimony, are able to produce certitude, and of why other sources fall short of the mark. By examining these accounts of the diverse principles of knowledge, it is possible to discern the contours of an Avicennian epistemology focused on the search for certitude and the conditions of justification appropriate to various types of belief.

1 However, Avicenna’s successor and critic, al-Ghazālī, anticipates a number of the skeptical worries we have come to associate with Descartes. See *Deliverance from Error*, in Watt 1982: 22–6.
2 For an overview of the Arabic reception of the *Posterior Analytics*, see Marmura 1990.
Avicenna’s discussions of the nature of certitude and the principles of knowledge employ a conceptual framework which is found earlier in the logical writings of al-Fārābī and becomes standard within Arabic logic. According to this framework, logic is an instrumental art whose goal is the attainment of truth and certitude in the mind’s cognitive operations and the linguistic expressions signifying them. Avicenna frequently employs the formula, “acquiring knowledge of the unknown” to describe the goal whose attainment logic facilitates. Knowledge in turn is subdivided into two basic acts: *tasawwur*, concept-formation or conceptualization, and *tasdiq*, assent or belief. Conceptualization represents the cognitive goal which definitions and their analogues aim to produce, and assent is the end sought by various types of syllogisms. Whereas the objects of assent are propositional and thus have truth-values, those of conceptualization do not. Thus, conceptualization is prior to assent and one of its principles. Within the realm of assent itself, some propositions are prior to others, insofar as assent to them is a prerequisite for assenting to others. Acts of assent also admit of degrees, that is, some acts of assent are more certain than others.

While Avicenna does not, as we noted above, directly engage with skeptical problems, he does allude to the avoidance of error and the quest for certitude as central to the aims of logic. In the opening of the logical portion of the *Salvation*, Avicenna notes that because we must acquire new knowledge discursively, it is possible for us to arrive not only at what is true, but also at what is only partly true but still useful, and at what is entirely false and misleading. Indeed, Avicenna notes that disagreements among individuals and self-contradiction are indicative of the inherent fallibility of human knowers: “innate human intelligence (*al-fitra al-insāniyya*) is for the most part not sufficient” to distinguish between truth and falsehood. Logic is necessary to remedy these natural shortcomings in our rational capacities, just as grammar and prosody are needed to aid our natural sensibilities and taste in linguistic and poetic matters. Indeed, while some people do have an innate talent to learn language and meter unaided by
any art, no human being – unless he is the recipient of divine aid – can arrive at the truth through reasoning without the help of logical tools.⁶

Avicenna’s claim that assent comes in degrees is closely connected to his recognition of human fallibility. Since our attempts to arrive at the truth can succeed or fail, our acts of assent vary in accordance with the degree of success attained. The highest degree of assent is certitude (al-yaqīn), the end at which Aristotelian demonstrative syllogisms aim. Avicenna’s account of certitude is of particular interest, since he defines certitude in terms of a second-order belief about one’s first-order beliefs: “[Certain assent]... is when someone holds a second belief along with [the first belief] (ma’a-hu), either actually or in proximate potency to actuality, that what one has assented to cannot be otherwise than it is, since it is not possible for this belief concerning it to cease.”⁷ Avicenna’s definitions of the remaining degrees of assent follow the same model: each type of assent is ranked according to the relative strength of the second-order belief, which is in turn traced back to the believer’s awareness of weaknesses in the first-order belief or the possibility that its contradictory might be true. Those acts of assent that are certain-like (shabih al-yaqīn) but nonetheless fall short of full certitude share the same first-order belief as certain knowledge, but the second-order belief is in some way defective. Avicenna’s analysis of the different ways in which this might occur is subtle: either the second-order belief is absent simply because one has not attended deeply to the first belief, but were one to do so, its strength or intensity might wane; or one has the second-order belief, but could lose it, i.e. come to think that the first belief might be overturned. Nonetheless, the first-order belief itself remains stable or established – the believer does not actually come to doubt it or believe its opposite is, in fact, possible. At a lower level of conviction is the assent that Avicenna here calls “doxastic persuasion” (iqnā‘ zānī),⁸ when one simultaneously holds that the opposite of what one has assented to is possible. Since this is not a case of doubt or suspension of belief, Avicenna emphasizes that one does not believe the opposite to be true, and one may not even be consciously attentive to its possibility. Still, at some level there is a suspicion that one’s belief may be subject to destruction or emendation.

Avicenna’s focus on second-order belief, or “knowing that one knows” (KK), represents something of a departure from the traditional Aristotelian criteria for knowledge, where the emphasis is on the nature of the objects

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⁶ Salvation: 43–4. By “the individual aided by God,” Avicenna probably means the prophet, even though he holds that rational prophecy does not involve a special divine intervention.
known, rather than on the strength of belief or conviction possessed by the knower.\footnote{Aristotle, \textit{Posterior Analytics} 1.6: 74b5–13.} Avicenna explicitly rejects the idea that demonstrative certitude is always about the necessary to the exclusion of the possible, arguing instead that demonstrations can be about either what is necessary or what is possible in its own right, so long as they rest upon premises to which the believer assents necessarily.\footnote{Avicenna 1892: 86–7; 1984: 148–9. Avicenna claims that the position he is rejecting here is not held by Aristotle himself. This move is anticipated by al-Fārābī; see Black 2006: 26–8.} In keeping with this fundamental principle, Avicenna’s classifications of the principles of syllogisms appeal primarily to the strength of acceptance that various propositions arouse, and to the diverse psychological and social sources of conviction which evoke assent in the human mind.

**II THE EPISTEMIC CLASSIFICATION OF THE PRINCIPLES OF SYLLOGISMS**

The systematic classification of the “principles of syllogisms” (\textit{mabādi` al-qiyāsāt})\footnote{That is, propositions that serve as the premises of syllogisms.} according to their origins and their epistemic force, is a feature of Avicenna’s theory of demonstration in all of his major works, including the \textit{Cure}, the \textit{Salvation}, and the \textit{Pointers}, as well as a number of minor texts.\footnote{The principal texts on the epistemic classification of premises are: \textit{Cure: Demonstration} 1.4: 63–4; \textit{Salvation}²: 97–102; Avicenna 1892: 55–8, 1984: 118–21.} In the preamble to his account of these principles in the \textit{Salvation}, Avicenna follows a brief overview of the distinction between conceptualization and assent with a defense of what we would now view as a moderate form of foundationalism. All forms of assent and conceptualization are either “acquired by some investigation” or are present from the very beginning of our cognitive endeavors. Both syllogisms and definitions are divisible into parts, and the parts of syllogisms can themselves be either assented to (the premises) or conceived (the terms). But, as Avicenna notes, “this cannot go on to infinity, so that knowledge of these parts is only attained through the acquisition of other parts, whose nature is to proceed to infinity, but rather, things terminate in something which is assented to and conceived without any intermediary. So let us now enumerate the things assented to without any intermediary.”\footnote{Salvation²: 97.} The principles of syllogisms, then, are the objects of immediate assent in which all other acts of assent are rooted.\footnote{Similar claims are made regarding conceptualization and infinite regress in the \textit{Metaphysics} of the \textit{Cure}: “If every conception were to require that [another] conception should precede it, then [such a] state of affairs would lead either to an infinite regress or to circularity” (§4, 23).}
As part of the task of cataloging these principles, Avicenna provides a general account of the various grades of assent that propositions can evoke in the believer. Propositions can command assent (1) “by way of necessity” (‘alā wajh darūra); (2) “by way of a granting” (‘alā taslim); or (3) “by way of a strong opinion” (‘alā zann ghālib). The latter two categories are assigned to dialectic and rhetoric, respectively, and they include most of the beliefs that we form on the basis of authority and social consensus.\(^{15}\)

While the exact list of proposition-types that Avicenna provides varies from text to text, a core set remains standard. Among the premises to which we assent by way of necessity, Avicenna regularly lists the following:

1. primaries (al-āwnāliyyāt), that is, immediate, self-evident truths;
2. propositions with innate syllogisms (muqaddimāt fitriyya al-qiyyāsāt);\(^{16}\)
3. sensible (or observed) propositions (al-maḥṣūsāt);
4. empiricals (al-mujarrabāt); and
5. testimonials (al-mutawātarāt).

In the Pointers, Avicenna adds:

6. intuited propositions (al-ḥadsīyyāt).

The list of premises of lower epistemic status also conforms to a fairly standard pattern. It includes two categories which are determined by their origination in a specific faculty within the sensible or animal soul:

7. imaginative premises (al-mutakhayyilāt), which do not evoke assent, since they do not engage the intellect as such; and
8. estimative premises (al-wahmiyyāt), which the internal sense faculty of estimation instinctively endorses as expressing the basic features of material reality.\(^{17}\)

Finally, the propositions whose acceptance relies on communal and social factors are the following:

9. widely accepted (al-mashhūrāt), conventional (al-dhā‘i‘āt),\(^{18}\) or praiseworthy (al-maḥmūdāt) beliefs;
10. received propositions (al-maqbūlāt); and
11. opined/supposed beliefs (al-maznūnāt).\(^{19}\)

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\(^{15}\) On these premises, see section v below.

\(^{16}\) At Avicenna 1892: 58 they are described as “propositions along with their syllogisms” (qadāyya qiyyāsāt-hā ma‘ā-hā). They are omitted from the Salvation, but included in Avicenna’s Persian work, the Danesh-name (Book of Science). See Avicenna 1955–8: 69–70.

\(^{17}\) For imaginative premises, see Black 1989 and 1990; for the estimatives, see Black 1993: 229–32.

\(^{18}\) This term is used in Salvation: 100.

\(^{19}\) Note that my list does not match exactly any of Avicenna’s, since I am offering a synoptic picture of his various accounts. A schematic outline of the main lists is provided in the “Introduction” to Avicenna 1984: 28–34.
Because the classification of propositions is based primarily on the degree of conviction and necessary acceptance which these premises elicit in the believer, the individual categories need not be mutually exclusive. A single proposition might be viewed as necessary from one perspective and widely accepted from another, as Avicenna says of the primaries, which are both necessary of acceptance and widely accepted, inasmuch as they are admitted by all human beings. That is not to say that Avicenna’s conception of certitude is entirely subjective, however: certitude requires one to know that one knows, and thus the truth of the proposition to which one assents is as much a necessary condition for the occurrence of certitude as is the believer’s recognition that the truth of such a proposition is beyond question. Thus, the truth of the proposition and its necessary acceptance by the believer are jointly sufficient for certitude.

III PRIMARY PROPOSITIONS AND PROPOSITIONS WITH INNATE SYLLOGISMS (MATHEMATICALS)

The category of primaries represents Avicenna’s take on the immediate, self-evident truths, as illustrated by the stock example, “The whole is greater than its part.” Avicenna defines these propositions with reference both to their psychological origins and to their logical structure, with the latter providing the foundation for the former. This is evident in the Cure account, where primaries are said to be unique, insofar as they alone have internal (bāṭiniyyah) necessity deriving from the “pure intellect.” This in turn is a function of their unmediated logical structure, which ensures that assent necessarily follows upon the conceptualization of their terms. But while the conceptual link between the terms of propositions sets the necessary condition for them to be primary truths, that link is not sufficient absent the psychological capacity of the subject to conceive those terms clearly. Thus, some primaries are evident to everyone (jali li-l-kulli) because their terms are easily conceptualized, whereas others only become evident upon reflection because of the obscurity of their terms.

It is important not to confuse Avicenna’s claim that the pure intellect on its own necessitates assent to these premises with the view that these

20 Cure. Demonstration: 66: “Know too that all the primaries are also widely accepted, but not the converse.” Cf. Salvation: 100; Avicenna 1892: 58; 1984: 122.

21 This is in contrast to the estimative premises, whose necessity is internal but derived from the estimative faculty. “External” necessity applies to propositions which depend upon some sort of empirical observation. The distinction between external and internal forms of necessity is given in Cure. Demonstration: 65–6.

propositions are innate in the sense of not depending upon any prior activity of the senses. Avicenna explicitly denies this in the *Salvation*, and he briefly recounts the role played by sensation and imagination as aids to the intellect in its acquisition of the simple concepts signified by the terms of the proposition, whereupon the cogitative faculty combines the terms into a proposition.\(^{23}\) Since these are the natural mechanisms on which human intellectual activity depends, they do not constitute “external” aids to the intellect. But Avicenna is nonetheless adamant that neither the actual conceptualization of the terms of the proposition, nor the act of assent itself, is accomplished by any of these ancillary faculties. Rather, as soon as the sensory mechanisms have been successfully engaged, “it is necessary for the mind to assent to them from the beginning, without any other cause, and without being aware that this is one of the things which is acquired instantly; rather, the human supposes that he always knew it.”\(^{24}\) Thus, the primaries are not “innate” in the sense that they are actually present within the individual human mind from the outset of its existence, but they are immediate in that their acquisition requires nothing more than the conception of their terms. Still, the primaries do have the subjective “feel” of innateness, since their acquisition is pre-conscious and does not require effort or attention.\(^{25}\)

In contrast to the primaries, Avicenna also identifies a second category of principles that are purely intellectual, but not immediate. Avicenna considers them to be principles, because he holds that the middle terms that cause the believer to assent to them are somehow innately present in the intellect as soon as the believer conceptualizes the extreme terms. Avicenna labels these propositions descriptively, as “premises whose syllogism is innate” (muqaddimāt fitriyya al-qiyāsāt).\(^{26}\) They share an affinity with primaries because they are purely conceptual and require no external sensory input beyond the basic contribution made by sensation to the conceptualization of their terms.\(^{27}\) Avicenna’s examples of such principles always involve simple mathematical propositions:

\(^{23}\) The cogitative faculty is the compositive imagination under the direction of the intellect. See *Cure: Psychology* 4.1, 165–6.

\(^{24}\) *Salvation*: 101.

\(^{25}\) This is the common understanding of innateness in the Arabic Aristotelian tradition, going back to al-Fārābī. See al-Fārābī 1948: 8–9 (trans. at McGinnis-Reisman 2007: §6, 70); al-Fārābī 1986–87: vol. iv, 23–5.

\(^{26}\) *Cure: Demonstration*: 64; cf. Avicenna 1892: 58; 1984: 23.

\(^{27}\) *Cure: Demonstration*: 63–4: “Or the aid is innately (gharīziyyan) in the intellect, that is, present (jādiran), this being what is known by a syllogism whose middle term is existent by nature (bi-l-fitra) and present to the mind.”
Whenever the conclusion (al-matlūb) is present, composed from two terms, a major and a minor, this intermediary between them is represented for the intellect without any need for its acquisition (ilā kasbi-hī). This is as in our saying, “Every four is even.” For if someone understands “four” and if he understands “even,” then “Four is even” is represented for him, since “[Four] is divisible into two equals” is immediately (fī l-hāl) represented for him. And in the same way, whenever “four” is represented in the mind and “two” is represented, then “[Four] is double [two],” is represented immediately. But if, in place of these terms, it is “six” and “thirty,” or other numbers, the mind needs to seek the middle.\(^{28}\)

Despite the fact that these mathematical propositions require a middle term for their verification, their difference from the primaries is difficult to recognize psychologically, since that middle term is always naturally present in the intellect whenever the extremes that it unites are present. The middle term does not need to be sought or acquired through a separate process of investigation or reasoning. Avicenna implies that this is the case for all humans of normal intelligence, as is also the case with the primaries. This explains why only the simplest of mathematical propositions are included under this category. While the proposition “Four is double two” is one whose syllogism is innate, the proposition “Thirty is five times six” is not. Avicenna’s propositions with innate middle terms seem to prefigure the Kantian synthetic \textit{a priori} in some interesting ways. Both are principally exemplified by mathematical propositions (in Kant’s case, the famous example of $7+5=12$); both are non-empirical and thus easily confused with analytic truths.\(^{29}\) In spite of this kinship, however, both the Kantian and Avicennian propositions are synthetic or ampliative, since they cannot be verified simply with reference to the application of the logical principle of non-contradiction to the subject and predicate concepts.\(^{30}\)

\section*{IV Sensible and Empirical Propositions}

The preparatory role played by the external and internal senses in the acquisition of primary propositions and concepts must be carefully

\(^{28}\) Ibid.: 64.

\(^{29}\) In the \textit{Book of Science}, Avicenna notes that not everyone who has a syllogism in his mind is consciously aware of its constituents or able to articulate them linguistically. The implication is that propositions of this sort appear to most people to be self-evident since they are not aware that they have already performed some calculation in accepting them as true. See Avicenna 1955–8: 70.

\(^{30}\) See Kant, \textit{Prolegomena to Any Future Metaphysics}: §2b, 267, 12: “All analytic judgments depend wholly on the principle of contradiction, and are in their nature \textit{a priori} cognitions, whether the concepts that supply them with matter be empirical or not. For the predicate of an affirmative analytic judgment is already thought in the concept of the subject, of which it cannot be denied without contradiction.”
distinguished in Avicennian epistemology from the contribution made by experience (al-tajriba) and related sensory operations to the formation of demonstrative principles.31 “Experience” occurs when the intellect receives some aid from the senses beyond their role in prompting the conception of the intelligibles to which the terms of a universal proposition refer.

The most basic type of empirical propositions that Avicenna recognizes are “sensibles” (al-mahṣūsāt), exemplified by such statements as “The sun is shining,” “Fire is hot” and “Snow is white.”32 Sensibles seem to be intellectual beliefs that immediately supervene upon the perceptions of the external senses. While the senses provide the grounds for assent, the fact that we assent to propositions about what we are experiencing immediately requires the involvement of the intellect.33 Sensible propositions are not simply expressions of my perceptual awareness of the sun, but rather, they signify my conscious belief that it is in fact a sunny day. They are facts of which I can be certain, even though they are not necessary or universal in their own right, and so they provide one of the key motivations for Avicenna’s desire to extend the realm of certitude to include the possible.

The propositions for which Avicenna himself reserves the label of “experiential” (mujarraba) are similar to the sensibles because both require the input of the senses as a necessary condition for the intellect to assent. In the case of experimentals, however, the immediate evidence of sensation is not sufficient. Two further requirements must be met: (1) the sensation must be repeated and preserved in memory; and (2) the mind must implicitly reason that the repeated connection between the terms of the proposition represents an essential, and not merely an incidental, relation. For this reason, experiential propositions rely on a latent syllogism which the mind applies to the empirical observations. Avicenna describes this latent process in the Salvation, where he uses his favorite medical example of the purgative capacities of scammony:

Experientials are things to which sensation, in cooperation with the syllogism (bi-shirka min al-qiyās), causes assent to occur. And this is because whenever the existence of something belonging to something else is repeated in our sensation, such as the purgative capacity belonging to scammony and the regularly observed motions of the heavens, this is [in turn] repeated for us in memory. And whenever this is repeated for us in memory, an experience originates in us from it because

31 For discussions of experience in Avicenna, see McGinnis 2003 and 2008; Janssens 2004b. For the background, see al-Fārábī 1986–7: vol. iv, 23–5.
32 Salvation: 97; Avicenna 1892: 56, 1984: 120.
33 For the role of sensation in knowledge, see Cure: Demonstration 3.5: 220–3; McGinnis-Reisman 2007: 152–6. Analysis of this and related texts is found in McGinnis 2008: 92–7.
of a syllogism which is conjoined to the memory, namely, that were this thing, such as purgation, for example, only coincidentally and incidentally [caused] by scammony, and not from something necessitated by its nature, then it would not exist for the most part without variation, to such an extent that were it not to occur, the soul would deem this a rare event and seek a cause for what happened, because of which it fails to occur. And whenever these sensations and this memory come together with this syllogism, the soul acquiesces, because of this assent, that it is of the nature (min sha’ni-hā) of scammony to purge bile when it is given to drink.

Avicenna adds that experiential propositions may yield not only “a decisive (jazman) judgment,” but also a judgment “for the most part” (akthariyyan), that is, one that pertains to regular connections that admit of the occasional exception or impediment. In either case, however, experience will only provide a principle of certain knowledge if the knower forms “a strong belief about which she has no doubt” that the association in question is essential and not mere coincidence. The hidden syllogism is what removes this doubt and raises the remembered observations to the level of intelligibles, through recourse to the maxim that regular occurrences cannot be the result of chance. But the fact that the reasoning in question is automatic and unconscious justifies in Avicenna’s mind the claim that experiential propositions are principles of knowledge and not conclusions.

In his further explanation of how experience is able to yield certitude, Avicenna is careful to place some limitations on experiential propositions. Avicenna acknowledges that experience does not provide us with complete causal knowledge of why the predicate always belongs to the subject – for example, experience alone cannot reveal to us the specific property of scammony that makes it an effective purgative. So experience provides causal knowledge only insofar as it enables us to grasp that the existence of the predicate in the subject has a regular cause, whatever the cause may be. Moreover, experience only provides certitude that is commensurate with what has actually been observed, and it must take into account the possibility of impediments to the regularity of physical causality. If

35 Avicenna 1892: 56–7 (my translation); cf. 1984: 120. See also Cure: Demonstration 1.9: 95.
36 To substitute a contemporary medical example, a case of Avicennian empirical knowledge would result from a clinical trial that definitively established that a drug, x, cured a disease, D, in all or almost all cases, even though the researchers had not discovered the chemical composition of x that makes it an effective treatment for D.
37 Cure: Demonstration: 95: “This [i.e. purgation] is necessitated by a proximate potency in [scammony], or a property of it, or a relation conjoined to it. So by this type of evidence it is verified that there is in or with scammony by nature a cause (‘illa) which is purgative of bile.”
a judgment extends beyond those limits, experiential certitude will not ensue. As Avicenna himself clarifies regarding the scammony example, what experience sanctions is not, strictly speaking, that “Scammony purges bile,” but rather, that “Scammony in our country always purges bile if it is sound.”

Avicenna elaborates further on this point by imaging an objector who wonders whether experience would license the inference by a Sudanese person that “All human offspring are black.” Avicenna argues that such a judgment would not constitute an experiential premise because the implicit syllogism that confers certitude on experience is valid only insofar as it conforms to the conditions under which the experience has taken place. So unless one’s repeated observations encompass the universal taken absolutely, the syllogism implicit in experience cannot issue in a proposition that is absolutely universal. Thus, to say that experience is a source of certitude is not to claim that experience is infallible. One may delude oneself that one’s experience is absolute, but this does not remove certitude from experience. Some people may make formal mistakes in their reasoning, as Avicenna notes, but this potential for error does not render the formal structure of the syllogism invalid. It simply means that we must be attentive, in utilizing experiential propositions, to the conditions under which they can and cannot produce certitude. Thus a person with experience limited to the Sudan can only acquire experiential certitude that Sudanese offspring are black.

Avicenna’s cautious approach to empirical knowledge in the *Salvation* and *Cure* should not lead us to think that he considers the acquisition of full-blown causal knowledge to be impossible without explicit syllogizing or inferential activity. In his later *Pointers*, Avicenna adds to the list of syllogistic propositions akin to experience a class of premises he calls “intuited” (*ḥadsiyyāt*), a term that is intended to invoke the theory of intuition developed in his psychological writings:

These are propositions in which the principle of the judgment (*mabdā‘ al-ḥukm bi-hā*) is a very powerful intuition of the soul (*ḥads min al-naissance gwī jiddan*) with which doubt ceases when the mind yields to it. But if someone were to

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38 Ibid.
39 Ibid.: 96.
40 Ibid.: 97: “And we do not say that experience is a protection against error, or that it always causes certitude to occur. For how is the syllogism too not just like this! But rather, we say that certitude often befalls us from experience, so that one seeks a way to make what does occur from it produce certitude.” The attentiveness required, though, seems to raise problems for the identification of empirical propositions as principles rather than conclusions, that is, the syllogizing here seems less clearly latent.
41 For discussion of this theory, see Gutas 1988: 159–76; Marmura 1991b; Gutas 2001.
deny this [judgment] because he was not entrusted with the perspective which is necessitated by this capacity of intuition, or by way of rejection, then it would not happen that what is verified for the intuitive person would be verified for him. An example is our judgment that the moon gets its light from the sun because of the patterns of the formation of light on it. And in these too there is a syllogistic force (quwwa qiyyāsiyya) which is very similar to the experientials; and so too with the testimonials.42

Avicenna’s example of an intuited premise is drawn from Aristotle’s account of acumen, or “quick wit” (anchinoia), the ability to discern the middle term upon observation of the extremes.43 In his psychological writings Avicenna elaborates extensively on this rather brief passage in Aristotle, building a theory of the intuition of middle terms which also provides the foundation for his theory of rational prophecy.44 While Avicenna’s account of intuition has received the most attention in its application to the special case of prophecy, intuition is also an everyday phenomenon that admits of greater and lesser degrees. Usually intuition is mixed with inferential thinking to some extent, and only prophets and geniuses are entirely exempt from the normal methods of acquiring new knowledge. But anyone can be said to have intuition just in case she is able to discover a middle term immediately upon seeing the two extremes it connects, as in the example of the sun’s illumining the moon. When that occurs, the intuitive grasp of the middle term yields a principle of knowledge that is certain and indubitable, as Avicenna says above. Because there is no conscious, explicit syllogizing involved, intuited propositions count as principles in the same way as experiential propositions, and propositions with innate syllogisms.

What sets intuited propositions apart from experientials is their reliance upon the intuitive capacity of the believer, which provides her with the specific middle term for some syllogism. This in turn yields certitude not simply that there is a causal connection (as in experientials), but also regarding the identity of the cause. This sort of intuitive insight, as in Aristotle, occurs immediately upon seeing the connected extremes. So simply having the requisite observations is not sufficient to guarantee that the mind will form an intuited proposition, as seems to be the case with experientials, where the repetition combined with the hidden syllogism certifies the belief. Nor can repetition make up for the lack of intuitive insight, because intuitive judgments go beyond experiential ones in actually

apprehending the cause. If it is not apprehended in the first place, there is nothing to repeat; if it has been apprehended, no repetition is needed to reinforce it.\(^{45}\) Of course, people lacking intuition might be able to acquire the intuited proposition as a conclusion rather than a principle, but their syllogizing will be explicit rather than latent.

In Avicenna’s account of intuited premises, then, we see both the importance of subject-relativity to the status of propositions as principles, and the creative application of psychological theories to the epistemological exploration of the foundations of knowledge. Here, as with all forms of empirical knowledge, the flexibility of the notion of a “principle” is especially evident, and even mediated propositions can be considered basic if the psychological mechanism which gives rise to them does not require conscious ratiocinative effort.

\*V Testimony, Authority, and Consensus: Avicennian Social Epistemology*

Amongst the propositions that are in some way empirical are those I have translated as “testimonials” (\textit{al-tawâtûrât}), a term drawn from legal theories to describe a tradition concerning the prophet Muhammad that has been handed down by an unbroken, reliable chain of transmission.\(^{46}\) Avicenna generalizes the concept to cover all true beliefs about historical figures and geographical facts that we have not directly observed for ourselves. The examples he gives are the existence of Mekka, Galen, Euclid, and so on.

Since they rely upon indirect observations reported by witnesses, testimonials only evoke certain and complete assent under circumstances which remove all doubt as to the truth of the reports and the reliability of the witnesses: “Testimonial propositions are those in which the soul rests completely, so that doubt (\textit{al-shakk}) is removed from them despite its possibility, due to the multiplicity of witnesses, insofar as suspicion (\textit{al-rîba}) is removed from the occurrence of these testimonies by way of agreement and corroboration.”\(^{47}\) While Avicenna does not explicitly attribute a hidden syllogism to the mind’s act of assenting to these propositions, it is suggested by their affinity to the experientials. Whereas in experience, the knower reasons subconsciously that “What happens always or for the most part cannot be coincidental,” in testimony, she would seem to reason that

\(^{45}\) This is how Naṣīr al-Dīn al-Ṭūsī (d. 1274) interprets intuited premises in his \textit{Commentary on the Remarks: Avicenna} 1960: i 218.

\(^{46}\) For a useful discussion of al-Ghazâlî’s understanding of \textit{tawâtûr}, see Weiss 1985.

\(^{47}\) Avicenna 1892: 57.
“It would be impossible for all these witnesses to be mistaken, lying, or colluding.”

Despite his emphasis on the multiplicity of witnesses as an important ingredient in the ability of testimonials to produce certain assent, Avicenna openly eschews numerical quotas, perhaps in response to attempts to set minimum numbers for authenticating a tradition (hadith) concerning the prophet. The evidence that certitude has been achieved rests primarily on the psychological state of the knower – the tranquility of her mind – rather than on any determinate feature of the proposition itself. We know that the witnesses are sufficiently numerous because certain assent has been evoked and doubt, while objectively possible, has been removed: “It is the certitude which decides the completeness of the observations, not the number of the observations.”

Hence these propositions will vary in strength from one person to another, not only because it is impossible to predetermine what number of corroborating witnesses will be sufficient in any given case, but also because no amount of verbal argument will satisfy someone whom the reports have failed to convince.

That Avicenna should allow for individual variations at the level of the principles of knowledge should not of itself be surprising, for we have already seen that he does this even for the primaries, on the basis of the relative obscurity of the terms that comprise these self-evident propositions. In the case of testimonials, however, these variations appear to be more pronounced precisely because the knower has no direct access to the observations upon which her assent is based, and hence, she has no personal guarantee of their veracity. Still, once assent is evoked, Avicenna remains confident that the testimonial proposition necessitates a belief that is reliable and certain.

Avicenna’s inclusion of testimonials amongst the principles of certain knowledge seems to prefigure one of the main categories of what contemporary philosophers refer to as “social epistemology.” Avicenna has taken a major step towards recognizing sources of justification that are external to the believer’s own evidence and acknowledging that they justify some of our most basic empirical beliefs. But it is also important to recognize the limited scope of Avicenna’s testimonials, since he considers other facets of the social basis of knowledge in a more ambivalent light. Testimonials for Avicenna pertain only to what is sensibly observable, that is, to the existence and actions of individuals. As such, they are subject to the same limitations as the sensibles: that is, while testimonials yield certitude,

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49 Avicenna 1892: 57; 1984: 121: “These propositions are also such that he who denies them is not convinced or silenced by words.”
they do not provide essential, universal knowledge. I may be certain on the basis of testimony that Avicenna was a real historical person, but Avicenna’s existence itself is not the basis for acquiring any further scientific knowledge.\(^{50}\)

Testimonials, then, do not extend to the realm of the universal, and Avicenna does not allow us to acquire universal principles simply on the basis of the reports of other people. I may say that I know that \(e=mc^2\) because I know from testimony that Einstein was a brilliant physicist, but unless I myself understand the equation, it is not an item of knowledge for me. And once I do understand the equation fully, the reliability of physics textbooks and Einstein’s reputation is irrelevant to my knowledge.

That this is Avicenna’s view is clear from his discussions of non-demonstrative premises – those suitable for use in dialectical or rhetorical arguments – under which fall most beliefs derived from the authority of other people. The basic notion underlying Avicenna’s account of these principles can be traced back to the *endoxa*, or common opinions of Aristotle’s *Topics*. In Arabic, *endoxa* was usually translated as *al-mashhūrāt*, “widely accepted,” i.e. common or popular beliefs to which assent is “based solely on notoriety.”\(^{51}\) The lowest forms of popular belief are “received” (*maqbūlāt*) beliefs, that is, beliefs that depend upon some form of partisan adherence to the authority of a single person or a small group of people, such as a charismatic politician or a religious sect.\(^{52}\)

Received premises are beliefs (*ārā*) to which a statement (*qawl*) of someone in whose veracity we have faith causes assent to what he says to occur, either because of some heavenly matter (*li-amr samawī*) which is proper to him, or because of a powerful belief and thought (*li-ray wa-fikr*) which is distinctive of him, for example, our believing things which we received from the Imams of the Laws (*A’ imma al-Sharā’ī*) – peace be upon them – before we had verified them through demonstration or what is similar to it.\(^{53}\)

Avicenna does not claim that received propositions are false, and indeed, he indicates that some may even be demonstrable.\(^{54}\) But they have a lower epistemic value if the person who holds them does not have independent evidentiary grounds for accepting them. In the case of received premises, a major factor seems to be that many represent truths that can only be verified

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\(^{50}\) Avicenna, like most medieval authors, doesn’t consider the possibility of a science of history.

\(^{51}\) Avicenna 1892: 58, 1984: 122.

\(^{52}\) On this, compare al-Fārābī 1986–7: vol. iv, 20–1, where he claims that testimony (*al-shuhūda, not tawātir*) can at best provide “accidental certitude.”


\(^{54}\) But at ibid., he concedes that many will contain some falsehood.
by a discursive inferential process – they represent potential conclusions of arguments, not their premises. So accepting them simply on the basis of authority represents the paradigm case of what Arabic philosophers and theologians call *taqlīd* – partisan adherence to a belief on the basis of authority alone.55

What of the status of common beliefs that are not received on the basis of authority or partisanship, but which depend upon the consensus of the majority of people? Avicenna sometimes refers to this subcategory of widely accepted premises as “conventional” (*al-dhā‘i‘āt*) or “praiseworthy” (*al-mahmūdāt*), i.e. what is considered moral within a given social group, a terminology that reflects the fact that these propositions are principally ethical and political.56 While many people accept these propositions as if they were primary truths, Avicenna insists that “they are not innate (ghayr fitriyya),” but “established in [our] souls because custom has repeated them since childhood.” Avicenna mentions a variety of social and emotional factors that produce this assent, such as the human desire for harmony and peace, feelings of guilt and friendliness, “ancient customs that remain and have not been repealed,” and “numerous inductions.”57 While Avicenna does not elaborate much on this list, the general point seems to be that the political or social nature that is proper to humans propels us to accept the practical truth of customs and beliefs that promote harmonious political associations, and the common moral beliefs that a society shares represent those practices and rules that have been shown to fulfill this aim.

The epistemic limitations that Avicenna places on these popular beliefs are in part a function of the fact that they express practices that are only meaningful within the context of determinate social conventions and institutions.58 Such propositions cannot be grasped simply by the use

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55 At *Cure, Psychology* 5:6: 249–50, Avicenna argues that rational prophecy does not constitute a form of *taqlīd*. In the *Deliverance from Error*, 19, 21, 26–34, al-Ghazālī charges that many philosophical and religious sects are guilty of *taqlīd*. See also Frank 1991–2; Griffel 2005.
56 The former label, which literally means “widespread” or “commonplace,” is used at *Salvation* 4: 100; the latter is used in Avicenna 1892: 58–9; 1984: 122–3. In the *Cure, Demonstration*: 66, Avicenna simply uses the generic *mashhūrāt* for these premises.
57 Avicenna 1892: 59; 1984: 123: “Thus the widely-known propositions are concerned with either obligations, reformatory education and those things on which divine laws agree, character and sentiments or inductive conclusions.” That is, when one removes the primaries and estimative propositions from this category, what remains are principally ethical dicta. For discussions of these types of propositions in Avicenna and others, see Marmura 1969; Black 1990: 138–52; 1995: 456–60; Javadi 2007.
58 *Salvation*: 100; cf. *Cure, Demonstration*: 66.
59 That is not to suggest that Avicenna is endorsing pure cultural relativism here. Rather, I take him to be claiming that “lying,” “promising,” “justice” etc. are concepts whose meaning is only fixed with reference to social relations amongst humans. It may turn out that all human beings discover that
of our innate cognitive capacities because the phenomena to which they refer do not occur in nature. The propositions “Justice is honorable” and “Lying is base” are not naturally (‘ala l-fīrat) necessitated by either the intellect itself, or even the internal sense power of estimation. That is why one can doubt the truth of ethical maxims, whereas it is impossible to doubt a primary truth such as “The whole is greater than its part.” Nonetheless, Avicenna acknowledges that most people become so habituated to their belief in the universal truth of conventional ethical dicta that they will take them to be necessary and indubitable. In order to overcome that tendency, Avicenna suggests that we conduct a thought experiment:

If a human being imagines himself as created at once with a complete intellect, without education and without abiding by the psychological and moral sentiments, he would not assert any such propositions. Rather, it would be possible for him to be ignorant of them and to stop short of asserting them. Avicenna’s social epistemology, then, accepts that ethical principles can only be established on the basis of the consensus of a community of individuals through the laws of a nation, religion, or similar institution. He rejects the claim that there is any intrinsic necessity in even seemingly unproblematic propositions such as “Lying is bad.” The goodness and badness of human acts cannot be intuited intellectually; rather, their recognition is conditioned by upbringing, by the moral agent’s individual temperament and experience, and by various other social influences. Avicenna does not see this as unduly troubling or relativistic. What is problematic, in his view, is the tendency of the general populace to cling irrationally to a conventional belief even when it is clearly inappropriate in a given situation. In this case

promise-keeping is a salutary practice given their shared rational nature – but Avicenna seems to think they could only formulate the idea of promise-keeping once they had established the social institutions which define what it means to make and keep promises.

See Avicenna 1892: 59; 1984: 122–3: “If they are true, they are not related to the primary propositions and what resembles them, since the truth is not evident to the primordial intellect (al-‘aql al-awāl) except by reflection and thought (bi-naz. arin wa-l-fikrin) even though this intellect finds them praiseworthy (maḥmūda).”

Avicenna 1892: 58; 1984: 122: “These are opinions such that if the human being has his pure intellect, his estimative power and his senses free from them; if he is not educated to accept and acknowledge their judgments; if induction does not incline his strong opinion to make a judgment due to the multiplicity of particular cases; and if they are not called for by that which is in the human nature of mercy, abashment, pride, zeal, and so on, then the human being does not assert them due to abiding by his intellect, his estimative power, or his sense. Examples are our judgments that stealing the wealth of others is an ugly act, and that lying is an ugly act which must not be pursued.”


The target here is the Mu’tazilites, who claimed that good and evil are autonomous, objective properties of human acts that all humans can intuit through their intellectual powers. See Marmura 1969: 396.
the commonly accepted proposition becomes a “supposition” (*maznūna*),
that is, an opinion to which adherence is given unreflectively. Avicenna’s
standard example of such a belief is the maxim that you should always help
your kin:

As for the supposed (*al-maznūnāt*), they are [conventional beliefs] about which
one holds an opinion without a decisive belief occurring. This may be on account
of their resemblance to widely accepted beliefs, for [supposed premises] are widely
accepted at first glance, without investigation. When they are investigated, one
comes to realize that they are not [in fact] widely accepted. An example: “Help
your brother, be he the persecutor or the persecuted.” For this is supposed [to be
true] as soon as it strikes the hearer, and one inclines to it somewhat. Then, when
it is investigated, it is widely-acknowledged that it is not required that one help
the wrongdoer, be he your brother or your child. But one does this deed at once,
until it is investigated.\(^{65}\)

In the example, then, the believer presumes that helping your kin is one
of the basic moral maxims of her society, and she unthinkingly helps
her brother to evade capture even though he is guilty of a crime. To the
extent that such a person rushes to judgment, her mind acquiesces to the
proposition and forms a determinate belief. But, Avicenna contends, if she
were to pause to reflect on this belief, she would recognize that the maxim
is grossly inappropriate in the situation at hand. In his more pessimistic
moments, Avicenna suggests that common people who “lack cleverness”
(and clever folks whose judgment is temporarily clouded!) will submit
to these beliefs far too easily.\(^{66}\) But Avicenna is clear that even though
these beliefs never attain the level of necessary acceptance conducive to
certainty, the social consensus upon which they rest is a legitimate ground
for accepting them, and indeed, the only ground available. The task, then,
is not to convert what is apparently a common belief into a necessary one,
but rather, to convince the believer that her mistaken view is not in fact in
harmony with the accepted norms within her society.

VI SELF-AWARENESS, INTROSPECTION, AND CERTITUDE

In justifying his claim that widely accepted, ethical beliefs do not evoke
necessary assent from either the intellect or the senses, Avicenna invites the
reader to engage in a thought experiment, imagining herself to have been

\(^{65}\) *Cure. Demonstration*: 66. Similar accounts are found in Avicenna \(1892: 61; 1984: 125; \) *Salvation*\(^b\)
900–1.

\(^{66}\) Ibid.: 100.
newly born, while possessed of the full cognitive capacities of an adult. This introspective technique is one of which Avicenna is fond, although it is better known from its appearance in the famous “Flying Man” experiment used in Avicenna’s psychology to alert the reader to her innate awareness of herself, an awareness that Avicenna contends is entirely independent of any sensory experience or evidence.

This much-discussed thought experiment has a number of parallels to the thought experiment used to show that widely accepted ethical propositions are not innate or necessary. Avicenna asks the reader to imagine herself born all at once, but with fully mature and functioning cognitive powers. This serves to ensure that all knowledge based on memory, experience, and instruction is bracketed. In the Flying Man, however, Avicenna also has us imagine ourselves suspended in a vacuum (i.e. floating or flying) so that we are in a state of total sensory deprivation. In contrast to the experiment involving ethical premises, Avicenna here reaches a positive conclusion: he argues that even in such a state, one would continue to experience an awareness of one’s individual self or existence. This thought experiment, then, shows that self-awareness is an innate, primary cognition.

These two examples suggest that the function of thought experiments in Avicenna’s epistemology is to isolate the psychological mechanisms by which various forms of knowledge are produced. They cannot reach substantive metaphysical conclusions – the Flying Man argument is not sufficient to prove demonstratively the immateriality of the rational soul – but they provide valuable information about the epistemological status of different types of cognition. Moreover, while Avicenna accords important roles to experience, testimony, and consensus in providing us a rich diversity of starting points in our quest for knowledge, he also insists that the input of the intellect is essential to transform what has been reported by the senses into universal, intelligible propositions. It is the intellect’s implicit syllogizing that ensures that experiential and testimonial knowledge is productive of certitude. But even this is not sufficient in Avicenna’s view, for he rejects any rules, numerical quotas, or similar external criteria by which to judge that certain knowledge has been attained. It is the certitude itself that tells us we have arrived at that point. And this seems to reflect the


68 Avicenna makes this point in Notes: 161: “This is as it were evidence (*bayyina*), not a demonstration (*burhān*), that the soul is aware of itself.”
fundamental place that self-awareness and introspection play in Avicenna’s epistemology.

Most striking in this regard is the fact that Avicenna treats self-awareness as the most basic item of innate knowledge that we possess. The Flying Man experiment alerts us to the primitive nature of our awareness of our individual existence, which is independent of our perception of our bodies and the knowledge that our senses provide us through our bodies. Self-awareness is also a precondition for our ability to have any other cognition. In some of his later works, Avicenna describes self-awareness as innate (gharīza) to the soul, and as direct, immediate, and unconditioned, even when we are not consciously attending to it. At one point Avicenna identifies self-awareness with the soul’s very existence. In this respect, self-awareness has a status similar to the primary concepts and propositions: it is properly basic and implicit in every act of knowing other things. Should someone refuse to admit the brute fact of self-awareness, only a method of alerting, reminding, or drawing attention to the primordial experience – a thought experiment – can offer a remedy.69

While self-awareness is cognitively primitive for Avicenna and constitutes a principle of knowledge in its own right,70 Avicenna’s suggestion that it is implicit in our knowledge of other things also indicates the role it plays in grounding certitude more generally. This role takes us back to Avicenna’s inclusion of a KK condition in his definition of certitude, a condition that elsewhere Avicenna compares to second-order self-awareness:71

Certitude is to know that you know, and to know that you know that you know, ad infinitum. And the apprehension of one’s self is like this. For you apprehend your self, and you know that you apprehend it, and you know that you know that you apprehend it, ad infinitum. The human soul’s awareness of itself is primary for it, for it does not arise for it through acquisition... And as for the awareness of the awareness, it belongs to the intellect.72

Insofar as certitude requires that the subject knows that she knows, then, it rests upon the foundation of self-awareness and is open to introspection.

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70 In Avicenna 1892: 56; 1984: 120, he attempts to incorporate this point into the epistemic classification of premises by introducing “observational” premises as an umbrella category which includes both sensibles and “reflective propositions” (qadāyā i’tibāriyya), exemplified by our introspective awareness of our own existence and our subjective states, such as our knowledge that we are thinking, afraid, or angry.
71 See above at n. 9ff.
Indeed, in a remarkable, though rather perplexing discussion in the *Psychology* of the *Cure*, Avicenna suggests that certitude is always marked by an inner feeling of confidence or conviction that functions as the primary indicator that actual knowledge has been attained.

The case that Avicenna describes here is not an uncommon one—it is the “eureka moment” which immediately precedes the discovery of the solution to a problem. Avicenna argues that in these eureka moments, the subjective aspect of certitude, the feeling of confidence, precedes the conscious articulation and awareness of the knowledge itself, rather than following upon it as is usually the case:

Another type of conceptualization is like what happens to you when a question is asked of you about what you know or what you are close to knowing, and the answer to it is presented to you in an instant. For you would be certain that you are answering it with something that you know, without there being any distinguishing there at all. Rather, you only begin to distinguish and compose in your soul when you begin the answer which proceeds from your certitude in your knowledge of it, before distinguishing and composition.73

Against those who would claim that such knowledge is only *potential* until it has been articulated, Avicenna claims that since the confidence experienced by the knower is actual—she is certain that she does know the answer, not simply that it will eventually come to her—there must be something really present in her mind about which she is certain: “For how could one be certain of the state of something unless the thing (*al-amr*) in respect of which one were certain were known?”74

The confidence felt by the respondent here is thus the main evidence on which Avicenna rests his argument. The certitude is real, not illusory, as can be verified not only by the mental state of the respondent, but also by the fact that the answer turns out to be correct. Even if such situations are infrequent, many people have experienced, either in themselves or in others, cases where a “hunch” has proven fully reliable. Moreover, as Avicenna emphasizes here, the mental state of certitude is itself an intentional state, that is, certitude is always certitude of something, and that something, Avicenna claims, must be an intelligible already present in such a knower.

While this argument seems problematic from many angles, it is important to note that Avicenna does not claim that such feelings of confidence are never mistaken, or that certitude is simply a subjective state. Certitude for Avicenna does contain an important subjective component, that is, confidence that one holds a true belief, or knowledge that one knows.

Without that subjective component we will not have certain knowledge even if our belief is both true and justified. So confidence is necessary for certitude and knowledge, but it is not sufficient.\textsuperscript{75} Avicenna says nothing in this passage to suggest that the feeling of certitude itself will verify the content of the knowledge about which one is certain. His focus is rather on the fact that the intentionality implicit in certitude verifies that there must be something present in the intellect that constitutes the object of knowledge. Since certitude is a second-order belief, then, when one experiences it there must be some first-order belief that is its object. So even if the person with the eureka moment is not yet consciously aware of what that first-order belief is, its actual existence is attested to by her actual certitude and verified by her ability to manifest her knowledge at will.

\textbf{VIII Conclusion}

What general points can we make about Avicennian epistemology when viewed through the lens of his account of the principles of knowledge? While it is true that there are many elements of naturalism in Avicenna’s epistemology, particularly in his account of the different types of empirical knowledge, his official accounts of certitude always include subjective states that are open to introspection. So there is a strongly internalist streak in Avicennian epistemology, as evidenced in Avicenna’s definition of certitude as a form of knowing that we know, and in his assertion that self-awareness is our most fundamental cognitive act.\textsuperscript{76} And while Avicenna rejects any strong notion of innate, \textit{a priori} cognition, he explicitly defends a moderate form of foundationalism and recognizes the existence of some properly basic beliefs.\textsuperscript{77} Nonetheless, the account that he provides of the foundations of knowledge has a certain reliabilist ring to it: the epistemologist (or logician) defers to the psychologist to explain why certitude is conferred by various sources, and why some feelings of confidence are more well-grounded than others. Achieving certain assent in and of itself does not depend upon any actual articulation by the knower of why she is certain or

\textsuperscript{75} Contra Nusebeih 1989, who makes this claim based on what I believe is a misinterpretation of the role of the Agent Intellect in Avicenna’s theory of intuition.

\textsuperscript{76} This mix of internalist and externalist approaches is also present in al-Fārābī, as I argue in Black 2006. But Avicenna’s interest in self-awareness is far more pronounced than anything we find in al-Fārābī.

\textsuperscript{77} McGinnis 2008, makes a compelling case for seeing Avicenna as a “naturalized epistemologist,” particularly with reference to the empirical aspects of knowledge, and in many ways my reading is compatible with his. But I think that there are strong internalist elements in Avicenna that make this characterization of his epistemology incomplete.
from what mental mechanisms her certain beliefs arise. But in the end Avicenna believes that a full account of the foundations of knowledge remains in principle cognitively accessible to every believer through introspection, although in practice only the philosophically perspicuous actually attain that level of justification for their beliefs.\textsuperscript{78}

\textsuperscript{78} This research was supported by the Social Sciences and Humanities Research Council of Canada.
Avicenna intends the *Metaphysics* of his *Cure* to have the same content as Aristotle’s *Metaphysics*, namely, the same science of metaphysics, or *ilāhiyyāt*. But he reorders the treatise, putting it in what he thinks is the appropriate scientific order of exposition, based on his own conception of this science: that conception, in turn, derives from Avicenna’s interpretation, both of what Aristotle explicitly *says* about metaphysics, and of the conception that Aristotle is presupposing when he *does* metaphysics. Avicenna is thus engaging in a discussion, extending from the fourth century BCE to our own day, not only about metaphysical issues, but also about the interpretation of Aristotle’s *Metaphysics*. Avicenna tells us that he was suddenly enlightened about the object of metaphysics, and about the contribution of each book of Aristotle’s *Metaphysics* toward knowing this object, by reading al-Fārābī’s little treatise, *On the Aims of the Metaphysics*, and indeed, he follows al-Fārābī on many points, but he also has important divergences from al-Fārābī as well as from his other predecessors. In this chapter I will start with a brief discussion of al-Fārābī’s and Avicenna’s conception of metaphysics as a science of being, and then look at how Avicenna develops this conception in some Farabian and some un-Farabian ways, both in the way he structures the *Metaphysics* of the *Cure*, and in the way he addresses a series of fundamental and controversial topics: the concept of being, unity and numbers, knowledge, and universals.

Al-Fārābī and Avicenna assume that Aristotle’s *Metaphysics* transmits a single science, which Aristotle calls wisdom, or first philosophy or theology (*theologikē = ilāhiyyāt* or *al-‘ilm al-ilāhī*, the usual Arabic ways of saying “metaphysics”); they also assume that every science has a single “aim” (*skopos = gharad*), i.e. a single primary object, such that the science treats everything else that it treats because it has some relation to that aim.

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1 So in Avicenna’s autobiography, edited with translation in Gohlman 1974: 30–5; also translated in Gutas 1988: 28.
(Thus the “aim” of medicine is health; medicine also discusses anatomy, the functions of the parts of the body, pharmacology, etc., but only because they have some relation to health.\(^2\)) As al-Fārābī puts the problem in *On the Aims of the Metaphysics*,

Many people have followed their fancy that the meaning and content of this treatise is the account of the Creator (glory be to Him, be He exalted!) and the intellect and the soul and the other things that are related to these, and that the science of metaphysics and the science of theology [lit. the science of unity] are one and the same. And thus we find that most of those who investigate [this treatise] are confused and go astray, since we find that most of the account in it lacks this aim, indeed we do not find in it any discussion specific to this aim except what is in the eleventh book, which bears the sign lām.\(^3\)

The reason why most people “fancy” that metaphysics is about divine or immaterial things is not that they have incomplete access to Aristotle’s texts, or that they confuse Aristotelian metaphysics with Islamic theology (kalām), or even that they are influenced by neo-Platonic interpretations of Aristotle (although to some extent they are), but rather, that Aristotle himself repeatedly says so. While modern readers tend to remember mainly the assertion that “there is a science that studies being *qua* being and its *per se* attributes” from the beginning of *Metaphysics* Γ (1003a21–2), the large majority of Aristotle’s descriptions of “first philosophy,” both in the *Metaphysics* and in other treatises, describe it as a science of things which are unchangeable or exist separately from matter. (And his descriptions of “wisdom” say either that it is that knowledge which is most worth having purely for the value of contemplation and not for any practical consequences, or else specify its object by saying that it is about the most noble or divine things, or that it is about first principles and causes.\(^4\)) And yet these texts must somehow be reconciled both with *Metaphysics* Ε\(^1\) 1026a23–32, identifying first philosophy with the science of being *qua* being from Γ\(\text{ı}\), and with the sequence of topics that Aristotle actually

\(^2\) On the concept of *skopos*, see Mansfeld 1994: the neo-Platonic commentaries standardly begin by addressing a fairly fixed list of “prolegomenal questions,” including the *skopos* of the text to be commented on, or of the science which it transmits. For a paradigmatic discussion of the concept, and of the rules for determining the *skopos* of a text, see Westerink 1962: 38–45 (ch. 9), and his brief discussion, p. xxxvi. The example of health as the *skopos* of medicine is from the first sentences of Galen’s *On the Sects for Beginners*, available in translation in Galen 1985.

\(^3\) In al-Fārābī 1890–2: 34.8–13. There is a complete translation of this treatise in Bertolacci 2006: 66–71. Al-Fārābī describes Λ as the eleventh book, rather than the twelfth, because the version of the *Metaphysics* he had was apparently lacking Α, and began with α. On the different Arabic versions and part-versions of the *Metaphysics*, see Bertolacci 2005; revised version in Bertolacci 2006: 5–35 (ch. 1).

\(^4\) See Décarie 1961 for a review of all the relevant texts. The description “science of being *qua* being” occurs only in *Metaphysics* Γ\(\text{ı}\)–2 and Ε\(^1\), and in their parallels in *Metaphysics* Κ.
treats in the *Metaphysics*, including substance and matter and form in books ZH, actuality and potentiality in Θ, and unity and plurality and connected topics in Iota. Some modern scholars, like Werner Jaeger, think that Aristotle changed his mind about wisdom, writing some books of the *Metaphysics*, early in his career, in pursuit of wisdom as a science of eternally unchanging things, and other books, later, in pursuit of wisdom as a universal science of being; but Jaeger had to admit that Aristotle ended by writing (the final transmitted version of) *Metaphysics* E1 in a failed programmatic attempt to unite these texts under a single science.\(^5\) It is unsurprising that medieval readers of Aristotle, like many modern ones, tried harder than Jaeger did to show how this program would work, even if it means filling in gaps that Aristotle had left open. Al-Fārābī tries to show that Aristotle himself carried out this program in the *Metaphysics*; Avicenna, in writing his own *Metaphysics*, tries to show what a *Metaphysics* would look like if the program were actually carried out.\(^6\)

Al-Fārābī in *On the Aims* has two central ideas for solving this problem, one very plausible and one quite unlikely, both of which Avicenna takes up. Al-Fārābī starts by saying that alongside the many particular sciences there is a single universal science, which treats “what is common to all the things that are, such as being and unity, and its kinds and its consequences; and those things that are not attributed specifically to any of the subjects of the particular sciences, such as priority and posteriority and potentiality and actuality and perfection and deficiency and what is like them; and the common principle of all the things that are, which is what must be called by the name ‘God.’” So the science is a science of maximally universal things like being and unity and their attributes, but also of God, because God is *causally* universal, in that He is “the principle of being *simpliciter*, not of one being as distinguished from another being.”\(^7\) Al-Fārābī adds that the science is “about” being in one way, and “about” God in another way, since being is the *subject* (*hupokeimenon, mawdū‘*) which we are trying to explain, while God is the *object* (*zetoumenon, maṭlūb*), the thing we are trying to find by investigating the causes of the subject. This is all plausibly Aristotelian, but it suggests that “the account of the Creator . . . and the intellect and the soul and the other things that are related to these” should be just a *part* of wisdom, while *Metaphysics* E1 simply identifies wisdom with the science of separate unchangeable or immaterial things. Al-Fārābī’s ingenious solution is to say that things can be separate from matter (or separate from natural things) in two ways: either as substances that actually


\(^{6}\) This point has been made by Amos Bertolacci for instance, at Bertolacci 2006: 208–9.

\(^{7}\) In al-Fārābī 1890–2: 35.8–12 and 35.17.
exist without matter, or as universal attributes like being and unity that apply both to natural things and to immaterial substances, and that in this way have an existence separate from natural things, unlike the per se attributes of natural things, which exist only in and through natural things. This is very unlikely to be what Aristotle meant, but it saves his words, and explains why Book Λ is such a small part of the *Metaphysics*; and Avicenna follows it without reservation.

The *Metaphysics* of the *Cure* will thus begin with an account of being and unity and their attributes, then examine the different kinds of cause, then argue that the first cause of being is a single first being, which satisfies (suitably reinterpreted versions of) many of the traditional attributes of God. In a very broad sense we could say that this is also the structure of Aristotle’s *Metaphysics*: after the preliminary AαB, Γ discusses being and unity (and the principles of noncontradiction and excluded middle), Δ describes general concepts such as the kinds of cause, the kinds of priority, and the different senses and attributes of being and unity, EZHΘ describe kinds or senses of being such as substance (ZH) and potentiality and actuality (Θ), Iota describes unity and plurality and connected attributes, and Λ uses the results of previous books to argue for the existence and attributes of a divine first principle. (K is a repetition of other material, and MN argue against Academic theories of Forms and numbers.) But in Λ, following *Physics* VIII, Aristotle argues for God primarily as a first cause of motion. It is very important for Avicenna to argue for God instead as a first cause of being. Being is a more widely extended effect than motion, and it brings out something deeper and more distinctive about God that he is a first cause of being than that he is a first mover; Aristotle’s arguments for a first unmoved mover lead him to a plurality of movers, one for each heavenly sphere, and although he thinks that the mover of the outermost

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8 In ibid.: 36.2–9.

9 So throughout Avicenna *Cure*: *Metaphysics* 1.1–2. For the distinction between being as the subject and God as the object of metaphysics, see esp. 1.1.10–18 (pp. 5–9), and for the sense in which metaphysics is about things separate from matter, see 1.2.18–19 (pp. 15–16). I will cite *Cure: Metaphysics* by book, chapter and paragraph numbers (but in my own translation, not Marmura’s). Marmura’s Arabic text reproduces, with some emendations, the standard edition edited by G. Anawati and S. Zayed (Avicenna 1960). Since Marmura follows the Anawati–Zayed book and chapter numbers, readers who are using the 1960 edition (or almost any other edition or translation) will be able to locate at least the chapter. However, Marmura’s paragraph numbers are his own, and so to help readers who are not using Marmura to locate passages more precisely, I will give the page numbers of the Cairo edition in parentheses when I refer to a passage shorter than a whole chapter. Those who can read Italian may want to look at Amos Bertolacci’s translation (Avicenna 2007) for an often clearer translation; those who read Arabic (whether or not they read Italian) may often want to check Bertolacci’s list of corrections to Anawati’s edition, given therein pp. 114–29 and in Bertolacci 2006: Appendix A (483–558).
sphere has a special status, he has difficulty in arguing for and explaining this distinctive status. For Avicenna, God is the first cause of being (which allows us to infer that He is essentially necessarily existent) and the movers of the heavens are not; God is the first cause of being even to these immaterial movers. Indeed, strictly speaking, Avicenna’s God is not a cause of motion at all, but a cause of being to immaterial substances which in turn cause motion. Thus it is appropriate to establish the existence of God with a properly metaphysical proof, independent of assumptions from physics – Avicenna wants to build physics on metaphysical foundations and not "vice versa."

Avicenna in much of this is following al-Fārābī’s Principles of the Opinions of the People of the Perfect City, whose first sentence asserts “the first being (mawjūd, ens) is the cause of being (wujūd, esse) to all the other beings (mawjūdat).” Avicenna also follows al-Fārābī in trying to give, on what is supposed to be a scientific Aristotelian basis, an account of kalām topics, not just the existence and unity and attributes of God, but also God’s creative and providential action and the order of things arising from Him, prophecy and imamate and an afterlife. But there are also important differences from al-Fārābī’s account. These kalām topics give the framework for the whole of al-Fārābī’s Principles, but they occupy only the last three books, viii–x, of the Cure Metaphysics. These books are Avicenna’s version of al-Fārābī’s Principles, but Avicenna wants to base them on the systematic investigation of being and unity and their kinds and attributes (lawāhiq, or ‘awārid khawāṣṣ) and causes that occupies

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10 Cure: Metaphysics: 1.1.12 (pp. 6–7) says that the proof of an immaterial mover from Physics viii was not proper to physics, but was a use in physics of something borrowed from elsewhere. Avicenna says repeatedly that physics posits something as unproved that is proved in metaphysics, including the assumption of causal regularity (Cure: Metaphysics: 1.1.16, p. 8), or that bodies are moved according to powers present in them (Cure: Physics: 1.5) and that there are four causes (ibid.: 1.2). Avicenna is probably basing himself on passages such as Aristotle Physics i.9 192a34–b2 and ii.2 194b9–15 and ii.7 198a22–31 deferring the investigations of some kinds of cause to metaphysics, but Aristotle does not say that the physicist uses premises from metaphysics. Avicenna may be influenced by Alexander, who thinks that metaphysics establishes the principles of the sciences, and perhaps Porphyry, who says that physics posits things that are proved in metaphysics (see Simplicius, In Aristotelis physicorum libros commentaria 9.10–12), and who seems to regard physics as being subalternate to metaphysics, as astronomy is to geometry or medicine to physics.

11 See al-Fārābī 1985: 56 (Arabic), 57 (Walzer’s translation).

12 Either of these phrases corresponds to what Aristotle calls sumbebēkota kath’ hauto (“per se accidents” or “per se attributes”) of a given domain. Avicenna sometimes prefers ‘arid (pl. ‘awārid) or ‘arādi for accident in this special sense, and ‘arad (pl. a’rād) for accident as contrasted with substance, but he is not terminologically consistent, and in 1.2.13 he goes back and forth between different formulations. Cf. Cure: Categories: 23–7, which distinguishes between accidents in the sense of the Categories, like the abstractum grammar, which are not “said of” but “in” substantial subjects, and accidents and propria (khawaṣṣ) in the sense of Porphyry’s Isagoge, like the concreta grammarian and
Books II–VII (after the introductory Book I), turning only then to God as the universal principle of being in VIII–X. Thus Metaphysics 1.2 lists as kinds of being “substance and quantity and quality,” and as attributes of being “one and many and potential and actual and universal and particular and contingent and necessary” (1.2,13, p. 13 – there is a more detailed derivation of the list of topics the metaphysician will have to treat in 1.4).

Accordingly, Book II surveys substance (and form and matter), Book III the categories of accident (and in detail especially quantity, then quality and relation). Book IV treats priority and posteriority and potentiality and actuality and perfection and connected notions; Book V universals in general, and species, genus, differentia, and definition. Book VI treats the four kinds of causes (and causality itself is an attribute of being, besides being needed for the path up from being to its first principle), and Book VII discusses the attributes that follow on unity and multiplicity (unity and multiplicity themselves had been discussed under “quantity” in Book III), and opens into a critique of Platonic–Pythagorean theories of mathematical and Forms.

Some of these books clearly correspond to books of Aristotle’s Metaphysics (IV = Θ, VII = IMN), but Avicenna’s overall list of topics is actually closer to Metaphysics Δ. Thus quantity, quality, and relation, the main topics of Book III, are discussed in Δ13–15, but nowhere else in Aristotle’s Metaphysics, and the four causes, the topic of Book VI, are discussed in Δ2, but not elsewhere in Aristotle’s Metaphysics, except the historical A3–7. (Avicenna has nothing corresponding to A or to the aporiai of B.)

Most remarkably, while Book IV follows Θ in arguing for the priority of actuality to potentiality, there is a fundamental difference in conception. Actuality and potentiality enter Aristotle’s Metaphysics chiefly as senses of being (being actually or potentially), but Avicenna consistently treats them as attributes (lawāḥiq) of being, and his Book IV treats actuality and potentiality exactly on a par with priority and posteriority (from Metaphysics Δ11) and perfection (Δ16; potentiality is in Δ12). Avicenna seems to take Δ as an inventory of the kinds and attributes of being and unity, and kinds of cause, which metaphysics will have to investigate, and follows that agenda more systematically than Aristotle does, although, of course,
he draws on later books of the *Metaphysics* which go deeper into the same topics than Δ does.13

I will focus here on the discussions of being in Book I and of unity and numbers in Book III, and on some issues about knowledge and about universals where we can see Avicenna applying his understanding of being. Book I, after the introductory discussion of the science of metaphysics and its object (corresponding structurally to Aristotle’s *Metaphysics* Π–Τ and Ε, but following al-Fārābī’s *On the Aims* in content), focuses on ontological notions that will be basic for the project: being, truth, and the modal notions of necessity and contingency.14 Although we have seen that 1.2,13 (p. 13) lists unity among the attributes of being, Avicenna more usually treats being and unity as both attributes applying universally to all things (so vii.1,1, p. 303). So “thing” or “something” (shay) is the subject of which being and unity are *per se* attributes,15 and *Cure Metaphysics* 1.5 treats “being”

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13 Avicenna is following al-Fārābī both in placing a high systematic value on *Metaphysics* Δ (clear from al-Fārābī 1969–70, see Menn 2008) and in treating actuality and potentiality as attributes of being (explicit in al-Fārābī 1890–2: 15,15–16).

14 Necessity and contingency (*imkān*) will be fundamental for Avicenna’s project in a way that actuality and potentiality (*quwwa*) will not, and this is a striking difference from Aristotle (although Avicenna says at 1.4,1, p. 25, that the investigation of necessity and contingency is the same as the investigation of potentiality and actuality). For Avicenna the *mumkin* (abstract noun *imkān*) is what is neither necessary nor impossible, so it should be translated “contingent,” which excludes the necessary, rather than “possible,” which would include the necessary. The concepts of necessity and contingency will be especially important in the proof of the existence and unicity of an “essentially necessary existent” (wājib al-wujūd bi-dhātihi), i.e. an X whose existence is necessary through X itself rather than through something else, which Avicenna gives briefly in 1.6–7 and more fully in Book VIII and which is Avicenna’s improvement on Fārābī’s argument for the existence and unicity of a First (al-Fārābī 1985: 56–69; Avicenna, too, speaks of “the First” in *Cure Metaphysics*: vii). For this argument, and for more on Avicenna’s modal concepts and their relations to his theology, see Peter Adamson’s chapter in this volume. After treating the primitive concepts of thing and being in 1.5, and of necessity and contingency in 1.6–7, Avicenna goes on to treat the primitive concept of truth in 1.8, starting with a parallel to Aristotle *Metaphysics* α1 but quickly sliding into a parallel to *Metaphysics* Γ–Ω on the principles of non-contradiction and excluded middle as the first and truest of all truths. Some of Avicenna’s argument in 1.6 from an intrinsically contingent being to a first cause sufficient to necessitate it (in particular, the idea that an infinite regress of causes, even if acceptable, would not give a sufficient explanation for the thing) seems partly inspired by α2, though Avicenna is rereading the argument through modal concepts taken from elsewhere. (A very much expanded version of the argument, this time clearly reflecting on α2, is in viii.1–3.) Thus, Avicenna manages in Book I to cover those parts of Aristotle’s preliminary books ΔΔΕ that he finds worth preserving in his own *Metaphysics*; he also preserves and develops much of the content of Δ, not in a separate preliminary book, but integrated into different parts of his main argument.

15 Thus, in Avicenna’s *Kitāb al-Najāt*, “the nature of the one is an accident necessarily attaching to things, and the one is not a constituent of the quiddity of any thing; rather the quiddity is {some} thing – whether man or horse or nous or soul – and then this [thing] is qualified (mawṣūf) by being one and mawṣūd “ (*Salvation*: 245). For other relevant passages and discussion, see Druart 2001; Wisnovsky 2003, esp. pp. 158–60; and Menn 2012a, esp. n. 4. Wisnovsky suggests that there is a tension between texts like *Cure Metaphysics*: 1.5, which say only that “thing” and “being” are coextensive and mutually entailing but different in meaning, without specifying one of them as
and “thing” as distinct primitive notions. Aristotle insists that, since unity is a per se attribute of being, “being” and “one” are coextensive but not the same in meaning, and Avicenna likewise insists that, since being is a per se attribute of thing, “thing” and “being” are coextensive but not the same in meaning. When I say “a thing exists,” or e.g., more specifically, “a horse exists,” I am not simply saying “a horse is a horse.” More precisely, Avicenna distinguishes two senses of being, what he calls wujūd khāṣṣ (“proper being,” the kind of being proper to X, namely, its being X) and wujūd ithbāṭī (“positing being,” the kind of being we are attributing to X when we posit X: 1.5.9, p. 31). To say “X mawjūdun” or “X is” or “X is a being,” in the sense of wujūd khāṣṣ, is short for saying that X is what it is, namely, X: to say of this thing that it is mawjūd in this sense is to say that it is X, and so its wujūd in this sense is just the quiddity of X. By contrast, to say “X mawjūdun” in the sense of wujūd ithbāṭī, is to say that X exists, and Avicenna insists that this is not just saying that it is X. Avicenna is presumably thinking of passages like De Interpretatione 11.21a25–8, where Aristotle says that we can truly say “Homer is a poet,” although Homer (being dead) does not exist. So, we might say, “a stegosaurus is a stegosaurus” is true – and, in a sense, a stegosaurus is a being – even though there are no stegosauri; and likewise for phoenixes and heptagonal houses. However, these assertions will require reflection, and ultimately some qualifications. Avicenna wants to safeguard the common-sense thought that we can sometimes truly say “X is not,” and that we can sometimes falsely say “X is,” i.e. that “X is” can be meaningful without being true. We could safeguard this the way Ockham later does, by saying that all affirmative sentences with empty subject-terms are false, and all negative sentences with empty subject-terms are true, so that if “X” does not stand for anything, “X is not” will be true. If anyone had suggested this way out to Avicenna, he would certainly have rejected it: when we deny that phoenixes exist and when we deny that heptagonal houses exist, we must be denying different things, denying being of different subjects. But then, what are these subjects?

underlying and the other as its attribute, and texts such as the Najāt passage which specify “thing” as underlying and “being” and “one” as its attributes (including texts such as Cure: Metaphysics: v.1, where the thing is neutral to receiving wujūd in the mind or wujūd in individuals).

On Avicenna on the phoenix and the heptagonal house, see Black 1997 and Druart 2012. Ockham would agree with Avicenna that “there is no phoenix” and “there is no heptagonal house” are denying different things, in the sense that the mental concept of phoenix is not the same as the mental concept of heptagonal house, and in that “phoenix” and “heptagonal house” secondarily signify different extramental things, namely, the things mentioned in the nominal definitions of “phoenix” and “heptagonal house,” respectively (bird, fire, house, etc.). But “phoenix” and “heptagonal house” stand for, or primarily signify, exactly the same things, namely, nothing at all. So there are not different subjects, except the different mental concepts, which the two sentences would refer to and deny being of. Avicenna would not be satisfied.
Avicenna is here picking up on several different earlier Arabic discussions. The Muʿtazilites, in explaining such Qurʾanic passages as “when God wishes to create a thing, he says to it ‘be!’ and it is” (with variations, Qurʾān 2:117, 3:47, 36:82, 40:68), are led to posit a domain of non-existing or not-yet-existing objects (māʾdūmāt, sg. māʾdūm). After all, God is addressing something, and there is some thing that He wishes to create, and the effects are different if He addresses a not-yet-existing horse or a not-yet-existing camel. This Muʿtazilite conclusion was resisted by most non-Muʿtazilites, partly on the ground that it seems to posit objects other than God which are independent of God’s creative activity; but those who resist must give some alternative account of statements about non-existing objects, including false statements asserting of non-existing objects that they exist (and, if they want to make sense of the Qurʾān, an alternative account of what God is doing when He creates). Avicenna discusses Muʿtazilite views of being and thing and māʾdūmāt at 1.5.12–20 (pp. 32–4) and 25–7 (p. 36). Two other thinkers he is probably responding to are al-Fārābī and the Monophysite Christian philosopher-theologian Yahyā ibn ʿAdī.¹⁷

Al-Fārābī in his Kitāb al-Hurāf tries to show that in no sense of mawjūd is the wujūd of a thing X something real outside the mind and really distinguished outside the mind from X; it is likely that he is responding in particular to al-Kindī, who thinks that God is the wujūd through which all things exist.¹⁸ (On al-Kindī’s theory, things other than God would exist by extrinsic denomination, i.e. in the way that “healthy” is said of a diet rather

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¹⁷ For the basics about Yahyā ibn ʿAdī, see Endress 1977 and Ibn ʿAdī 1988, which, besides a useful introduction (in Arabic), includes the philosophical texts then available. A new collection of philosophical texts has since become available, and will be published by Robert Wisnovsky and Ahmed-Reza Rahimi-Riseh. Many of Ibn ʿAdī’s Christian theological texts (mainly apologies for the Trinity and Incarnation against Muslim criticisms, and defenses of Monophysite Christology against Nestorians and Chalcedonians) have also been edited and translated, mostly into French: see, notably, Périer 1920; Platti 1982 and 1983. Ibn ʿAdī was a fellow-student with al-Fārābī of the Nestorian Christian teacher Abū Bishr Mattā ibn Yunus. After Abū Bishr’s death, he is said to have become Fārābī’s student, though I can see no sign that he was influenced by al-Fārābī, and when al-Fārābī left Baghdad for Syria, Ibn ʿAdī seems to have succeeded him as the acknowledged senior philosopher in Baghdad (“head of school” is probably too formal). Avicenna seems to take Ibn ʿAdī and his school as representing the normal default positions of philosophers in the Muslim world, whether he agrees or disagrees with them on each particular issue. When, in the “Letter to Kiyā” translated in Gutas 1988: 60–4, and in the comments reported in the “Memoirs of a Disciple from Rayy,” ibid.: 66–72, Avicenna speaks disparagingly of the Baghdādī philosophers (some of whom are named), he means the next several generations of Ibn ʿAdī’s students. As these texts show, Avicenna’s lost Kitāb al-Ināf (written after the Cure, and then subsequently lost within Avicenna’s lifetime) was a systematic assessment of disagreements between the Baghdādī philosophers and their (real or imagined) “Eastern” opponents arising out of their interpretations of Aristotle’s treatises; it seems likely that such a systematic coming-to-terms with Ibn ʿAdī and his school, as well as with al-Fārābī, is already on Avicenna’s mind in the Cure, at least, in the Metaphysics.

¹⁸ The Kitāb al-Hurāf has been edited by Muḥsin Mahdi (al-Fārābī 1969–70), but no complete modern-language translation has been published (in particular, the discussions of metaphysics and philosophical logic in Parts One and Three have not been translated). There was no medieval Latin
than in the way that “healthy” is said of an animal. That is, these things would be called by the denominative or paronymous name “mawjūd” not on account of a wujūd inhering in them, but on account of a wujūd which exists outside them, namely, God.) To this end al-Fārābī distinguishes two main senses of mawjūd, being as the true and being as divided into the categories.\textsuperscript{19} Being as divided into the categories is what is “delimited by an essence outside the soul”: in this sense, to say that X is mawjūd is to predicate X’s own essence of it, and the wujūd of X will be just the essence of X, and not anything distinct from it. Being in this sense will be predicated primarily of substances, derivatively of things in accidental categories, and not at all of things that do not have essences, negations like not-white and privations like blindness and entia per accidens like white horse, which are not species of any category. Being as the true, which al-Fārābī paraphrases as “what is outside the soul as it is inside the soul,” can be said not only of propositions or judgments, but also of concepts: the concept of X is true, i.e. it “is outside the soul as it is inside the soul,” if it is instantiated by something outside the soul. X can be mawjūd in this sense even if it has no real essence, since the concept of not-white or blindness or white horse can still be instantiated; indeed, being-as-the-true applies univocally to things in all categories and to things in no category at all. Al-Fārābī thinks that when we begin an investigation by asking whether X is, we must be asking whether X is mawjūd in this univocal sense of being-as-truth, since we do not yet know what X is, and so do not know what category X is in, or whether it is in any category at all. Al-Fārābī concludes that the question “does X exist” must be analyzed as asking about the concept of X, whether it has being-as-truth – asking whether this thing which exists in the soul also exists outside the soul, i.e. whether there is something that corresponds to the concept, that is as the concept represents it to be. This allows him to conclude that because wujūd in this sense is predicated of things in the soul, it is a “second intention” and not something really existing outside the soul. It also allows him to explain how we can truly assert “phoenixes do not exist,” or falsely but meaningfully assert “phoenixes exist,” without translation either, but the treatise was extremely important for Averroes, and through him many of its conclusions are known to the Latins (without al-Fārābī’s name). I leave the title in Arabic to keep the untranslatable ambiguity between “Book of Letters [of the alphabet]” – a title used by Arabic authors for Aristotle’s \textit{Metaphysics}, for the obvious reason – and “Book of [grammatical] Particles”: al-Fārābī apparently intends both. What I say here is a summary of some main points from Menn \textit{2008}, where I give full references. For al-Kindī on God as the wujūd or Truth through which all things exist and are true, see his \textit{On First Philosophy}, in al-Kindī \textit{1998}: 9.12–14. Al-Kindī is more interested in arguing that God is the One through which each thing is one (a thesis which al-Fārābī works to undermine in al-Fārābī \textit{1989}), but al-Kindī does also make the same assertion about being.

\textsuperscript{19} See al-Fārābī \textit{1969–70}: i.80–101 (esp. i.88–92) and iii.228–47; detailed references in Menn \textit{2008}.
8 Avicenna’s metaphysics

positing Mu’tazilite ma’dumār: the term “phoenix” refers, but it refers only to a mental concept of a phoenix.

Avicenna in Cure: Metaphysics i.5 gives an anti-Mu’tazilite solution which sounds close to al-Fārābī’s, but he ultimately adopts an importantly different position from al-Fārābī. He denies the Mu’tazilite theses that there are individual ma’dumāt that might “return” to existence (as in the Mu’tazilite theory of the resurrection, i.5,25–6, p. 36), and that there are “things,” legitimate subjects of predication, which are non-existent (ma’dum) without restriction: Avicenna says that they may be non-existent outside the mind, but must exist at least in the mind, or they could not be referred to and nothing could be said about them (i.5,12–13, pp. 32–3). He sounds very close to al-Fārābī when he says that in a judgment like “the resurrection will be,” the subject is something in the soul, and the predicate asserts that this thing in the soul has some relation to something external (i.5,16 and 18, pp. 33–4). He is also close to al-Fārābī in distinguishing two senses of (1-place) being, Avicenna’s “positing being” (wujūd ithbātī) corresponding to al-Fārābī’s “being as truth” or “being outside the soul as it is in the soul,” and Avicenna’s “proper being” (wujūd khāṣṣ) corresponding to al-Fārābī’s “being as divided into the categories” or “delimited by an essence outside the soul.”  

But, unlike al-Fārābī, he does not say that wujūd in the positing sense is a second intention, something mind-dependent and an object of logic rather than metaphysics. On the contrary, Avicenna thinks that being in this sense is an objective feature of things, and is (alongside unity) one of the universal attributes of things that are central objects of metaphysics; if X is other than God, the wujūd of X is an accident of the quiddity of X, and God is “pure existence” without any quiddity that would be the subject of the existence (viii.4,13, p. 347) – and this would obviously be absurd if wujūd in this sense were a second intention. Especially this last thesis sounds like the Kindian view that al-Fārābī is attacking in the Kitāb al-Ḥurūf. But how can Avicenna maintain this, when he agrees that what comes to participate in existence is not a non-existent object, but something existing in the soul?

The key, for Avicenna, is that the quiddity of which extramental existence is predicated is not essentially a concept in the soul: rather, it is by its essence neutral to existing in the soul, as a concept, or existing outside the soul. It is not the concept which is capable of existing extramentally; rather, the quiddity, which exists in the soul as a concept, can also exist extramentally. Both mental and extramental existence are accidents, additional to what the

See above on these concepts in Avicenna and in al-Fārābī.
thing is by its essence. Here Avicenna seems to be taking up a central idea of Yahyā ibn ‘Adī, found in varying forms in his On the Existence of Common Things, his On the Three Kinds of Existence, and his On the Necessity of the Incarnation. 21 In On the Existence of Common Things and On the Three Kinds of Existence, Ibn ‘Adī criticizes the view that (say) a human exists in precisely two ways, as an individual with matter and accidents or as a concept, i.e. a universal form in the soul, and that when we say “Socrates is human” and “Plato is human,” the only human that can be predicated of them both is such a universal form in the soul. Ibn ‘Adī himself maintains that the essence which is signified by the definition “mortal rational animal” without any further qualifications is the common part of “mortal rational animal with matter and accidents” and “mortal rational animal in the soul,” and must be prior in existence to both, since it must exist whenever either of them exists, but not vice versa; and it is this neutral essence, not the universal concept, which is predicated of Socrates and Plato, since Socrates is not in fact the concept human. Human does exist both as an individual and as a universal, but both individual and universal existence contain something beyond the essence of human, depending in one case on matter and in the other on a soul. But the essence also exists in itself, not through anything else; Ibn ‘Adī calls this its “divine” or “metaphysical” (ilāhī) existence, by contrast with its “physical” existence in matter and its “logical” existence in the soul, and argues that since it is prior in existence to the others, it is existence in the highest degree. 22 Avicenna follows Ibn ‘Adī in distinguishing the concept of horse in the soul from the quiddity

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22 The premiss that what is the cause of existence and truth to other things is truer and more existent than they comes from Aristotle Metaphysics 1093b23–31, a favorite text with Arabic philosophers. Ibn ‘Adī is also drawing on the Syrianus–Proclus doctrine of the three kinds of forms (or of universals), the one-before-the-many in the divine nous, the one-in-the-many in matter, and the one-after-the-many in souls (a good summary at Proclus, In primum Euclidis elementorum commentaria 50,16–51,13, cf. Syrianus, In Metaphysica 163,3–14, Ammonius, In Porphyrii Isagogen 68,25–69,2, Simplicius, In Categorias 81,35–83,10; for discussion, see Helmig 2008 and references therein). But as far as I know, the Neoplatonists never support the priority of the one-before-the-many by arguing that, as indifferent to material or psychic existence, it is capable of existing without either and so must be prior to both: this line of argument is Ibn ‘Adī’s development out of the ideas from Alexander that I shall discuss in the next paragraph.
or definable essence of horse, which is neutral to existing either in the
soul or in extramental individuals (fi l-a’yân), and in saying that either of
these two types of existence involves something beyond the essence being
added to the essence (so esp. v.i.17, p. 201). But he will not agree with
Ibn ‘Adi that the essence of horse can also exist by itself and through itself,
apart from either matter or souls – still less that its existence by itself is
“most real” (abqāq).

While Avicenna in Cure: Metaphysics i.5 is not directly addressing the
issue of universals (though he applies all this to universals in v.1–2), both
he and Ibn ‘Adi are drawing on Alexander of Aphrodisias’ account of
universals in Quaestiones i.3 and i.11. Alexander starts in Quaestio i.3 by
asking what a definition like “mortal rational animal” or “biped land-
going animal” is a definition of: as we would expect from a Peripatetic, he
insists that it is neither of some one individual human, nor of a separate
or incorporeal or eternal universal (an incorporeal couldn’t be a biped,
something eternal couldn’t be mortal), but of something common that
is present in each of the individuals. But then Alexander says something
more surprising: the definition is not of the common thing qua common,
but of a nature to which it belongs accidentally to be common – the
definition of human would apply even if there were only one human, and
so being common or universal can not be part of its content. Apparently
Alexander’s motive for this strange thought-experiment is that he wants
the definition not to be about something mind-dependent, even though he

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23 Where I am changing the example from “human” to “horse” to avoid confusion with the (presumably
human) soul in which the quiddity can have logical existence.

24 When Avicenna says here that animal in the soul or extramental animal is (in Marmura’s translation)
“animal and a thing,” he means not that animal qua animal is not already a thing, but that animal
in the soul or extramental animal is animal plus something else. His argument here closely follows
Ibn ‘Adi on animal as the part common to animal in the soul and extramental animal.

25 Avicenna will, however, agree that horse has wujūd khaṣṣ by itself – not that it exists, but that
it is horse, independently of whether it exists in a soul or in matter. At Cure: Metaphysics: i.5.11
(p. 31) Avicenna says that the reality of a thing exists “either fi l-a’yân or in the soul or absolutely
(mutlaq),” being common to them [both],” but I think the third option means that it exists in both
ways, not that it exists in a third way independent of matter and souls. At Cure: Metaphysics: v.1.28
(pp. 204–5), closely echoing Ibn ‘Adi, he says that animal “taken in itself is the nature of which it
is said that its wujūd is prior to physical wujūd as the simple is prior to the composite, and this
is that whose wujūd is specifically [called] divine wujūd.” This is anomalous enough in Avicenna
that I think he must mean “it is said by Ibn ‘Adi and his school”: he is trying to explain why some
people would speak this way, but he does not take it up in his own voice. (He goes on to say that
the reason this is called divine wujūd is that “the cause of the wujūd through which it is animal is
the providence of God,” meaning apparently that providence keeps the species from going extinct,
which is much weaker than what Ibn ‘Adi means by divine wujūd.)

26 Alexander seems to intend no difference between “common” and “universal,” but there is some
dispute here. Quaestiones i.3 and i.11 are translated in Alexander of Aphrodisias 1992, with references
to recent discussion.
thinks that things can be universal only due to the action of the intellect: there is no separate human nature, and the immanent human nature exists in each individual with different matter and accidents, so if it were a single thing in them all it would have contrary attributes at once. So the nature becomes universal only when the intellect thinks it and abstracts it (see Alexander of Aphrodisias De Anima 90.2–11). The definition, and the understanding based on it, are not about this mental act, but about the same nature which also becomes universal through this act. (The understanding is not false, because it does not add to the nature anything that is not there in reality, but only subtracts from the nature accidents that are added to it in reality; but only through the intellect’s act of abstraction does the nature actually exist in the same way that it is understood, i.e. universally.) In Quaestio 1.11 Alexander does not speak of the mind-dependence of the universal, but he speaks of its posteriority, in trying to explain why Aristotle says that “the universal animal is either nothing or posterior” (Aristotle De Anima i.14 02b7–8). This might be because animal is not an ordinary univocal genus, but Alexander argues that the same conclusion would hold even if it were. “Universal” is not strictly a thing, but an accident of a thing, namely, of animal; we know that animal is not universal of its own nature, because it would still exist, but would not be universal, if there were only one animal. The universal animal is posterior to animal, because universal animal cannot exist without animal existing, but animal can exist without universal animal existing; Bucephalus is also posterior to animal, because Bucephalus cannot exist without animal existing, but animal can exist without Bucephalus existing. Aristotle had said that “being” and “one” are not genera contained in the essence or definition of (say) animal (Metaphysics B 3 998b22–7: because the other part of the definition, the differentia, will still have to exist and to be one, and then presumably there will be an infinite regress of being-constituents or unity-constituents). Alexander adds that “universal,” and presumably “individual,” are also not contained in the definable essence, but attach accidentally to it.

Neither Ibn ‘Adî nor Avicenna try to draw conclusions from the thought-experiment “what if there were only one animal?” But they both draw on Alexander’s argument that the quiddity animal is prior both to the universal animal and to individual animals, and should not simply be identified with the universal; and they combine this with Alexander’s conviction that universality is mind-dependent. This approach gives Avicenna an

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27 Indeed, on Avicenna’s account of universality in Cure. Metaphysics: v.1.2 (p. 195), animal would still be a universal even if there were only one extramental animal.
alternative to al-Fārābī’s conclusion that existence (in the “positing” sense) is a predicate merely of a mental concept; it allows him to abstract the thing (the quiddity) from all modes of existence, and then to consider both extramental and mental existence as attributes, not of being, but of thing. (“Extramental and mental existence” is not the same as “individuality and universality”: something can exist in the mind without being universal, if it is not predicated of many. Universality involves being predicated, and so it is a second intention, but mental existence is not a second intention any more than extramental existence is.) Ibn ‘Adī, by contrast, does not seem to want to abstract from all modes of existence: for him, the quiddity has the most real kind of existence, “divine existence,” already through itself, logically prior to its acquiring other kinds of existence through combination with other things. Avicenna agrees that God has such divine existence through Himself alone, but no other quiddity does (strictly, no quiddity does, since God is not a quiddity, and God does not have this wujūd, but is this wujūd).

While Ibn ‘Adī’s official view, following Alexander, is that the universal exists only in the mind and that the simple quiddity (say, horiness), which is mind-independent, is neither individual nor universal, in practice this seems to amount to thinking of horiness as a real immanent universal fully present in each individual horse. (And he will say that horiness does indeed have divine existence, since it exists in God, since God knows everything, and whenever X knows Y, Y is present in X, stripped of its matter, if any.)28 Avicenna’s view, best spelled out in his account of universality in Cure: Metaphysics v.1–2, is importantly different. The difference turns on an analysis of how phrases like “animal qua animal” or “animality qua animality” function semantically. If the assumption “horiness, inasmuch as it is horiness, is F” leads to absurdity, we may not infer “horiness, inasmuch as it is horiness, is not F,” but only “it is not the case that horiness, inasmuch as it is horiness, is not F,” but only “it is not the case that horiness, inasmuch as it is horiness, is not F” (v.1.5, p. 197, cf. 11–12, pp. 199–200).29 So, although the answer to “is the

28 See On the Necessity of the Incarnation (Périer 1920: 80.6–83.2) for the argument that the form of each natural thing is present in God, and On the Existence of Common Things and On the Three Kinds of Existence (discussed above) for the “divine existence” of each quiddity (as Ibn ‘Adī prefers to put it, of each type of form), as the element shared by, and prior to, its “natural existence” in matter and its “logical existence” in the soul. Ibn ‘Adī’s argument that the form of each natural thing is present in God recalls Proclus’ description of the one-before-the-many as a paradigm-form (e.g. of horse) present in the divine nous, as the God’s knowledge of that thing which guides him in producing that thing, or as an aspect of the self-subsisting knowledge which the God is. On Proclus, see n. 22 above.

29 Marmura’s translation here has “Inasmuch as it is ‘horiness,’ it is neither A nor anything else” (Avicenna 2005: 150), where it should have “It is not, inasmuch as it is horiness, A, nor [is it, inasmuch as it is horiness] anything else,” or “It is not the case that, inasmuch as it is horiness, it
humanity which is in Zayd, inasmuch as it is humanity, other than [the humanity] which is in ‘Amr?” is no (v.1,9, p. 198), we cannot infer that “the humanity which is in Zayd, inasmuch as it is humanity” names some object which is also in ‘Amr, but only that the fact that it is humanity does not make the humanity which is in Zayd to be other than the humanity which is in ‘Amr. Indeed, we know that the humanity which is in Zayd is not numerically identical with the humanity which is in ‘Amr, because humanity has contrary accidents in the two individuals; the quiddity also has distinct accidents of existence, and distinct accidents of unity, in Zayd and ‘Amr, which cannot have numerically the same subject (cf. v.1,14, p. 200).

Avicenna follows this analysis of *qua*-clauses in responding to an objection against his theory of immanent neutral quiddities. The objector says: animal *qua* animal does not exist in Zayd, since neither is it particular to Zayd (for what is particular to Zayd would be an animal, not animal *qua* animal), nor is it common to Zayd and ‘Amr (for then, a numerically single thing would exist in many and would have contrary attributes); so, since animal *qua* animal exists, it must be separate from the individuals (v.1,21, p. 202). But it is not the case either that animal, *qua* animal, is particular, or that animal, *qua* animal, is common (v.1,23, p. 203). And the fact that when an animal exists outside the soul it is a particular animal does not entail that “the nature of animality, considered in itself and not on condition of anything else (lā bi-shartī akhara), does not exist in it” (v.1,23, p. 203). Avicenna distinguishes animal *bi-lā shartī shay in akhara*, “without the condition of anything else,” from animal *bi-shartī lā shay in akhara*, “with the condition of not anything else” (v.1,26, p. 204). Animal *qua* animal, animal without the condition of anything else, exists in Zayd, even though when it exists in Zayd other conditions attach to it; it can still be conceived, without falsehood, by abstracting away these other conditions. But animal with the condition of not being anything else, an animal that is *just* animal so abstractly conceived, exists only in the soul; if it existed outside the soul, it would be a Platonic Form of animal (v.1,26, p. 204). But it is striking that Avicenna uses this same terminology again in viii.4, where the being that is predicated of all things is “being not with the condition of addition (al-mawjūdu lā bi-shartī l-ziyādati),” neutral to whether it is also something else besides being, while “the First,” God, is “being with the condition of no addition of composition (al-mawjūdu ma’a sharti lā ziyādati tarkibī),” being that excludes the possibility that is A, nor [that, inasmuch as it is harseness, it is] anything else.” Avicenna is explicitly contrasting sentences where the negation comes before and where it comes after the “inasmuch as”; Marmura’s translation fails to preserve this contrast.
anything else should be added to it (viii.4.13, p. 347). So while Avicenna applies his metaphysical machinery, much more carefully than Ibn ‘Adī, to avoid positing Platonic Forms, here he applies the same machinery to assert that God is something like a Platonic Form of being-itself, sufficient to exist outside the soul with no further addition.30

This is particularly striking in that Aristotle’s eleventh aporia in *Metaphysics* B asks “whether being and the one are substances of things-that-are, and it is not the case that each of these, being something else, is one or being; or whether we must ask what being and the one are, there being some other underlying nature [of which being or one is predicated] . . . . For Plato and the Pythagoreans think that being and the one are not something else [of which being or one is predicated], but that this is their nature, so that their substance is just to be being or to be one” (*Metaphysics* B4 1001a5–12).31 Aristotle clearly thinks that Plato and the Pythagoreans are wrong, that there is no subsistent being-itself or one-itself, but always some other underlying nature which exists and is one (see his treatments of the aporia at *Metaphysics* Z16 1040b16–27 and in Iota 2). But Avicenna thinks that God is a subsistent being-itself, although as we will see below, he agrees with Aristotle about unity. Aristotle argues that if “being” names an individual, anything other than being will not be; and since non-being has no predicates, it cannot even come to participate in being. Avicenna can reply by distinguishing God, being that constitutes an individual and allows no addition, from the neutral being which admits further determinations; horiness is always a being, even if it does not always exist outside the mind, and so it admits further predicates, including extramental existence.

Not only individuality and universality, but also existence, whether extramental or mental, is extrinsic and accidental to any quiddity other than

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30 Avicenna seems to derive this “metaphysical machinery” from reflection on Alexander’s distinction between genus and matter, notably in his *Quaestiones* II.28 (Greek text as cited above, English translation in Alexander of Aphrodisias 1994). While Aristotle sometimes seems to identify genus and matter, and gives body or three-dimensional extension as an example of both, Alexander says that matter and genus are each “common” or belonging to many, but in different ways: matter belongs to something as a part of it, exists in its own right, and is not predicated of the whole, whereas the genus is predicated of a thing, exists only as predicated of something else, and is not a part of it. Avicenna develops this in *Cure Metaphysics*: v.3, with particular application to body, which is in one way the genus of man and in another way a part of man. But body in the sense in which it is the genus of man is three-dimensional extension “without the condition of anything else,” i.e. whatever is long, broad, and deep; whereas body in the sense in which it is the matter of man is three-dimensional extension “with the condition of not anything else,” that is, *merely* three-dimensional extension. In this sense, man is not a body, but a whole composed of a body and a soul. This seems to give Avicenna the model which he applies in the critique of Ibn ‘Adī on universals in v.1–2, and in distinguishing God from the universal being in viii.4.

31 Avicenna clearly alludes to this aporia at viii.4.3–6 (pp. 344–5); what I have cited from viii.4.13 (p. 347) is part of his answer to this aporia.
God (and God is and has no quiddity). This is why anything other than God is of itself contingently existent \((\text{mumkinu l-wujūdi bi-dhāthīhi})\): the point is not so much that Socrates might not have existed – as if there were possible worlds in which the actual individual Socrates does not exist, and other possible individuals who do not exist in the actual world – but that the quiddity, humanity, does not have to exist in matter rather than in a mind, and does not have to exist in this matter rather than that matter. Other attributes of things \textit{qua} things follow on existence: that is, a quiddity is not intrinsically one or many, individual or universal, but once it exists, one of these attributes must attach to it.

Among these attributes, Avicenna is most interested in unity: his account here, like his account of being, was to be highly controversial. It comes up in what might seem a peculiar place, not in Book \textit{vii}, corresponding to Aristotle’s \textit{Metaphysics} Iota, M and N, but first in Book \textit{iii}. Avicenna, going through the kinds of being, discusses substances in Book \textit{ii} and accidents in Book \textit{iii}. But his main burden in Book \textit{iii} is to argue of certain things \textit{that they are accidents}, when some philosophers had taken them for substances. His main concern is with quantity, picking up Aristotle’s argument against those who say that three-dimensional extension is the substance of sensible things, or that surfaces, lines, points, numbers, and units are principles of substances and are therefore themselves prior substances. But he also has a chapter “that qualities are accidents,” against al-Nazzām’s Stoic-like view that qualities such as colors are subtle bodies mixed with the bodies they qualify; and he also has a chapter “that knowledge is an accident,” to which I will return. The people Avicenna is worried about who made numbers substances “made [numbers] the principles of substances, but they made them composed out of unities, so that unities became principles of the principles,” so that unity would be a substance in its own right and a first cause of all things (\textit{iii}.i.8–9, p. 95). Since unity is the principle of number, Avicenna wants to show that unity is an accident, and thereby to infer that numbers are also accidents.

Avicenna shares with his opponents a strongly realist view of numbers and of unities, and in particular of numbers as collections of indivisible unities. He rejects the common formulation that there is no number apart from the soul (as Aristotle seems to say, \textit{Physics} iv.14 223a21–8): there is no number apart from the soul and apart from particular numbered things, but three can exist either in three oranges or as an abstract threeness in the soul, just as horseness can exist either in Bucephalus or in the soul, and threeness is a real quiddity like horseness (so \textit{iii}.5.2–4, pp. 119–20). (As he says, since there are unities in existing things, there will also be numbers
in existing things, III.5.2, p. 119.) Avicenna also thinks something a bit unusual about the relation between number and plurality or multiplicity (καθρα = πλθος). It was standard to define number as “plurality of units” (Aristotle *Metaphysics* Iota 1 1053a30) or “plurality composed of units” (Euclid *Elements* VII def 2) or “plurality measured by [a] one” (Aristotle *Metaphysics* Iota 6 1057a3–4), so that number would be a species of plurality, but Avicenna says that number just is plurality, that *every* plurality is composed of unities (III.3.5, p. 105). To the objection that a plurality could also be composed, say, of humans, Avicenna replies that just as each human is not a unity but the subject of which unity is predicated, so the humans collectively are not a plurality but the subjects of which plurality is predicated; the plurality which inheres in the humans collectively is composed of the unities which exist in each of the humans (III.3.6–7, p. 105). A threeness is thus divisible into three unities, but unities themselves are not divisible even if their subjects are divisible: the threeness of three houses is composed of the unities of each of the houses, but the unity of a house is not composed of the unities of each of its bricks and boards, and if the house is divided into separate bricks and boards, the unity of the house is not divided, but perishes. This view of numbers as composed of pure units resembles the Academic theories that Aristotle criticizes in *Metaphysics* M6–9, but with the crucial difference that for Avicenna these units are accidents, not substances. This makes him immune to Aristotle’s challenge to the Academics to explain how the units are individuated: they are individuated by the different subjects (either substances or accidents) whose accidents of unity they are.

But how does Avicenna know that unity is an accident? The unity of an accident is certainly an accident, since it would be absurd for a substance to be predicated of an accident (III.3.10, p. 106). As for the unity which is predicated of a substance, Avicenna argues, following Aristotle’s argument in *Metaphysics* B3 (998b22–7, cited above) that unity (like being) is not a constituent entering into the definition of the substance either as a genus

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32 “Unit” here translates *monas*, but especially in Euclid vii def 2 we might want to translate *monas* rather by “unity,” given the immediately preceding vii def 1, *monas* is “that in accordance with which each being is called one.” *Monas* in Arabic becomes *waḥda*, which is also the abstract noun corresponding to the paronym *waḥid*, “one”; we might want to translate *waḥda* in different contexts as “unity” or “unit.”

33 To say that a threeness is divisible into, or composed of, three unities, is not to say that it just is these three unities. As Avicenna argues in III.5.4–8 (pp. 120–2), ten is not nine and one, or nine together with one, but rather, a whole composed out of nine and one taken together, and ultimately out of all its constituent units; each number must be unified, participating in unity as a whole, as well as being composed of indivisible unities as its parts. As just noted, *waḥda* here could be translated either by “unity” or by “unit”: Avicenna’s thesis is that it is both.
or a differentia; it is thus an accident in the “predicable” sense, the sense of Porphyry’s *Isagoge* (iii.3,10, pp. 106–7). But Avicenna wants to show that the unity of a substance is an accident in the “predicamental” sense, the sense of the *Categories*, i.e. that it is in the substance, not as a constituent part of it, in such a way that it would not be able to exist separately from the thing it is in (see *Categories* 2 124–5). Avicenna takes himself to have shown that the unity is not in the substance as a constituent part (as it would be if it were the genus or differentia): what remains to prove is that it cannot exist separately from the substance (iii.3,11, p. 107).

If unity is just indivisibility, then clearly it cannot exist separately, but must be said of some other underlying nature – at a minimum, of *wujūd* (iii.3,12, pp. 107–8). So perhaps unity is not just indivisibility, but indivisible existence. Perhaps indivisible *wujūd* could exist separately, but then, being a substance, it could not be the unity of any accident, but only, at best, of substances; so the same unity could not be predicated both of substances and of accidents, and so unity would not be univocal (iii.3,13, p. 108). But if so, Avicenna says, there would be a prior unity, the more universal unity which is predicated both of substances and of accidents (even if it divides into more specific kinds of unity); this unity could not exist separately, and this is the unity we are really concerned with when we ask whether unity is an accident or a substance (iii.3,14–15, pp. 108–9).

Avicenna thus seems to give very different answers to the eleventh aporia of *Metaphysics* B, “whether being and the one are substances of things-that-are, and it is not the case that each of these, being something else, is one or being; or whether we must ask what being and the one are, there being some other underlying nature” (B4 1001a5–8, cited above), in the case of being and in the case of unity: Avicenna says that God is a self-subsisting *wujūd*, but he denies at surprising length that there is such a self-subsisting unity.34 (Although Avicenna’s accidents of unity look much like the many Platonic or Academic units criticized in *Metaphysics* M6–9.) Perhaps this contrast is a bit too sharp: Avicenna does say that God is “the one which is one by its essence (*bi-dhātihi*), and the being (*mawjūd*) which exists by its essence (*mawjūd bi-dhātihi*)” (viii.3,6, p. 342). But, as we have seen, if

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34 Where Avicenna cites the eleventh aporia at viii.4,3–6 (pp. 344–5, noted above), he is asking whether existence, or necessary existence (both mentioned at viii.4,3, p. 344), is in the First an attribute of some other underlying quiddity, and then says this question is like the disagreement about whether the first principle is the one-itself (*dhāt al-wḥūd*) or just something which is one. But he goes on to consider, and give a “Platonist” answer to, only the question about existence, or necessary existence, not the question about unity, which he has already answered in an “anti-Platonist” way in Book III. With my discussion, here and above, of Avicenna on the eleventh aporia, compare Bertolacci 2006: 431–6.
God is a subsisting unity-itself, this is not just indivisibility but indivisible *wujūd*, and being is the underlying nature of which unity is predicated; and, of course, God is neither the being nor the unity which are predicated of other things. In general, for Avicenna, unity is posterior to being: both are attributes of “thing,” but unity, like plurality and individuality and universality, is an attribute that attaches to a quiddity once that quiddity exists, either extramentally or in the mind. It is rather striking that, in the argument we have seen from III.3,10–15 (pp. 106–9), Avicenna assumes that unity must be predicated univocally of things in all categories, even though being is said of them *per prius et posterius*; it is not obvious that Aristotle allows this option, and Averroes will attack Avicenna for taking it.\(^\text{35}\)

More generally, it seems strange that unity, as a *per se* attribute of being or of “thing,” is an accident in the category of quantity (serving sometimes as an accident of substances, sometimes as an accident of other accidents, even sometimes as a quantity of continuous quantities). And yet, Avicenna is clearly committed to all this: number is a quantity, number is composed of unities, therefore unity must be a quantity. The status of numbers as accidents also raises questions, since there is no substance that the number three can be an accident of. It must inhere, not in a substance, but in three substances, say Socrates and Plato and Xanthippe; and even if an accident can inhere in several substances at once (or have parts each of which inhere in a different substance), it seems that once we have admitted the subject

\(^{35}\) On being as said *per prius et posterius* of things in the different categories, see Avicenna *Cure*: *Metaphysics*: 1.3.21 (pp. 34–5). Averroes claims that Avicenna thinks being is said univocally of the ten categories, but this is not quite accurate. But Avicenna does seem to come closer to univocality than the orthodox Aristotelian doctrine (from *Metaphysics* Γ2) that being is said *pros hen*, i.e. said primarily of substances, and then derivatively of other things on account of their different relations to substances, so that e.g. for a quality to exist is for it to be a quality of some substance, i.e. for some substance to exist and be qualified in that way. In *Cure*: *Categories*: 1.2, among terms that are not entirely univocal, Avicenna has separate discussions of terms which are said *per prius et posterius* (p. 10.8–12, part of the larger discussion of terms that have the same meaning in many things but apply to them in different ways, pp. 10.4–11.2) and of terms which are said *pros hen* (p. 11.3–7); and he cites “being,” as applied to things in different categories, as an example of a term said *per prius et posterius*, not of a term said *pros hen*. The standard Aristotelian examples of things said *per prius et posterius* are “number” and “polygon,” and these are closer to univocality than health as said of an animal and of its diet; perhaps they can even be called univocal, but not in the way that a genus is said univocally of its species, since the species of a genus are simultaneous with each other and are all equally immediately related to the genus, whereas triangle is prior to quadrilateral and pentagon, and there are theorems that are true of all polygons because they are true of triangles and because all polygons can be decomposed into triangles. Avicenna apparently regards being as more like polygon than like health, and this may allow him to explain how unity can be said univocally of beings in all categories, as “equal to a square” can be said of all kinds of polygons, whereas it is not clear that anything can be said univocally of health in an animal and in a diet. For recent discussions, see Koutzarova 2009 and Treiger 2010: 211–58.
“Socrates and Plato and Xanthippe,” this subject is essentially three and does not need a further accident of threeness.

All these criticisms and more will be raised by Averroes. Recall that Avicenna refuses to say that number cannot exist without a soul, saying rather, that it cannot exist without either a soul or an extramental subject (that is, extramental subjects) in which to inhere. But, as we have just seen, there is something strange about number as an accident, and Averroes says that this accident cannot exist without a soul, because it is a second intention; and he thinks that the accidents of unity out of which accidents of number are composed are also second intentions. He is here developing what are at least hints in al-Fārābī’s Book on the One and Unity, and paralleling al-Fārābī’s analysis of being-as-truth in the Kitāb al-Hurūf: just as “F exists” can be taken as saying something about the concept of F, namely, that “it is outside the soul as it is inside the soul,” i.e. that the predicate-concept F is instantiated, so “F is one” can be taken as saying that the predicate-concept F is instantiated precisely once, and “F is three” can be taken as saying that the predicate-concept F is instantiated precisely three times. Averroes thus distinguishes between the unity which is the principle of number (“predicamental unity,” as the Latins who pick this up from him will say), which is a second intention, and the unity which is a per se attribute of being (“transcendental unity”), which exists extramentially but is not an accident, since it is essential to being and not something superadded to it. He thinks that Avicenna has conflated these two senses of unity, and that only this conflation leads him to posit a unity which is an accident, existing outside the mind and really superadded to the quiddity.36

Averroes’ neo-Farabian critique of Avicenna on unity is parallel to his neo-Farabian critique of Avicenna on being. For Averroes, following al-Fārābī, the wujūd by which F is mawjūd-as-true is accidental to F, but is a mere second intention, while the wujūd by which F is mawjūd-as-delimited-by-a-quiddity-outside-the-soul exists extramentially, but is identical with the essence of F. Averroes thinks that Avicenna has conflated these two senses of being, and that only this conflation leads him to posit a wujūd which is an accident, existing outside the mind and really superadded to the quiddity. For Averroes, there is no neutral quiddity of F, independent of F’s extramential existence: if F does not exist extramentially, it has no real definition whose content would be a quiddity, but only a nominal definition whose content would be a mental concept; extramential existence cannot

36 See Menn 2012a. Averroes treats the concept of unity, and his criticism of Avicenna on unity, parallel to his criticism of Avicenna on being, especially in his Epitome of the Metaphysics, Books 1 and 3 (Averroes 2010: 35–41 and 111–22).
be an accident attaching to the quiddity, since the quiddity presupposes extramental existence, and can have no existence at all if it does not already have extramental existence.

Averroes’ criticisms of Avicenna on being and on unity are, in fact, more than just parallel. Following al-Fārābī, Averroes analyzes the different ways that something can be called one as arising from different ways in which it is “delimited” or “circumscribed,” thus united with itself and distinguished from other things. A thing can be delimited, most obviously, by a container or a bounding surface (two bodies of water become one when the surfaces delimiting them are joined), and this unity is an accident; it can also be delimited by being the only thing to have some predicate F, and this unity is a second intention; but it is also delimited by its quiddity, by the fact that it is itself and nothing else is it, and this “transcendental” unity is nothing beyond its quiddity. For Averroes, again following al-Fārābī, “delimited by a quiddity outside the soul” explicates both one sense of “one” and one sense of “mawjud,” and this is precisely why unity is a per se attribute of being; but both the wujud and the unity are really identical with the quiddity. Thus Avicenna’s metaphysical structure of unity added to wujud added to a quiddity is for Averroes only a structure in the mind projected onto reality, indicating no complexity in re that could be the subject-matter of metaphysics. Averroes’ neo-Farabianism on being and unity will be a central part of his critique of Avicenna’s metaphysics, and through Averroes the dispute will become central in Latin metaphysics as well.37

Avicenna’s theory of the neutral quiddity, of the modes of existence, extramental and mental, added to this quiddity, and of the further attributes that attach to it once it exists in these ways, gives him a distinctive approach to solving a wide range of old metaphysical problems. I will close by pointing to its application in the surprising-sounding chapter *Metaphysics* iii.8, “that knowledge is an accident.” Why would anyone deny that knowledge is an accident? Well, Aristotle says that the knowledge of F is the form of F existing in the soul without its matter; and Avicenna gives his version of this by saying that the quiddity of F can exist either fi l-aʿyān, as an individual F, or in the soul, as the knowledge of F. But the quiddity of F falls either under the category of substance or under some category of accident; so it seems that if an extramental F is a substance, the same quiddity of F existing in the soul should also be a substance. And yet it exists in the

37 For a start on the Latin impact of Averroes’ critique of Avicenna on unity, see de Libera 1994. Most Latin scholastics accept much of Averroes’ critique of Avicenna on unity, but usually they do not think that predicamental unity is a second intention. For a very brief start on the Latin impact of Averroes’ critique of Avicenna on being, see Menn 2006.
soul, not as a part, and so it should be an accident of the soul. Avicenna replies that to call F a substance-quiddity means not that F exists not in a subject, but rather, that F has a disposition, when it exists fi l-aʿyān, to exist not in a subject: even when the quiddity exists as an accident of knowledge in a soul, it remains true that if it existed fi l-aʿyān it would exist not in a subject. If F is an accident-quiddity, then it has a disposition, when it exists fi l-aʿyān, to exist in a subject; when it exists in a soul, it exists in a subject, but it is not then exercising its disposition to exist in a subject (any more than a substance-quiddity existing in a soul is exercising its disposition to exist not in a subject), since it is not in the soul in the same way that it is disposed to be in something fi l-aʿyān – for instance, the quiddity of motion does not exist in the soul by being a motion of the soul, but by being knowledge, which falls under a different category of accident.

All this seems straightforward enough, perhaps a bit pedantic, but the point comes through when we think what the alternative account would be. The knowledge of F exists in a soul not as a constitutive part, but as we saw above in the discussion of unity, this is not enough to show that it is an accident in the sense of the Categories: we must also show that it cannot subsist by itself without the thing that it is in. So the alternative would be that, if F is a substance-quiddity, the knowledge of F is a substance existing outside the soul and extrinsically denominating the soul “knowing F.” This is perhaps not especially plausible if F is horseseness: unless we accept Platonic Forms, horseseness does not exist outside the soul except as some individual horse, and Socrates can know horseseness in general without his knowledge being any one particular horse outside the soul. The case is different, however, if F is an intrinsically immaterial substance, like God or a separate intelligence, and these are the cases Avicenna is most worried about. In these cases, there is just a single F fi l-aʿyān for the knowledge to be of; and if we say with Aristotle that the knowledge of F is F existing without its matter, then since F had no matter to begin with, the knowledge of F will just be F. Or, as Avicenna puts the objection here, “the maʿqūl [= noēma, the “intelligible” or “intention,” the thought of F in the rational soul] of these things will not be different from these things themselves, since they are of themselves intelligible (maʿqūl)” (iii.8.6, p. 142). The objector assumes, and Avicenna agrees, that an enmattered form is only potentially intelligible and therefore needs to be abstracted from matter by the agent intellect to become maʿqūl, and that because it cannot exist by itself without matter it can only be maʿqūl in a soul; whereas the agent intellect itself, or any other separate immaterial substance, is maʿqūl by its
Avicenna’s metaphysics

essence, does not need to be abstracted from matter, and does not need to
inhere in a soul to be ma‘qūl. But, says Avicenna, the thought (ma‘qūl) of F must inform a human soul if we are to know F, and F itself cannot be
present in a human soul: “[these substances’] essence is separate, and they
do not themselves become a form to the soul of a human, and if they did,
the form of the whole would come to be in this soul, and this soul would
know everything in actuality, and they would become [a form] for [only]
one soul, and the other souls would be left without any object to know,
since one soul would have taken sole possession of [the objects]” (iii.8.6,
p. 142), since, as Avicenna says, a numerically single thing cannot be a form
to many matters (iii.8.7, p. 143). So, if I am to know the separate substance
F, something F-related must come to be in me, numerically distinct from
what comes to be in you, and this something will be my knowledge of F:
Avicenna calls it the “influence” of F on me (iii.8.9, pp. 143–4), but also
the “intention” (ma‘nā) of the quiddity F, by contrast with F itself (iii.8.8,
p. 143).

We can see an analogy here with Avicenna’s treatment of wujūd. Some
earlier philosophers say that God is the wujūd-itself through which other
things are mawjūd, and Avicenna agrees that God is wujūd-itself, and that
He is the ultimate efficient cause to other things of their being mawjūd.
But he thinks it is absurd to say that God is the wujūd through which, as
a formal cause, other things are mawjūd, so that they would exist only by
extrinsic denomination; rather, they must exist through a wujūd “without
the condition of anything else” which can be participated in, distinct
from God as a wujūd “with the condition of not anything else,” which
cannot be participated in. Likewise, some earlier philosophers say that
God, or a separate agent intellect, is the knowledge-itself through which

8 Avicenna’s metaphysics

38 This goes back to Aristotle De Anima iii.4 430a3–7, which Alexander of Aphrodisias (his De Anima
87.24–88.16) takes as meaning that the forms of material things are only potentially intelligible,
and therefore require the agent intellect as described in De Anima iii.5 to render them actually
intelligible, whereas forms existing apart from matter are essentially actually intellectually cognized,
by themselves if not by us. In my own view, this turns on a grammatical misconstrual of Aristotle’s
text, but as far as I know Alexander’s construal was uncontested among late ancient and medieval
Aristotelians.

39 Avicenna here cites what he has said in his Kitāb al-Nafs; the reference is apparently to v.6 (Cure:
Psychology: 239–41), arguing against the thesis which he attributes to Porphyry, that the rational soul
becomes the intelligibles when it knows them. See the translation and discussion of this passage
of Kitāb al-Nafs v.6, and of a parallel passage in Avicenna’s Ishārāt wa-Tanbihāt, by Adamson
2007, specifically in his appendix, “Avicenna, Yahyā ibn Ḍād, and Porphyry’s theory of intellect.”
As Adamson argues (following Carl Ehrig-Eggers), Aristotle’s main targets here, when he speaks of
people being led astray by Porphyry, are Ibn Ḍād and his school, and it seems likely that he knew
the relevant Porphyry texts only through Ibn Ḍād.
other things are knowing/intelligent and known/intelligible, and Avicenna agrees that separate substances are essentially knowing and known (“the meaning of our saying that they are through themselves intelligible is that they understand themselves,” III.8.6, p. 142), and that the agent intellect is the efficient cause to the human soul of its actually understanding and to material forms of their being actually intelligible. But such a separate substance cannot be the knowledge itself through which, as a formal cause, we know, so that we would know only by extrinsic denomination; rather, we must know through some “intelligible” or “intention” present in our souls. Avicenna’s immediate target here is apparently Ibn ‘Adī, who, citing the authority of Aristotle and Alexander of Aphrodias, argues that our knowledge of God is God, and therefore that anyone who knows God is united with God, that God “bestows the divine essence” on anyone who knows Him, and that He does so most perfectly on Jesus.\footnote{This is Ibn ‘Adī’s main argument in On the Necessity of the Incarnation; the On the Three Kinds of Existence gives the philosophical foundation for this theological application. He cites Aristotle’s authority for the claim that the intellect in act and the intelligible in act are a single thing, one in substratum, with the consequence about God, at On the Necessity of the Incarnation (Périer 1920: 74–5; his formulation here is quite close to what Avicenna attacks in Cure: Metaphysics: III.8.6–7 and Cure: Psychology: v.6). Ibn ‘Adī cites Alexander, too, at Platti 1982: 38.} Avicenna would regard this as bad metaphysics in the service of bad (Christian) theology. But the real problem is that Aristotle and Alexander do indeed think that the knowledge of F is just F existing without its matter, and that where F has no matter to begin with, the knowledge of F is simply identical with F.\footnote{This is the plain sense of Aristotle De Anima iii.4 430a3–5 and Metaphysics A9 1074b18–1075a5; see discussion in, for instance, Menn 2001 and 2012b: 442–8. Alexander (De anima libri mantissa 108,16–28) says that any immaterial being is of itself actually intelligible and actually nous, and that when it acts on us it becomes our agent nous, “not as a part or power of our soul, but coming to be in us from without whenever we intellectually cognize it, if intellectual cognition happens by taking on the form” (108,22–5, cp. 112,9–113,2). The separate immaterial F “informs” us from without, and becomes our knowledge of F for as long as it is “in” us. These texts are translated Alexander of Aphrodias 2004: 24–44.} In a sense, Avicenna agrees with them that the knowledge of F is just F, existing in the soul. But it is not this individual F, even when F has no matter and there cannot be more than one F, since even such an individual F cannot be united to the soul as its form. Rather, the knowledge of F is the quiddity of F, which exists in the soul in one way, as knowledge of F, and exists outside the soul in another way, as an individual F. If we explain the difference between F and the knowledge of F, as Aristotle and Alexander do, by applying the concepts of matter and form, we are led to the conclusion that when F has no matter it is identical to the knowledge of F, and indeed to our knowledge of F, a conclusion that Avicenna finds clearly unacceptable. His alternative is to apply his distinctively ontological
concepts of the neutral quiddity and its two modes of being; and this leads him, unlike Aristotle, to conceive the “intention” as standing in a primitive ontological relation to its intentional content, irreducible to the relation of form to the matter-form composite.42

42 I would like to thank Peter Adamson and Rob Wisnovsky for comments on earlier versions. This chapter builds on the work of both of these scholars, and of Amos Bertolacci and Marwan Rashed, as well as on my own earlier articles. I have also profited from discussions with Adam Crager, Bilal Ibrahim, and Lukas Muehlethaler. All translations are mine.
If one were asked to name Avicenna’s greatest contribution to the history of philosophy, one might reasonably choose his proof of God’s existence. The proof shows that there must be a “necessary existent” (wājib al-wujūd), an entity which subsists through itself and requires no external cause in order to exist. It is, quite simply, an entity which cannot not exist. This conception of God, and the proof that goes with it, ranks among his most influential ideas. It was taken up, usually with approval (if also with modification), by Jewish philosophers like Maimonides, Christian philosophers like Duns Scotus, and generations of Muslim philosophers and theologians. Our admiration for Avicenna’s achievement should not, however, blind us to the fact that proving the existence of a necessary existent is different from proving the existence of God.

Avicenna was fully aware of this, as is clear from the version of the proof in the Salvation. In this and other versions, he asks us to consider all the contingent entities together as an aggregate. Avicenna is heading for the idea that there must be a cause outside of this aggregate which explains the existence of contingent things: the necessary existent. He thus has to contend with an alternative possibility, namely, that the aggregate of contingent things is somehow self-caused, rather than caused by something external. He dismisses this as impossible, and then adds, “[even] if it is correct, it is in a certain way the very thing that is sought. For anything that is sufficient to necessitate itself is something existing necessarily.” In other words, as soon as his opponent admits that something necessary exists, Avicenna can declare victory: this is what the proof aims to show. But of course, what the opponent would admit here is not the existence of God. Rather, he would say or imply that the aggregate of contingent things – which we may as well call “the universe” – is itself a necessary existent.

1 See, for instance, Davidson 1987; Druart 2002, and the final chapters in the present volume.
This should alert us to a fundamental limitation of Avicenna’s proof: if successful, it shows the existence of a necessary existent, without showing why we should identify the necessary existent with God. An atheist might agree with Avicenna that there is a necessary existent, yet insist that this existent is the universe itself, or perhaps something else. Suppose that Platonic Forms or numbers necessarily exist. Then there will be many (perhaps infinitely many) necessary existents, none of which is God. So what would it take to show that the necessary existent is God? For Avicenna, it means showing that a range of traditional divine attributes are implied by the fundamental trait of necessity. In numerous texts, he shows that the necessary existent not only exists, but is unique, immaterial, intellective, powerful, generous, and so on. Avicenna lavishes a good deal of attention on this project. He saw clearly that his proof of the necessary existent was in fact only the first step in a long chain of argument, which would finally yield a philosophical account of the God of Islam.

One might usefully compare Avicenna’s strategy to that of Anselm in the Proslogion. There has been a good deal of debate about whether Avicenna’s proof is “ontological” in nature, that is, whether it tries to prove God’s existence through sheer conceptual analysis or by invoking a factive or empirical premise (e.g. “contingent things exist”).\(^4\) I will not enter into that debate here. But there is certainly a parallel between Anselm and Avicenna, insofar as Anselm, too, begins from a schematic description of God, in his case “that than which nothing greater can be conceived.” In the short part of the Proslogion that people usually bother to read, he argues that this description must be satisfied by something that exists in reality, not only in the mind. But the Proslogion has only just begun. Anselm goes on to derive the divine attributes from this same schematic description (for instance, it is less perfect to be material than to be immaterial, so “that than which nothing greater can be conceived” is immaterial). Broadly, Avicenna’s strategy is the same: prove that X exists (here X is “necessary existent” instead of “that than which . . .”), then show that X has the divine attributes.\(^5\)

In what follows, I will first (section I) suggest that the notion of the necessary existent as it emerges from the proof implies two primary routes for deriving attributes, both of which are exploited by Avicenna. In section II of the chapter, I will consider how Avicenna derives a few specific divine attributes, by way of illustration. I will need to be selective, because

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\(^4\) See, e.g., Marmura 1980; Davidson 1987: 28–310; and Mayer 2001 with further references.

\(^5\) My thanks to Dag Nikolaus Hasse for prompting me to consider this parallel.
Avicenna considers a large number of attributes and often gives intricate arguments for them. I will also be selective in terms of texts, focusing on the *Cure* and *Pointers*, with occasional forays into the *Salvation*. (A complete consideration of Avicenna’s derivation of all the attributes across his entire corpus would need a book-length study.) In conclusion (section III), I will briefly consider the implications for Avicenna’s later critics and defenders.

I AVICENNA’S STRATEGY

Thus far I have described the task before Avicenna as a simple one. Having shown that there is an existent that is necessary, he must now show that the trait of necessity implies certain other traits God should possess, like goodness or knowledge. This will establish that the necessary existent is God. The task would be similar to that facing an Aristotelian biologist who, having grasped that frogs are amphibians, seeks to relate this demonstratively to other traits. For instance, he might explain frogs’ laying their eggs in water on the grounds that this is implied by being amphibious. But in fact, things are more complicated. For what Avicenna has shown is not merely that there is a necessary existent. He has shown that there is a necessary existent that is the cause for the existence of contingent things. After all, we discover that there is a necessary existent by showing that there must be a cause for the aggregate of contingent existents.

This means that Avicenna has two resources on which he can draw in deriving the divine attributes. On the one hand, of course, there is the necessary existent’s “intrinsic” trait of necessity. On the other hand, there is its “extrinsic” trait of being a cause for all other things. To put it another way, the necessary existent is an “uncaused cause,” so a given attribute might be implied by its being uncaused, by its being a cause, or both. That second way of putting the point already suggests why it is so

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6 All references to *Pointers* are to the *Metaphysics* section of that work.
7 For a comparable project, see Koutzarova 2009.
8 One might worry that this causes problems: I have suggested above that Avicenna would “declare victory” in his proof if his opponent conceded that the aggregate of contingent things is itself necessary. But if some of the divine attributes are shown on the basis that the necessary existent is a cause, then doesn’t he need to insist not only that there is a necessary existent, but that it is a cause? The answer is yes, and of course he does argue for this. But it should be noted that when the opponent says the universe is itself necessary, Avicenna takes this as meaning that the universe somehow necessitates itself, so that it is self-causing. This is absurd, but also “in a certain way the very thing that is sought,” because it concedes a necessary existent which is a cause for all contingent things. In any case, divine attributes like “one” and “intellective” are shown on the basis of being uncaused, not on the basis of being a cause, as we’ll see below. These attributes would suffice to rule out the notion that the universe is the necessary existent.
important to think of the necessary existent as a cause, as well as thinking of it as necessary. “Being uncaused” looks like a fairly unpromising basis for deriving attributes, since it is a negation. As we will see, Avicenna is able to wring a good deal out of this “negative” feature. But he would not be able to show, for instance, that God is generous or powerful simply on this basis. Rather, if the necessary existent’s being “necessary” is actually a concealed negation – meaning simply “uncaused” – then it seems all the *positive* divine attributes will need to be derived from its relational trait of being a cause.

That would sit well with a rule Avicenna lays down regarding divine attributes:

*Cure: Metaphysics* viii.7.12: The primary attribute (*al-ṣifā al-ʿulā*) of the necessary existent is the fact that it is, and is existent (*anna-hu innan wa-mawjūdun*). Then, some of the other attributes combine in their concept this existence together with a relation, while others are this existence together with a negation.

According to this general rule, there are three kinds of thing we can say about the necessary existent. First, that there is indeed a necessary existent; second, that this existence lacks certain features; third, that this existence enters into certain relations with its effects. Avicenna gives examples (viii.7.13): the necessary existent’s being a “substance” (*jawhar*) is nothing but existence plus the negation of “being in a subject,” whereas its being “powerful” refers to the necessary existent’s being related to everything else such that these things are from it. Some attributes involve both a negation and a relation, in addition to existence. For instance, intellection means negation of mixture with matter, plus a certain unspecified relation (for more on divine intellection, see below, the section *Ineffability*). But this does not compromise the basic rule, it just makes the application of the rule a bit more complicated than one might have expected.

Avicenna’s determination to follow the rule is shown nicely by his handling of the attribute just mentioned, “substance.” In both the *Cure* and the *Pointers*, he raises an objection against his own claim that the necessary existent lacks a genus. (He has a variety of philosophical and historical reasons for insisting on this, but for our purposes it is sufficient to note that membership in a genus would be neither sheer existence, nor a negation, nor a relation to effects, so it would violate the rule.) The objection is that if the First does not subsist in a subject, then He is a substance, and thus falls under the genus “substance” (viii.4.17). Avicenna replies that the First is not a substance in the way that, for instance, an actual human is,
because He lacks any quiddity (māhiyya). Rather, the First’s “not being in a subject” is purely a “negation which adds nothing to existence, apart from the relation of being distinct,” which I take to mean the relation of being distinct from things that are in subjects (viii.4.18). Avicenna raises the same worry in Pointers (iv.25) and again replies that the First has no quiddity that would put him in the genus of substance. He adds a clever argument to distinguish existence from substancehood: merely possible things (like possible humans) may fail to exist, and nevertheless belong to the genus of substance (Pointers iv.25, Cure: Metaphysics viii.4.19).

Avicenna’s rule is meant to accommodate divine simplicity – such that there is no multiplicity of real attributes in God, and no quiddity that would be predicated of Him – while also allowing for substantive theological predication. As he says in Cure: Metaphysics viii.4.2, it is impossible that any existing be so ineffable that it is immune even to negation and relation. So we can “describe” (wasafa) God, but only by “negating features of Him that would be shared in common [with something else], and affirming relations of Him” (viii.5.14). With this in mind, we can suggest a neat equivalence between the two features of the necessary existent and the types of “attributes” recognized by Avicenna’s rule:

- necessity (intrinsic trait): basis for negations
- cause (extrinsic trait): basis for relations

On this interpretation, Avicenna would be treating the First’s intrinsic necessity as amounting simply to His being uncaused, and basing the negative part of his theology (the non-relational part) on this lack of cause. There is some basis for such a reading in the Cure. At viii.4.12–13, he remarks that “everything that has a quiddity is caused,” and adds that since the necessary existent is uncaused, it “is nothing but existence, with the condition of negating both non-being and all other descriptions of Him (bi-sharṣ salb al-‘adam wa-sā’ir al-ausaf ‘an-hu).” The rationale for this is that what is uncaused cannot involve composition (tarkīb: see further below, on divine simplicity, the section on Simplicity), and the possession of positive attributes would involve composition.

To this we can add the fact that later authors who react to Avicenna sometimes treat necessity as a concealed negation. A prominent example is al-Ghazalī, who argues in his Incoherence of the Philosophers that calling something necessary simply means denying that it needs a cause to exist. A similarly negative treatment of necessity can be found in Fakhr al-Din

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9 On this claim, see Macierowski 1988, and further below for the sense in which God may be said to have a quiddity.

From the necessary existent to God

9 From the necessary existent to God

175

al-Rāzī. Of course, this might also make us nervous about ascribing such a view to Avicenna himself, since both theologians mean this as a criticism and not a point of agreement. Indeed, we should be nervous: it would be wrong to think that necessity is a purely negative notion for Avicenna.

We can see why if we recall that in his rule on attributes, he actually recognizes three acceptable kinds of attribute for the First: not only negations and relations, but also sheer existence. Indeed, this was identified as the First’s “primary attribute.” Now, in the argument against God’s having a quiddity, Avicenna says that “everything that has a quiddity which is not being (anniyya) is caused” (Cure: Metaphysics viii.4.11), which echoes a previous remark that “the First has no quiddity apart from being (anniyya)” (viii.4.3). So it seems God does have a quiddity, but just lacks any quiddity beyond His sheer existence. When we describe the First as “necessary,” without adding anything about causal relations, we are not only denying that the First is caused. We are also affirming God’s quiddity: existence. This more “positive” understanding of necessity is anticipated in the first book of the Metaphysics of the Cure, where Avicenna writes that “the true nature (haqiqa) of necessity of existence is nothing but the very guarantee of existence (nafi ta’akkud al-wujūd)” (i.7.6).

Yet we can still relate the rule on attributes to the two aspects of the necessary existent, as follows. The First’s necessity implies both sheer existence and a range of negations (including the denial of relations such as “equal to”). In addition, the First’s status as a cause and principle implies a range of (positive) relations to other existents. Thus:

- necessity (intrinsic trait): “guarantee of existence”; basis for negations
- cause (extrinsic trait): basis for relations

This allows Avicenna to treat some “positive” attributes as following immediately from the necessity of the First. For instance, at Pointers iv.9 he designates the necessary existent as “the self-subsistent” (al-qayyūm), which is a Qur’ānic epithet of God (2:255, 3:2, 20:111). Avicenna provides only a brief rationale for this: “every existent, if you look at it in itself... is either such that existence is necessary for it in itself, or it is not. If [its existence] is necessary then it is God in Himself, the necessary existent in itself, namely the self-subsistent (al-qayyūm).” This would be a rather deflationary account of the divine name if “necessity” were nothing more than a concealed negation. But Avicenna is treating “self-subsistence,” in effect, as a synonym of what he has identified as God’s “primary attribute,”

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12 Translation from Mayer 2001: 22, with discussion at 23.
namely, \textit{mawjūd}, “existent.” Negation enters into the picture only insofar as we deny that this attribute is caused by something else.

Still, most of the divine attributes are established either by appealing to the fact that the necessary existent is uncaused, or the fact that the necessary existent is the cause of all other things. And for good reason: it is simply implausible to claim that when we say “God is knowing” or “God is powerful,” this refers to His sheer existence, however guaranteed this existence might be. So the point still stands that we need to invoke the necessary existent’s causal features (His lack of a cause, and the causation He exercises on other things) if we are to make much headway in showing that the necessary existent is God. As we turn our attention to Avicenna’s arguments for specific divine attributes, we will see him doing precisely this. We will also see that to a surprisingly large extent, Avicenna is able to rely on God’s being uncaused, without needing to appeal to His being a cause.

\textbf{II THE ATTRIBUTES}

Avicenna’s reliance on the First’s causal features may lie behind a curious, and much remarked-upon, feature of the \textit{Metaphysics} of the \textit{Cure}. He notoriously fails to set out with any clarity his own distinctive proof for the necessary existent, as he does in the \textit{Salvation} (II.12) and \textit{Pointers} (IV.9–15). At best, as Marmura has argued,\textsuperscript{13} he scatters elements of the proof throughout the \textit{Metaphysics}. But at the outset of Book VIII, he sets out explicitly to show “that the causes are in all respects finite, that in each of their classes there is a first principle, that the principle (\textit{mabda’}) of them all is one, that it differs from all [other] existents, that it alone is the necessary existent, and that the existence of every other existent has its beginning from it” (VIII.1.2). As Avicenna himself points out (VIII.2.1), he is here following the strategy of Aristotle’s \textit{Metaphysics}, book \textit{Alpha Elatton}, which treats the first principle as the terminus of a causal regress.

This gives him a foundation for the rest of Book VIII (and the beginning of IX), the part of the \textit{Metaphysics} in which most of the divine attributes are derived. Certainly, as shown by the quote just cited, Avicenna identifies the necessary existent with the “first principle” demonstrated by the \textit{Elatton}-style proof. Still, the \textit{Elatton} strategy focuses our attention on the First’s status as \textit{first}, rather than as \textit{necessary}. That is, it focuses our attention on its being both uncaused and the cause of other things, rather than its

\textsuperscript{13} Marmura 1980.
trait of guaranteed existence. Avicenna then proceeds in three stages. First, he proves that there is a unique first cause, which he identifies with the necessary existent (viii.3.5). Then, in viii.4–5, he explores the range of negations that apply to the necessary existent: it has no genus, no quiddity, and so on. This part of Book viii depends principally on the fact that the necessary existent is uncaused. Finally, at viii.6, he begins to exploit the positive implication of the necessary existent’s status as first cause, deriving attributes such as “goodness” and “generosity.” In this section of the chapter, I will follow Avicenna’s lead in this part of the Cure (while drawing on other texts as well) and discuss a selection of attributes in roughly the order chosen by him: uniqueness, simplicity, ineffability, intellection, and goodness.

**Uniqueness**

Among the attributes derived by Avicenna, none is more pivotal than “one (wāḥid).” It almost goes without saying that in his discussion of this attribute, Avicenna is giving a philosophical account of the Islamic doctrine of tawḥīd. In the first instance, this refers to the “oneness” of God not in the sense of “simplicity” (though as we will see in the next section, Avicenna also uses the word wāḥid to mean “simple”), but in the sense of “uniqueness.” To say that God is one is to say that there is only one God, that He has no “peer” (nidd; see, e.g., Cure: Metaphysics viii.5.2, Pointers iv.27). By prioritizing this divine attribute, Avicenna signals the relation between his project and Islamic conceptions of God. But philosophical considerations also make it pressing to show that there is only one necessary existent. As I pointed out above, one can imagine rival conceptions of necessary existence, including conceptions according to which there would be a multiplicity or even infinity of such entities (such as numbers, or Platonic Forms). Establishing this attribute will be crucial in excluding such rival conceptions.

Avicenna first takes up the attribute of uniqueness in the Cure: Metaphysics at 1.6.7–13, giving a complicated argument which resonates with Pointers iv.16–20. In both versions, Avicenna aims to show that something uncaused must be unique. His strategy is a *reductio*: he supposes that there are two necessary existents, and shows that a contradiction follows. In the Pointers he focuses on the problem of what would “individuate” the

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14 The Pointers version has been well studied by Mayer 2003.
15 Thus, it is not entirely implausible for al-Rāzī to describe uniqueness, along with necessity, as a negative (ṣalḥī) trait; see Mayer 2003: 210.
two necessary existents – call them A and B. His argument is complex, but
the basic idea is that if A is distinct from B as a result of something that
follows from necessity of existence, then B would share that feature (after
all, it, too, is necessarily existent) and the two would not be distinguished
after all. But if A is distinct from B as a result of something not implied
by necessity of existence, then this individuating factor will be a cause for
A (since it makes A exist separately from B), and this will compromise
the necessity of A. Let us call Avicenna’s reasoning here the “individuation
argument.” We will see it again in the next section.

In the *Cure*, he takes a rather different tack. Again, the argument is
complex and I will simplify to some extent: suppose for the sake of *reductio*
that there are two necessary existents, A and B, which exist together, neither
causing the other, and both being necessary. This time, we ask not what
makes A and B distinct from one another, as in the *Pointers*, but what
accounts for their being together (*ma‘ā*) in necessary existence. If either
A or B is the reason for this, then it causes the other to be together with
it – which violates the assumption that both are uncaused. If something
other than A or B is the cause, this is even worse: both A and B will be
caus. This seems to leave open an obvious reply, which is that there is no
cause for their being together. Why, then, are they together? Perhaps it just
happens to be so – there is no reason why. But then it would be possible
that they are not together, so that their actually being together is likewise
in itself merely possible. Of course, in that case, something needs to bring
about that this possible togetherness is realized, and again, the supposedly
necessary existents are caused.

Whatever we make of this argument, it calls attention to a fundamental
assumption of Avicenna’s: if an existent is necessary, then *everything* about
it must be necessary. A necessary existent cannot “just happen” to have
an equal partner, or, indeed, “just happen” to have any other trait. For
it would be possible that this trait is not realized, and then some cause
would be needed to explain why the trait is in fact realized, meaning
that the supposedly necessary existent is caused. To put it another way,
all of the necessary existent’s features must flow inevitably from its “true
nature” (*baqiya*), that is, from its necessary existence. This means that the
second type of divine attributes, the ones that arise because the necessary
existent is a cause, are just as necessary as the attributes that arise from
its being uncaused. As Avicenna puts it, “if multiple positive and negative
relations follow on Him, these are concomitants of the essence, caused by
the essence” (viii.4.2). I will return briefly to this consequence of his view
in the Conclusion of this chapter.
Avicenna returns to the topic of uniqueness in Book viii of the *Metaphysics* of the *Cure*. He has already shown, following Aristotle in *Alpha Elatton*, that all causal sequences are finite. Now he states, “if we say [that something is] a first agent principle, that is, a principle that is absolutely first, then it must necessarily be one (wāhīd)” (viii.3.5). At first glance, the idea here seems to be that whatever initiates a causal series must be unique. But a moment’s thought will cast doubt on this notion: why couldn’t there be multiple causal chains, initiated by distinct, uncaused causes? Avicenna has had at least a moment’s thought about this, and decided that there can indeed be multiple first causes in the case of material and formal causal chains. But the case of efficient causation is different:

*Cure: Metaphysics* viii.3.5: If, however, we say it is a first material cause, or a first formal cause, and so on, then it need not be one, the way this is necessary for the necessary existent. For not a single one of these is an absolutely (mutlaqān) first principle, because (li-anna) the necessary existent is one, and falls under the class of agent principle. So the one, the necessary existent, is also a principle and a cause of those first [causes, i.e. formal and final].

There are, I believe, two ways to read this passage. One reading would emphasize the word “absolutely” and suppose that Avicenna assumes an unstated premise, for instance, that in the case of efficient causal chains multiple uncaused causes could be only relatively “first,” needing to be ordered under some absolutely first cause. But that looks question-begging, and would have all the work being done by the unstated premise. In any case, it ignores the fact that Avicenna says it is *because* only the first efficient cause is a necessary existent, that only the first efficient cause needs to be unique. In the next paragraph, he adds, “it has been shown from this, and from the account we gave previously, that the necessary existent is one in number” (viii.3.6). The backwards reference, I take it, is to *Cure: Metaphysics* i.6. If so, Avicenna is telling us that the uniqueness of the First is after all established by its being uncaused, and not its being a cause. Remarkably, Avicenna does not bother to *argue* for his identification of the first efficient cause with the necessary existent. But it is not hard to see why he would think the point obvious: the first efficient cause can terminate the series of cause and effect only if it is uncaused, and an uncaused existent is a necessary existent.

**Simplicity**

Avicenna’s arguments for divine simplicity are closely linked to his arguments for divine uniqueness, and likewise proceed on the basis of God’s
being uncaused. This is evident in *Pointers*, where Avicenna follows his demonstration of God’s uniqueness with the following:

iv.21: If the essence (*dhāत*) of the necessary existent were composed of two or more things that came together, it would be necessary through them. Then one of them, or all of them, would be prior to the necessary existent, and would give rise to it. Thus, the necessary existent is divided neither in concept (*ma’nā*) nor in quantity.

Avicenna’s reasoning here is straightforward, at least by the standards of the *Pointers*. He presupposes that anything made up of parts is in some sense an effect of those parts. Since the necessary existent is uncaused, it cannot have parts. In the *Cure*, he follows the same procedure of first showing that the necessary existent is “one” in the sense of being unique (1.6.7–13), and then showing that it is “one” in the sense of being simple. His argument for the latter takes up *Cure: Metaphysics* 1.7.1–13 and is considerably more elaborate than *Pointers* iv.21.

Avicenna again deploys a *reductio*. Suppose that the necessary existent is not simple, but “a multiplicity (*kathra*).” In that case, we would have a number of elements of the composite necessary existent, which would stand in need of differentiation from one another. This seems right: a minimum requirement, if something is to have multiple parts, is for its parts to be non-identical. But if the internal parts of the necessary existent are themselves necessary and non-identical, then there must be some feature that individuates them (a “specification,” *takhsī”). But this individuating feature cannot derive simply from the necessity of the part that it individuates, since otherwise it would be possessed by each of the necessary parts. Nor can it be merely accidental to the part that it individuates, since it would belong to the part contingently and hence require an outside cause. Then the supposedly necessary, uncaused part would receive its individuation from a cause: a contradiction (*Cure: Metaphysics* 1.7.2). More generally, Avicenna argues, we can rule out that necessary existence is like a genus with multiple differentiae, like “animal” which receives differentiating features such as “rational.” This is not only because necessity means nothing but “guarantee of existence” (1.7.6), but also because it would mean that the

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16 Avicenna recognizes this double meaning of “one” at *Cure: Metaphysics* viii.7.13, where he writes that the necessary existent is called “one, as meaning nothing but this existence itself, or as denying of it division through either quantity or discourse [i.e. simplicity], or as denying of it a partner (*sharīk*) [i.e. uniqueness].” See ix.1.1 for a similar remark distinguishing two senses of “one.”

17 Avicenna does not seem to consider the possibility that the necessary existent is composed of non-necessary parts. But it is perhaps obvious that this could not be the case, since if it were, its parts would exist through a cause, and then so would the whole.
various necessary existents are in some sense caused by their differentiating features (1.7.7–8).

Of course, we have seen this argument before: it is the “individuation argument” from *Pointers* iv.16–20 (see the preceding section), but used to prove simplicity rather than uniqueness. Evidently, these two notions are closely allied. Avicenna expresses both with the same attribute, “one” (wāḥid), and he uses the individuation argument to establish both. Indeed, if we turn ahead to *Cure: Metaphysics* viii.5, we can see Avicenna using the individuation argument to establish uniqueness rather than simplicity (“the true nature of the First exists for the First and for nothing else” (ḥaqīqat al-awwal mawjūda al-awwal dūna ghayrihi), viii.5.1, “the First has no peer,” viii.5.2). That is, he argues that if there were several necessary existents then something would need to individuate them, and this would compromise their necessity by serving as a cause for them. This contrasts with the strategy for proving uniqueness in *Cure: Metaphysics* i.6, which proceeded by inquiring into the “togetherness” of the supposedly multiple necessary existents. But all these passages have something in common: Avicenna argues from the premise that the necessary existent is uncaused. So in general, we can say that the attribute “one” is derived from this premise, whether this attribute is taken to mean uniqueness or simplicity. Uncaused existence suffices for tawḥīd.

**Ineffability**

At *Cure: Metaphysics* viii.4.3–4, Avicenna makes an Aristotelian-style “fresh start” (min ra’). He has, since the start of Book viii, been considering the Elatton-style proof of the First as the terminus of the series of efficient causes. But now, he proposes that we consider the First “just as the necessary existent itself (nafs).” One might wonder whether the quiddity (maḥiyya) of the necessary existent “is, for instance, man, or some other substance.” He compares this puzzle to the situation faced by the Pre-Socratics, who believed that there was some single principle for natural things, but failed to reach a consensus about the identity of this “one”: is it water, air, fire, or something else (viii.4.6)? I take Avicenna to be articulating the puzzle I raised at the outset of this chapter: it is one thing to say there is a necessary existent, and another to say what that necessary existent is like. The extent to which Avicenna is starting afresh, at least for the sake of the following argument, is shown by the fact that he is entertaining possibilities such as man being the necessary existent, something clearly ruled out by the arguments for uniqueness and simplicity in *Cure*:
Nonetheless, the First’s simplicity is again at stake in the following argument. Avicenna says that “the necessary existent cannot have an attribute (ṣifa) that would involve composition (tarkīb), such that there would be here some quiddity, and this quiddity would be necessary of existence, so that this quiddity would have a notion (ma’na) which is not its true nature (ḥaqīqa), but ‘necessary of existence’” (viii.4.7). This is not exactly crystal clear, but Avicenna helpfully provides an example. Suppose the necessary existent were a man. Then it would have a quiddity distinct from its necessity, since it is one thing to be a man, another to be necessary. (This is not question-begging: even if a man were, according to the hypothesis, a necessary existent, it would not follow that what it is to be a man and what it is to be necessary are one and the same.) But then, necessity would need to attach somehow to this quiddity, and that would require a cause. There follow the conclusions already mentioned above: “the necessary existent has no quiddity apart from its being the necessary existent, which is being (anniyya)” (viii.4.9), and “everything that has a quiddity is caused” (viii.4.11).

Here, then, Avicenna is still exploring the implications of saying that the necessary existent is uncaused. I argued above (section I) that for Avicenna, the intrinsic trait of necessity implies both sheer existence and negation of any non-relational attributes. This is borne out by the present chapter, when Avicenna remarks that the First “is the existent, together with the condition of having no added composition” (viii.4.13). In one sense, we are simply returning to the observation that if the necessary existent is uncaused, then it must be simple. But we are also learning that the possession of any positive quiddity or attribute apart from necessary existence would compromise simplicity. This allows Avicenna to exclude both genus and differentia from the necessary existent (viii.4.14–16), which implies that it has no definition (viii.4.16). For good measure, he adds that it also has “no demonstration (burhān), because it has no cause” (ibid.); he later remarks that we can provide for it a dalīl, but not a burhān (viii.5.14).

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19 In his note ad loc. in Cure: Metaphysics: 415 n.11, Marmura refers to what I take to be a synonymous distinction between burhān inna and burhān lima; this is Aristotle’s contrast between showing that and showing why.
So far, we have learned a good deal about what the necessary existent is not. It is neither caused, nor multiple (either by having equals or having parts), nor does it have a genus or any quiddity apart from sheer existence. This rather negative set of findings is unsurprising, as I remarked above, so long as we appeal only to the necessary existent’s guaranteed existence and the fact that it is uncaused, we seem likely to reap little in the way of positive theology. In establishing more positive attributes than he has so far, Avicenna will presumably need to exploit the fact that the necessary existent is also a cause. He will indeed go on to do this, as we will see shortly (next section). Yet one of his central “positive” claims about God derives ultimately from the “negative” premise that the necessary existent is uncaused. This is his claim that God is an intellect. He infers this from the immateriality of the necessary existent, which in turn follows from its being uncaused—since matter is a type of cause.

We see this idea at work when Avicenna discusses the question of what might individuate the necessary existents, if there were more than one of them. He says:

_Cure: Metaphysics_ viii.5.3: How can the quiddity which is separate from matter have two things that possess it (_li-dhātaynī_), given that the two things would be two either in respect of concept (_bi-sabab al-ma‘nā_), or in respect of what bears the concept (_bi-sabab al-ḥāmil_), in respect of position or place, or in respect of moment and time—in general, because of some cause (‘_illā_)?

Obviously his point is that none of these individuating factors will be available in the case of the necessary existent. Let us focus on the connection he draws between such individuating factors and matter (_mādda_). It is a familiar point in the Aristotelian tradition that matter is the principle of individuation for things like men. Being individuated in this way is a way of being caused:

_Pointers_ iv.23: If the existence of something is attached to a sensible body, it is necessitated through [the body], not through itself. Every sensible body is multiple, being divided both in respect of quantity, and conceptually, into matter and form. Furthermore, every sensible body will become another body, either of the same species or of another species, except in consideration of its corporeality [that is, it will remain body despite changing its species]. Every sensible body, and everything attached to it, is caused.
Of course, Avicenna would not wish to argue that everything either subsists in matter or is the necessary existent. There are also celestial intellects, which are both immaterial and caused. So we cannot infer necessity from immateriality. But the reverse is, according to Avicenna, a legitimate inference: the necessary existent must be immaterial, because it is uncaused.

It might seem uncontroversial, in Avicenna’s context, that God is immaterial, and little more controversial that necessary existence implies immateriality. After all, materiality is associated with potentiality or possibility, a point made by Avicenna at the end of *Cure: Metaphysics* 1.7. The next step he takes, however, looks more contentious. He takes immateriality to imply intellection – indeed, self-intellection. For a concise declaration of this inference we can turn again to the *Pointers*:

iv.28: The First is intelligible of essence (maʿqūl al-dhāt) and makes it [sc. its essence] subsist. For it subsists free from attachments, lacks (ʿuhad), or materials (mawāʿadd), and anything else that would bestow an addition onto the essence. And you know that what is like this intellects itself and is intellected by itself.

Notice that Avicenna calls on the reader to deploy previously acquired premises here: *you already know* that what is immaterial is self-intellective. As I have argued elsewhere, he is alluding to claims established in his psychology, which is not what we would have expected in the midst of this metaphysical project of describing God.²⁰

Once he admits premises from psychology, Avicenna can take it as established that any intellect is immaterial – this much is shown in Aristotle’s *De Anima* and again by Avicenna, with new arguments.²¹ But why suppose that, if the necessary existent is immaterial, it engages in (self-)intellection? Blue is a color, but not everything colored is blue. Similarly, the fact that every intellect is immaterial does not imply that everything immaterial is an intellect. But Avicenna affirms at *Pointers* III.22 that “whatever is such as to become an intelligible form and is self-subsistent is also such as to intellect.” I take his reasoning to be as follows. An immaterial object is something intelligible. Now, we know that some intelligible things are intellects. So the question is, in fact, what would prevent an intelligible thing from being an intellect? The answer is that intelligibles which subsist in something else are not intellects. Basically this means that forms in matter are not intellects, though Avicenna also discusses the fact that a form in my mind does not itself think (*Pointers* III.20). So an intelligible thing which subsists through itself, not in matter or in an intellect, will itself be an intellect.

²⁰ For this and what follows, see further, Adamson 2012.
²¹ On this, see Druart 2000 and Adamson 2004b.
Obviously the necessary existent will pass this test – it is the self-subsisting existent *par excellence* – and is therefore an intellect.\(^{22}\)

In *Pointers* III.22, Avicenna immediately adds that the self-subsisting intelligible is not only an intellect, but also intellects itself. He has laid the groundwork for this already at *Pointers* III.19, where he argued that whatever thinks can also think that it is thinking. Again, it is matter which would impede self-intellection. The upshot is that, since the First is self-subsisting (He has “guaranteed existence”) and immaterial (He is uncaused, and matter is a cause for what subsists in matter), the First must be not only thinking, but also self-thinking. He will be an intellect who thinks about Himself.\(^{23}\) In this way, Avicenna uses materials from Aristotle’s (and his own) psychology to re-establish Aristotle’s claim in *Metaphysics* book *Lambda*, that God is a self-thinking mind.\(^{24}\)

Unfortunately, this raises as many questions as it answers. For instance, is the First only thinking about Himself, or does He know about other things? Avicenna holds that He does, but that particular objects of knowledge are known “in a universal way.” This is a claim which has provoked a good deal of discussion, some of it by myself.\(^{25}\) I will not add more here. Rather, I simply observe that on any interpretation, Avicenna’s account of God’s knowledge in *Cure* VIII.6 presupposes a relation God bears towards what He creates. Whereas God’s being an intellect who knows Himself – like His uniqueness, simplicity, and ineffability – is proven ultimately by His being uncaused, His knowledge of other things cannot be understood without invoking His causal relationship to those things. Of course, Avicenna holds that God knows His creatures by knowing Himself. But He does so precisely by knowing Himself as a cause. This is one way Avicenna exploits the second result of his proof, namely, that the necessary existent is the cause of all contingent things. We will see another example in the next section.

**Goodness**

Avicenna’s identification of the necessary existent with “the pure good” marks a transition in his derivation of the attributes. He continues to use

\(^{22}\) One might object that although the necessary existent is self-subsistent, it is not intelligible, because of its ineffability. This objection was indeed put to Avicenna by al-Rāzī in his commentary on *Pointers*, and rebutted by al-Ṭūsī in his own commentary. I discuss this in Adamson 2012.

\(^{23}\) See also *Cure: Metaphysics* VIII.6.6, where Avicenna affirms that the absence of matter guarantees both pure intelligibility and intellection.

\(^{24}\) For the relation between Avicenna’s *Cure: Metaphysics* and the *Metaphysics*, see further, Bertolacci 2006.

\(^{25}\) Marmura 1962; Adamson 2005; see more recently, Nusseibeh 2010. For later reactions see, e.g., Eichner 2011.
the premise that the necessary existent is uncaused, but now he also invokes
the fact that the necessary existent is the cause of all other things. Here
is the concise version found in the Salvation:

Whatever necessarily exists through itself is pure good (khayr mahd) and pure
perfection (kamal mahd). In general, the good is that which everything desires,
and that through which it is completed. Evil has no essence, but is either the absence
(‘adam) of substance or of some state beneficial to the substance. Thus existence
is goodness. Perfection of existence is goodness of existence, the existence that is
untouched by absence – whether absence of substance or absence of something
that belongs to substance – rather, it is perpetually actual (dā’im bi-l-fi’h). So it
is pure good. That which, through itself, is [merely] possibly existent is not pure
good. For its essence does not, through itself, have existence, so that its essence in
itself suffers absence. What suffers absence in any way is not entirely free of evil
and deficiency. Therefore there is no pure good apart from that which necessarily
exists through itself.

“Good” is also said of what is useful or supportive (mufid) for the perfections
of things, and we will show that the necessary existent must from itself be supportive
of all existence, and of every perfection of existence. So from this point of view
also, it is good, and no deficiency or evil enters into it.26

Much could be said about this passage, which looks back to the Neopla-
tonic idea of evil as absence or non-being (‘adam),27 even as it anticipates
Aquinas’ account of God as purely good because purely actual. For present
purposes, though, I want simply to draw attention to Avicenna’s explicitly
twofold approach to the goodness of the necessary existent. First, pure
goodness is seen to follow from necessity, in the sense of “guaranteed
existence.” Second, pure goodness is ascribed to the necessary existent on
account of its being a source of perfections for other things.

The parallel passage in the Cure has the same twofold structure. Avicenna
begins by affirming the necessary existent’s “complete existence (tāmm al-
wujūd)” on the basis that nothing belonging to His existence is “inadequate
(qasiran)” in Him (viii.6.1). This is in contrast to man, who lacks many per-
fections that he might possess.28 The necessary existent is “pure good” and
free of evil, because evil is lack or deficiency (viii.6.3). Having established
this, Avicenna reminds us that the necessary existent provides existence
and perfections of existence. This, too, allows us to affirm His goodness
(viii.6.4). Here the Cure and Salvation agree almost verbatim, but as often,
the Cure does provide further nuances. At viii.6.2–3, Avicenna gives a

26 Salvation: 82.2–12. 27 On this connection, see Steel 2002.
28 Avicenna adds that merely sharing in the species of humanity is itself a mark of imperfection, a
remark that needs to be understood in light of his argument that the necessary existent has no genus.
further rationale for identifying the necessary existent with pure good, namely, that existence is an object of desire (mentioned only in passing in the *Salvation*). Thus “guaranteed existence” also makes God a final cause, a point picked up elsewhere when Avicenna describes God as an object of love for Himself (viii.7.3).

A more significant difference from the *Salvation* account comes when Avicenna admits that God is not really perfect or complete (tāmām) but rather, “above completeness (fawqā l-tamām).” For God “not only has the existence that belongs to Him alone, but every [other] existence is also an overflow from His existence, belongs to Him, and emanates from Him” (viii.6.1, Marmura trans.). It is interesting to see here how God’s status as a cause, far from being the only route to establishing His perfection, in fact leads Avicenna to qualify this divine attribute. If God were merely necessarily existent, He would be perfect; but because He is also the source of all other existence, calling Him “perfect” or “complete” would be to damn with faint praise. The train of thought here is notably different from the one we find in Avicenna’s source text. In the *Theology of Aristotle*, an Arabic translation and re-working of Plotinus’ *Enneads*, the First Cause is likewise said to be “above completeness (fawqā l-tamām).” But there, the reason given is that completeness or perfection is appropriate to a lower level of reality. For the author of the *Theology*, the phrase “above completeness” safeguards divine transcendence (God is not really “perfect” because He is better than what is perfect), whereas Avicenna uses the same phrase to mark God’s causation in addition to his self-sufficiency (God is genuinely perfect, but also the source of perfection for other things).

“Good” is, then, a double-sided attribute. From one point of view it refers to the now familiar fact that God exists with no need for a cause. From another, it refers to God’s status as the source of existence and perfection for other things. This provides a basis for further attributes, as we can see from the opening *fusūl* of the sixth *namat* of Pointers. Avicenna first expounds the attribute “sufficient” or “wealthy” (ghanī, vi.1–2): the necessary existent is not “poor” because it has no need to “acquire” anything else (kasb). Then, he turns his attention to the epithets “king” and “generosity.” On the one hand, these can be seen to follow from God’s sufficiency or wealth: “the true king is the absolutely, true sufficient, who can do without anything’s coming to be in something else from Him (wa-lā yastaghnī ‘anhu shay’ fī shay’).”

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29 See Adamson 2002: 119–24. The designation “pure good (khayr mahdī)” is another allusion to the *Neoplatonica Arabica*; the Proclus adaptation later called *Liber de Causis*, circulated in Arabic under the title *Book of the Pure Good*. For Avicenna’s comments on the *Theology*, see also Adamson 2004a and b.
But generosity and kingship mean more than self-sufficiency, they mean giving without need. God does not need His effects, yet graciously creates these effects anyway. This licenses us to call Him “generous,” an attribute which, more than any other we have examined so far, refers exclusively to God’s causal activity: “the true generous is the one who pours forth gifts from himself without any desire or search after some objective, for something that would be beneficial to him” (vi.5).30

### III Conclusion

One could, and ideally should, extend this discussion to take in all the attributes Avicenna discusses. Among these, one of the most contentious would be the attribute of “will (irāda).” At Cure viii.7,3 and 10–13 (cf. Pointers vi.5–7), Avicenna mentions this attribute several times, and is above all concerned to reaffirm that the necessary existent has no goal or purpose (gharad) for His causal efficacy. This would imply desire, and ultimately give God a final cause. Rather, God’s will is identical to His knowledge, emanation, and generosity (viii.7,12). These passages would be a red flag to any reader for whom God’s will involves a degree of contingency, such that God has multiple genuine alternatives open to Him when He creates, including the option of not creating at all. For such a reader – of course, al-Ghazālī leaps to mind – only this will permit us to say that God wills and is generous. Avicenna has his rival story to tell, namely, that God’s necessity makes Him entirely free of contingency, but His lack of desire and neediness nonetheless makes His creation “generous.” This maneuver did not, to put it mildly, find universal favor.

That much is familiar to students of post-Avicennian philosophy. But to understand fully the history of reactions to Avicenna’s philosophical theology, we need to bear in mind the structure and complexity of Avicenna’s own account. One can readily accept Avicenna’s identification of God with the necessary existent, and even his proof that there is such an existent, without endorsing Avicenna’s understanding of the various divine attributes. As already mentioned, there were numerous criticisms

30 Similarly, at Cure. Metaphysics viii.7,12, Avicenna equates generosity (jūd) with God’s emanation (fayd). Again, one can point to Graeco-Arabic inspiration here; obviously the reference to emanation evokes the Neoplatonica Arabica. But Alexander of Aphrodisias’ On Providence, translated more than once into Arabic, would have been a non-Neoplatonic source for the claim that divine principles do not need or desire their effects. When Avicenna writes, “the higher seeks nothing for the sake of the lower, such that this would play the role of a goal (gharad) for it” (Pointers vi.6), this should be compared to passages like On Providence §23 (in Ruland 1976), which denies that divine providence is exercised for the sake of mundane particulars.
of Avicenna focusing on the topic of God’s will and God’s knowledge of his creatures. More generally, since Avicenna argues for each attribute separately, his critics and supporters could engage in detailed dispute over each attribute. This is exactly what happened in texts like the *Pointers* commentaries of al-Rāzī and al-Ṭūsī.

There were also attempts to derail Avicenna’s project at its outset. To take an example from the twelfth century, al-Shahrastānī (d. 548/1153), author of the famous doxographical work, *Kitāb al-Milal wa-l-nihal*, also composed a refutation of Avicenna’s theology, called *The Wrestling Match* (*Kitāb al-Muṣāraʿa*). He accepts the designation of God as the “necessary existent,” yet takes a radically different view of its implications, because he holds that “existence” applies to God and creatures in an entirely equivocal way. That even so staunch a critic as al-Shahrastānī would accept the title *wājib al-wujūd* for God shows the deep intellectual power of associating necessity with God. This aspect of Avicenna’s philosophical theology was a legacy for Muslim philosophers and theologians of all persuasions, and for Jewish and Christian thinkers, too. But when it came to determining how exactly necessary existence relates to divinity, Avicenna’s treatment of the First was only the beginning.

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31 al-Shahrastānī 2001; see Introduction, p. 10. Ironically, al-Rāzī attacks Avicenna at this same fundamental stage in the argument, and for the same purpose of preserving divine transcendence, yet from the other direction. For him existence is univocal, so God must have some essence apart from mere existence or He would, again, be insufficiently distinct from creatures. See on this, Mayer 2003: 209.
CHAPTER 10

Avicenna’s Islamic reception

Robert Wisnovsky

I INTRODUCTION: ‘ABBUDH AND THE AVICENNIAN TRADITION

In December 1882, the Egyptian theologian and educational reformer Muḥammad ʿAbduh (d. 1323 AH/1905 CE), of al-Azhar University in Cairo, was forced into exile following the failure of ʿUrābī Pasha’s revolt against the British forces then colonizing Egypt. After journeying to Lebanon and France, ʿAbduh got a temporary teaching job back in Beirut, at the Sulṭāniyya College, a much smaller and less venerable institution than al-Azhar. The notes from ‘Abduh’s lectures at the Sulṭāniyya were eventually written up and published as his Essay on Monotheism (Risālat al-tawhīd), a concise summa that came to be one of ‘Abduh’s most influential works. After surveying the topics covered by philosophical theology (kalām or ʿilm al-tawhīd), ‘Abduh then offered a compressed version of a famous distinction elaborated by Avicenna nine centuries before, in his Origin and Destination (Kitāb al-mabda’ wa-l-maʿād):

An object of knowledge is divisible into three categories: the inherently possible, the inherently necessary, and the inherently impossible. The impossible is defined as that which, in and of itself, possesses non-existence. The necessary is that which, in and of itself, possesses existence. The possible is that which, in and of itself, possesses neither existence or non-existence; instead, it exists only on account of whatever makes it exist, and it does not exist only on account of the non-existence of the cause of its existence, so necessity and impossibility may attach to it on account of something other than it.1

Composing condensed versions of complex philosophical discussions was not new to Islamic intellectual culture. The great Muslim philosophers and theologians wrote for all levels of readers: extended treatises for their colleagues and advanced students, medium-length textbooks for

1 ʿAbduh 1906: 18.7–11 (my translation). The Risālat al-tawhīd has been translated into French by B. Michel and M. Abdel Razek (Paris, 1925), and into English by I. Musaʿad and K. Cragg (London, 1966). On ʿAbduh’s life and thought, see Horten 1915 (on biography) and 1916a (on doctrine).
intermediate students, and shorter, propaedeutical works – sometimes in versified form, as mnemonic devices for beginners. ‘Abduh’s summary of Avicenna’s distinction between necessary, possible, and impossible existence, appears to have been at least partly modeled on a popular short creed, entitled Source [lit., Mother] of Proofs (Umm al-barāḥīn) written four centuries earlier by the North African theologian al-Sanūsī (d. 895/1490).² What is new about ‘Abduh’s Essay on Monotheism is that it was composed in an explicitly modern, popular style, designed to appeal to his students at the Sultāniyya College, who – unlike his colleagues and students at al-Azhar – possessed little or no familiarity with the technical vocabulary of Islamic kalām and logic (manṭiq):

I was of the opinion that the short works on this subject [viz., philosophical theology] often failed to attain the goal of benefitting the students, that the long works were beyond their comprehension, and that the intermediate works were composed for an era other than their own. So I thought it more proper that I lecture to them in a way that corresponded to their current situation.³

This is not to say that ‘Abduh’s own philosophical abilities were limited. They are in full display in a long scholastic work that emerged from his early collaboration with one of his teachers, the Shi‘ī-Iranian thinker Jamāl al-Dīn al-Afghānī (d. 1315/1897): ‘Abduh’s Gloss on the Sunni-Iranian philosopher Jalāl al-Dīn al-Dawānī’s (d. 907/1501) Commentary on the ‘Adudīyya, a creed by an even earlier Sunni-Iranian thinker, ‘Adud al-Dīn al-Ījī (d. 756/1355).⁴ Compared to the Essay on Monotheism, the Gloss shows a sophisticated command of the history of Avicennian metaphysics in its treatment, for example, of the problems arising from the way existence relates both to God, the Necessary of Existence, and to other beings, a topic to which I will return at the end of this chapter.

² al-Sanūsī 1848; French translation by Luciani 1908. On the relationship between al-Sanūsī’s creed and that of al-Fuṣḥal, one of ‘Abduh’s predecessors at al-Azhar, see Horten 1916b.
⁴ Dunyā 1958. Arguments in favor of attributing the work to al-Afghānī rather than ‘Abduh can be found in the short Introduction by H. Khusrawshāhī, and the long Introduction by M. ‘Amārah, to Vol. vii of Khusrawshāhī’s al-Āthār al-kāmilah li-jamāl al-Dīn al-Afghānī (Cairo, 2002). For arguments in favor of the traditional view that the work is by ‘Abduh alone, see the two important articles by M. Haddad: Haddad 1997 and 2000. (I am grateful to Dyala Hamzah for directing me to Haddad’s work.) My own position is that the Gloss is analogous to a late-antique Greek apophēses commentary, such as Asclepius’ and several of Philoponus’ commentaries on Aristotle’s works, commentaries that largely recapitulate the views of their teacher Ammonius. Other works by al-Afghānī are not written at a particularly high level of philosophical sophistication, but the Gloss shows such proficiency in the use of technical Arabic that it appears likely that ‘Abduh not only transcribed but also redacted and supplemented the notes he took during al-Afghānī’s seminars in Cairo – much as Philoponus and Asclepius had done almost 1,400 years previously (and only 220 kilometers away, in Alexandria) with the lectures of Ammonius.
This pair of works of Muḥammad ʿAbduh – one a lengthy scholastic text, the other a short popular text – is emblematic of a pivotal moment in Islamic intellectual history, when Muslim thinkers still participated actively in a long philosophical tradition, yet began to step outside that tradition. On the one hand, dozens if not hundreds of Muslim scholars before ʿAbduh, had divided their efforts between commenting on authoritative philosophical texts from previous centuries (as well as glossing earlier commentaries), and composing new philosophical texts, which they hoped would become the subject of future commentaries. In this sense, ʿAbduh’s authorship of the Gloss on al-Dawânî’s Commentary on the ʿAdudiyâ, as well as the Essay on Monotheism, was perfectly in line with centuries of Arabic-Islamic philosophical practice. On the other hand, ʿAbduh’s Gloss on al-Dawânî’s Commentary on the ʿAdudiyâ marks an end-point, because it has been largely ignored, both within the Islamic world and outside it, since it was first published in 1904. (To my knowledge, the only substantive treatment of philosophical aspects of the Gloss is contained in Sulaymân Dunyâ’s Introduction to his 1958 edition of the text, entitled al-Shaykh Muhammad ʿAbduh bayna l-falâsifa wa-l-kalâmîyyîn.) This is astonishing, given how popular his Essay on Monotheism has been in the twentieth and twenty-first centuries. In contemporary Sunni intellectual culture (contemporary Shi‘î-Iranian intellectual culture is different), writing commentaries, glosses, and superglosses on philosophical works by earlier Muslim thinkers has become far less common than it used to be.

This is not to say that Arabic-Islamic philosophical activity has ended – far from it. Many new philosophical works are composed every year by Sunni thinkers writing in Arabic, Turkish, and Urdu, as well as in European languages. But since the time of ʿAbduh, these works’ connection to the pre-modern Islamic philosophical tradition has become increasingly tenuous, in the sense that nineteenth- and twentieth-century Sunni philosophers have moved away from an intimate, exegetical engagement with the Islamic philosophical tradition of the post-Classical period (roughly, 1100–1900), and towards a more distant, modernist critique or appropriation of that tradition. In most Sunni colleges or madrasas today, the traditional balance between studying “transmitted” scriptural texts (manqûlât, e.g., ḥadîth-criticism and Qur’ân-interpretation) and “reasoned” concepts and argumentation (ma‘ûlûlât, e.g., logic, metaphysics, and theology), has been replaced by an almost exclusive focus on the former, with jurisprudence and philosophy of law (usûl al-fiqh) remaining as one of the only rationalistic disciplines left in the curriculum. But in Cairo at the end of the nineteenth century, when ʿAbduh and al-Afghânî was writing his Gloss, as well as in Istanbul, Baghdad, Shiraz, and Hyderabad, the Islamic philosophical
Avicenna’s Islamic reception

10 Avicenna’s Islamic reception

tradition of maʿqūlāt was still highly developed and complex, saturated by the concepts, distinctions, examples, and arguments contained in a millennium’s worth of textual production. However variegated, this intellectual tradition was dominated by one figure, who had laid out a powerful and comprehensive conceptual vocabulary, created an innovative system of logical and metaphysical distinctions, and left behind the most challenging set of unsolved problems. That figure was Avicenna.

II THE ISHĀRĀT’S MYSTERIOUS SUCCESS

Avicenna exerted his influence on subsequent Muslim thinkers both directly and indirectly. His direct influence was on his own students, of course, but more generally on the commentators and glossators who interpreted and transmitted his philosophical texts. His indirect influence was mediated through those authors who studied, taught, and sometimes commented on Avicenna’s works, but who also wrote original treatises that became new vehicles of an appropriated, transformed, and systematized Avicennism.

I will begin with Avicenna’s direct influence. Table 10.1 is a list of those Muslim philosophers and theologians (along with their dates of death) who commented on or glossed Avicenna’s two most influential works, the Ishārāt and the Shīfā’ (mostly on the Ilāhiyyāt, or Metaphysics, of the Shīfā’), and whose commentaries or glosses survive.

What is perhaps most striking about Table 10.1 is that the Kitāb al-Shīfā’, Avicenna’s longest, most comprehensive and most detailed philosophical treatise, seems to have been almost completely neglected as an object of commentary for half a millennium following his death in 1037. Instead, Avicenna’s final philosophical summa, the terse, dense, and cryptic Kitāb al-Ishārāt, dominated the attention of commentators between the eleventh and the sixteenth centuries, while the Shīfā’ only emerged as a focus of interest from the sixteenth to the nineteenth centuries.

What are the possible explanations of this shift in focus, from the Ishārāt to the Ilāhiyyāt of the Shīfā’? One could argue that the Ishārāt attracted the immediate attention of commentators for a compelling philosophical-theological reason. This reason is that the Ishārāt represents the final stage of development of Avicenna’s ideas about the interrelationship between two of his most important distinctions: first, between essence (māhiyya) and existence (wujūd), and second, between the necessary of existence in itself (wājib al-wujūd bi-dhātihi) and the necessary of existence through another (wājib al-wujūd bi-ghayrihi), which Avicenna took to be convertible with the possible of existence in itself (mumkin al-wujūd bi-dhātihi). According
to this hypothesis, post-Avicennian *mutakallimūn* were interested in the *Ishārāt* precisely because it is in the *Ishārāt* where Avicenna tied the two distinctions most closely together. What I mean is that in the *Ishārāt*, Avicenna’s discussion of essence and existence is followed immediately by his discussion of causality, which is then followed immediately by his discussion of intrinsically and extrinsically necessary existence.

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### Table 10.1 Commentators on the *Ishārāt* and the *Shifā*[^1]

<table>
<thead>
<tr>
<th><em>Ibn Sīnā, al-Ishārāt wa-l-tanbihāt</em></th>
<th><em>Ibn Sīnā, al-Shifā</em>[^2]</th>
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<tbody>
<tr>
<td>Sh. al-Mas‘ūdi (c.585–90/1189–94)</td>
<td>Ibn Zayla (?) (439/1048)</td>
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<tr>
<td>F. al-Rāzī (606/1210)</td>
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<tr>
<td>S. al-ʿĀmidī (641/1243)</td>
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<tr>
<td>N. al-Nakhuwānī (7th/13th cent.)</td>
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<tr>
<td>N. al-Ṭūsī (672/1273)</td>
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<tr>
<td>ibn Kammūna (676/1277)</td>
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<td>S. al-Urmawī (682/1283)</td>
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<tr>
<td>Sh. al-Samarqandi (?) (fl. 690/1291)</td>
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<tr>
<td>B. al-ʿIbri (7th/13th cent.)</td>
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<tr>
<td>M. al-Nakhuwānī (fl. 701/1301)</td>
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<tr>
<td>Q. al-Shirāzī (710/1310)</td>
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<td>R. al-Astārabādī (715/1315)</td>
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<tr>
<td>ʿAllāma al-Ḥilli (726/1326)</td>
<td>ʿAllāma al-Ḥilli (726/1325)</td>
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<td>B. al-Tustarī (732/1332)</td>
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<tr>
<td>Sh. al-Iṣfahānī (fl. 8th/14th cent.)</td>
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<td>Q. al-Rāzī (766/1364)</td>
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<td>S. al-Abharī (fl. 773/1376)</td>
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<td>Sayyid Sharīf al-Jurfānī (816/1414)</td>
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<tr>
<td>Z. Ṣadaqa (fl. 9th/15th cent.)</td>
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<tr>
<td>J. al-Dawānī (907/1301)</td>
<td></td>
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<tr>
<td>Sh. al-Khafrī (fl. 907–31/1502–24)</td>
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<tr>
<td>Ibn Kamāl Pāshā (940/1533)</td>
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<tr>
<td>Gh. al-Dashtakī (949/1542)</td>
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<tr>
<td>Mirzājān al-Shirāzī (994/1586)</td>
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<tr>
<td>Z. al-ʿAlawī al-ʿĀmili (c.1048/1638)</td>
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<td>ʿA. al-Lāhiji (1051/1641)</td>
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<td>M. Bāqir al-Sabzawārī (1090/1679)</td>
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<td>M. Khāṭūnābādī (1116/1704)</td>
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<td>Ṣaḥḥā Ḥusayn al-Khwānsārī (1098/1687)</td>
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<td>M. Khāṭūnābādī (1116/1704)</td>
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<td>Ṣaḥḥā Ḥusayn al-Khwānsārī (1125/1713)</td>
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<td>ʿAqā Jamāl al-Khwānsārī (1125/1713)</td>
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<td>B. al-Īṣfahānī (1137/1725)</td>
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<tr>
<td>Mullā Āli al-Nāʾīrī (1246/1831)</td>
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<tr>
<td>M. Kabūdarāḥāngī (1239/1824)</td>
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<tr>
<td>Mullā ʿAli al-Nāʾīrī (1246/1831)</td>
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<tr>
<td>Mirzā Abū l-Ḥasan Jīlwa (1314/1896)</td>
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<tr>
<td>Mirzā Abū l-Ḥasan Jīlwa (1314/1896)</td>
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**Source:** Robert Wisnovsky, Adam Gacek, Reza Pourjavady.
In the Ilāhiyyāt of the Shifā’, by contrast, there are extensive discussions of other metaphysical topics – substance, matter and form, perfection, and so on – that come between the discussion of essence and existence in Book 1, Chapter 5, and the discussion of causality in Book vi; and also further extensive discussions of other metaphysical topics that come between the discussion of causality in Book vi and the discussion of the Necessary of Existence in itself in Book viii. (It is true that Ilāhiyyāt 1.6 is devoted to the necessary/possible distinction, and that it follows immediately upon the discussion of essence and existence in 1.5. But 1.6 does not use the essence/existence distinction for a theological purpose; that is, 1.6 does not argue that God is the only wājib al-wujūd bi-dhātihi because His essence and His existence are identical. For this, we have to wait until Book viii.)

Pressing the essence/existence distinction into the service of the distinction between the necessary of existence in itself and the necessary of existence through another is only fully and explicitly done in the Ishārāt. The mutakallimūn who followed Avicenna could therefore turn to the Ishārāt and get his proof of God’s existence, his Burhān al-sīdīqīn, in its most mature and economical form. But this hypothesis about the Ishārāt’s sudden popularity fails upon closer examination. The first commentator on the Ishārāt, Sharaf al-Dīn al-Mas’ūdī (who appears to have been also known as Sharaf al-Dīn al-Ṭūsī; c.585–90/1189–94), was not a systematic appropriator of Avicenna’s metaphysics for theological purposes. Rather, he was a problem-commentator, a compiler of doubts and confusions (Shukūk wa-shubah, which is al-Mas’ūdī’s title).

Like al-Ghazālī (d. 505/1111) and al-Shahrastānī (d. 548/1153) immediately before him, al-Mas’ūdī seems to have been motivated by anxieties over the increasingly widespread and glib (as they saw it) appropriation of Avicenna’s ideas by eleventh- and early-twelfth-century mutakallimūn. Al-Mas’ūdī’s “commentary” on the Ishārāt was designed to expose the vulnerabilities in Avicenna’s theories, by going straight to their source. Both al-Ghazālī (in his Incoherence of the Philosophers [Tahāfut al-Tahāfūt]) and al-Shahrastānī (in his Wrestling Match [i.e., with the Philosophers: Kitāb al-Muṣāra’ā]) and in his very brief commentary on a problem in Avicenna’s Najāt, which prompted a defense of Avicenna by Ibn Sahlān al-Sāwī (d. c. 565/1170) concentrated most of their fire on theological issues, with particular emphasis on showing that Avicenna’s identification of God as wājib al-wujūd bi-dhātihi did not give Avicenna the philosophical payoff that he claimed it

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5 On this, see Mayer 2001: 18–39. For an attempt to distinguish the premises and structure of the Ishārāt’s proof of God’s existence from those of the Shifā’, see Davidson 1987: 281–310 and 350–61. For an attempt to narrate a development in Avicenna’s views, see Wisnovsky 2003: 245–63.
did, and that it raised at least as many new problems as it resolved old ones – including the problem of God’s knowledge of particulars. In the first lines of his problem-commentary, al-Mas’ūdī says that “these are doubts and worries that came to me concerning several topics [or, “passages”] from the Ishārāt (fi ba’d al-mawādi’ min Kitāb al-Ishārāt).”  

Al-Mas’ūdī had problems with Avicenna’s conception of God as the Necessary of Existence in itself, and cited with favor the earlier anti-Avicennian objections of al-Ghazālī (referred to as Ṣāhib al-Tahāfut) as well as Abū l-Barakāt al-Baghdādī (d. 560/1165) (referred to as Ṣāhib al-Mu‘tabar). But al-Mas’ūdī was also a mathematician, and a student of Umar Khayyām (or a student of a student of Umar Khayyām – it is not entirely clear); and one medieval genealogy of teachers and students of the Ishārāt places al-Mas’ūdī right next to Khayyām:

1. Ibn Sinā read it with (2) Bahmanyār;
2. Bahmanyār read it with (3) Khayyām;
3. Khayyām read it with (4) al-Mas’ūdī;
4. Al-Mas’ūdī read it with (5) al-Rāzī;
5. Al-Rāzī read it with (6) al-Miṣrī;
6. Al-Miṣrī read it with (7) al-Abharī;
7. Al-Abharī read it with (8) al-Ṭūsī;
8. Al-Ṭūsī read it with (9) al-Shirwānī;

Al-Mas’ūdī’s connection to Khayyām is significant because al-Mas’ūdī actually devoted the longest set of objections in his commentary on the Ishārāt not to theological problems arising from Avicenna’s conception of God as the Necessary of Existence in itself or from Avicenna’s theory that God knows particulars in a universal way. Instead, al-Mas’ūdī’s most extensive criticisms of Avicenna (23 out of a total of 45 folios) concerned Avicenna’s theories of perception, abstraction, and intellection. These criticisms revolved around the roles that the physical faculty of estimation (wahm) and the immaterial faculty of intellection (’aql) play in apprehending and manipulating concepts, with mathematical objects such as geometrical figures (al-ashkāl al-handasiyya) serving as a problematic test-case undermining Avicenna’s theory that intellection consists in a form’s issuing from the Agent Intellect and becoming “imprinted” in the

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6 R. Pourjavady and L. Muehlethaler are jointly preparing an edition and translation of al-Sāwī’s defense of Avicenna’s doctrine that God knows particulars in a universal way.
immaterial human intellect. The role of mathematical-scientific objections to core elements of Avicenna’s philosophy (as opposed to scriptural-theological objections); the role of these objections in undermining Avicenna’s theory of knowledge acquisition and in constructing what seemed to post-Avicennian mathematicians to be a more economical, human-centered epistemology, which dispenses entirely with the Agent Intellect; and the appropriation of some of those mathematical-scientific objections by thinkers such as al-Suhrawardī (d. 587/1191) and subsequent Ishrāqī thinkers such as Qutbaddin Shirāzī (d. 710/1310), is beginning to receive some scholarly attention.

Apart from the clear counter-example provided by al-Mas‘ūdi’s commentary, there is another flaw with the hypothesis that the Ishārāt appealed instantly to commentators because it pressed the essence/existence distinction into the immediate service of his distinction between the necessary of existence in itself and the necessary of existence through another. Fakhr al-Din al-Rāzī, the first to write a systematic and comprehensive commentary on the Ishārāt, did seize upon the way essence and existence are distinguishable in all beings other than God as a way to underscore their compositeness, and hence their causedness. But al-Rāzī raised some of his most important points about essence and existence not in his comments on Ishārāt IV (“On Existence and its Causes,” Fi l-wujūd wa-‘ilalihi), the chapter that culminates in the Burhān al-sīdūqīn, but in his comments on a chapter from the Ishārāt’s first section, devoted to logic. What is more, al-Rāzī refuses to explain God’s uncausedness by appealing to the identity of essence and existence in Him. Instead, he says that God’s essence is sufficient to cause His existence, in contrast to other beings, whose essences are not sufficient to cause their existence. Here al-Rāzī appeals to a different Avicennian distinction, introduced in Ilāhiyyāt 1.6; there Avicenna makes

9 Al-Mas‘ūdi’s Shukūk (MS Istanbul: Ayasofya 4851) is divided as follows: fol. 75a: Q1 (about the concept of body and its coming-to-be from form and matter); 76b: Q2 (about space and extension); 78b: Q3 (about motion); 80b: Q4 (about perception); 98a: Q5 (about division and the separability of the human intellect); 101b: Q6 (about what exists and what is sensed); 102a: Q7 (about the finitude of causes); 103b: Q8 (about the necessary of existence); 108b: Q9 (about contingency); 113a: Q10 (about possibility and impossibility); 115b: Q11 (about causation and necessitation); 117a: Q12 (about potentiality and motion); 118b: Q13 (about the rational soul’s conjunction with the Active Intellect); 119b: Q14 (about the intellect’s existence and the soul’s survival); 120b: Q15 (about God’s knowledge of particulars).

10 See Wisnovsky 2012.

11 e.g. al-Rāzī 2005: I, 11, 53.7–11.

12 In his Kitāb al-Ma‘alim, to take one example, al-Rāzī asks, rhetorically, “Why is it not possible for the quiddity, in respect of itself, to necessitate this existence [i.e. God’s], just as quiddity, in respect of itself, admits of existence in contingent [beings]? (lima lā ya‘jūzu an takūna l-māhiyyatu min ḥaythu hiya biya mūjiyatu min ḥaythu biya ma‘ṣīhāt li-dhālika l-wujūdī kamā anna l-māhiyyatu min ḥaythu biya gābilātun li-l-wujūdī fi l-munkinātī)” (Schmidke and Pourjavady 2007: Q10: 54, ult.–55, 2. For a list of other passages where al-Rāzī articulates this view, see Wisnovsky 2012: 41–3.)
a distinction between an essence which is sufficient for a thing to exist and an essence which is not sufficient for it to exist (38.17–18). The existence of that whose essence is sufficient for it to exist will be uncaused (38.18–39.1); whereas the existence of a thing whose essence is insufficient for it to exist will be caused (39.2–4). The point is that although the Ishārāt looks, on the outside, like a particularly useful Avicennian source-text for any mutakallim writing in a scholastic environment and wishing to strengthen his proofs of God’s existence, this does not appear to be the reason why it became suddenly popular as a lemma (matn) for subsequent commentators.

Having dispensed with this first explanation, we might suppose that the Ishārāt’s success had something to do with its relative brevity, compared to the voluminous Shifā’. It is a plain fact that commenting on the Ishārāt did not require nearly as big a commitment of time and effort as commenting on the Shifā’ did. But if this had been the reason, why did the commentators not pick the Najāt, which is a much more transparent exposition of Avicenna’s thought than the frustratingly opaque Ishārāt? Setting aside al-Shahrastānī’s few brief comments, there is no extant commentary on the Najāt other than that of al-İsfarā‘īnī (d. 685/1285). Fakhr al-Dīn al-Rāzī did write a systematic commentary on another short summa of Avicenna’s, the Elements of Philosophy (‘Uyun al-hikma), which – like the Najāt – is quite clearly written, at least compared to the Ishārāt. Why, then, did the ‘Uyun al-hikma not become the focus of exegetical activity in the post-Avicennian era?

The most likely reason is that by the time al-Rāzī wrote his commentary on the Ishārāt, that work was already the subject of an incipient exegetical tradition, albeit a tradition of problem-commentaries rather than system-commentaries. Al-Rāzī’s commentary on the Ishārāt was preceded by his specific responses to some of al-Mas‘ūdī’s doubts – just as al-Rāzī responded in several debates in Transoxania to positions on non-philosophical issues laid out by al-Mas‘ūdī – and it seems that al-Rāzī also taught the Ishārāt to a range of students. In the two generations following al-Rāzī, al-ʾAmīdī (d. 641/1243) and al-Ṭūsī (d. 672/1273) themselves responded to some of the criticisms that al-Rāzī, in his commentary on the Ishārāt, had leveled at

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13 Al-İsfarā‘īnī’s Commentary on the Ilāhiyyāt section of the Najāt has been edited by H.N. İsfahānī (Tehran, 1383/2004 or 2005). Zarrukān speculates that the misattribution of this Najāt commentary to Fakhr al-Dīn al-Rāzī may have resulted from the fact that al-Rāzī and al-İsfarā‘īnī shared the same honorific title (al-imām fakhr al-milla wa-d-dīn): Zarrukān 1963. I am grateful to Bilal Ibrahim for pointing this out to me.

14 On this topic, see Kholeif 1966. Excerpts from Rāzī’s Responses to Mas‘ūdī’s Doubts (Jawābāt al-Imām ‘an Shukūk al-Mas‘ūdī ‘ala l-Ishārāt) are contained in MS Istanbul: Ayasofya 4855, fol. 95a–98a.
Avicenna. Unlike al-Mas’ūdī, who objected to a relatively restricted set of Avicenna’s philosophical positions, each of the three late-twelfth- and thirteenth-century commentators on the Ishārat – al-Rāzī, al-Āmidī and al-Ṭūsī – also tried to systematize Avicenna’s philosophy. The new systematizers found, in the Ishārat, a pliable material with which they could fashion their own model of Avicennian philosophy more easily than they could have done with the more determined – and hence more brittle – Najāt and ‘Uyūn al-ḥikma. Those looking for a clear exposition of Avicenna’s philosophy naturally found the Najāt and ‘Uyūn al-ḥikma more attractive than the Ishārat. But the Ishārat was more attractive than the Najāt and ‘Uyūn al-ḥikma to those aiming to fashion a new, Avicennian philosophy – an Avicennian philosophy that suffered from fewer vulnerabilities than Avicenna’s philosophy did. Where the Ishārat came in handy, in other words, was that its compressed and opaque style of composition allowed commentators to tease out philosophical implications in ways they wanted, in contrast to the more explicit articulations in the Najāt and ‘Uyūn al-ḥikma, which resisted creative interpretation. This gave them more interpretive freedom than they would have enjoyed with the Najāt and ‘Uyūn al-ḥikma, and, a fortiori, with the Shifa’.  

III AVICENNA’S PHILOSOPHY AND AVICENNIAN PHILOSOPHY

Let me explain what I mean by an Avicennian philosophy, as opposed to Avicenna’s own philosophy, by drawing an analogy with the way late-antique commentators systematized and transformed Aristotle’s philosophy. As had been the case with Aristotle, whose many treatises collectively constitute an attempt to lay the basis for a system of universal knowledge, so Avicenna, especially in his Shifa’, proceeded systematically and comprehensively through the many sciences of the late-antique and classical-Islamic philosophical curriculum: through the different stages of logic presented in the Organon; through the branches of natural philosophy such as physics, biology, and psychology; through the mathematical sciences of arithmetic, geometry, astronomy, and music theory; and finally, through metaphysics.

15 On the title page of the codex MS Istanbul: Laleli 2519, al-Āmidī’s commentary, usually known as the Kitāb Kashf al-Tamwīh li Sharḥ al-Ishārat (Exposing Deceptions in Commenting on the Pointers), is described as Kitāb al-‘irādāt ‘alā Sharḥ al-Imām al-Rāzī li-l-Ishārat (Objections to Imam Rāzī’s Commentary on the Pointers); and al-Ṭūsī’s commentary is usually entitled Ḥall mushkilāt al-Ishārat (Resolving the Problems of the Ishārat).

16 At a conference in Pisa in September 2010, Heidrun Eichner presented compelling pieces of textual evidence suggesting that through the lemmata contained in his commentary, Rāzī played a major role in establishing the very text of the Ishārat.
including both ontology and theology. But despite the best intentions of both Aristotle and Avicenna, incongruities remained in their systems, many of them relatively trivial, but some quite fundamental.

Post-Aristotelian thinkers, following Alexander of Aphrodisias, tried to reconcile Aristotle’s various incongruities by locating the passage that they thought expressed the basic doctrine and then using various methods to explain away the apparently contradictory ideas found in other passages. For how could Aristotle’s superiority as a philosophical authority be established if his own philosophy suffered from internal inconsistencies? This effort to reconcile Aristotle with himself (I have called it the lesser harmony) became more complicated when a new hermeneutical commitment was added to the mix: the need of Neoplatonists to reconcile Aristotle with Plato (the greater harmony). This commitment was motivated by two factors.

In a restricted sense, the greater harmony began as an effort by Middle Platonists (e.g. Alcinous) to seize upon elements of Aristotelian conceptual vocabulary in order to formulate Platonic theories more precisely, and thereby better equip themselves to attack the Stoics’ corporealism.\textsuperscript{17} It received a fresh impetus with Plotinus’ appropriation of particular Aristotelian ideas. As with Alcinous, Plotinus’ first step towards using Aristotle took place because Plotinus wanted to use Aristotle against the Stoics. The Stoics believed that soul is a kind of active body that is “somehow disposed” (\textit{pós ekhon}) as a pneuma, a subtle body that intermingles with the coarse body and holds it together. For example, Plotinus seized upon passages from Aristotle’s \textit{De Anima} (\textit{DA}) as a way to arm himself against psychologizing interpretations of \textit{nous} (e.g. \textit{DA} iii.5) as well as against corporealizing interpretations of the soul (e.g. \textit{DA} ii.1). But while Plotinus appropriated elements of Aristotle’s conceptual vocabulary to give a more precise statement of Plato’s views, he never went so far as to commit himself to the hermeneutical principle that Plato and Aristotle \textit{always} agree at some subterranean level.

This broader commitment to the greater harmony between Plato and Aristotle was motivated partly by the Neoplatonists’ need to demonstrate the superiority of classical Greek philosophy over Christianity. For how could philosophy contain and express the truth if its two greatest exponents, Plato and Aristotle, disagreed on basic issues such as the nature of the human soul and the ultimate basis of reality? This effort to reconcile Plato and Aristotle took concrete form in the commentaries on Plato’s and Aristotle’s works, by Neoplatonists such as Proclus, Syrianus, Ammonius, Olympiodorus, Asclepius, Philoponus, and Simplicius. The efforts by

\textsuperscript{17} The following paragraph owes a great deal to discussions with Stephen Menn.
Ammonius, son of Hermeias, and his students, to read Aristotle through a Platonist’s lens, were focused on the production of commentaries on key works of Aristotle. These Ammonian commentators often chose to present a particular passage in Aristotle as expressing his basic doctrine because that doctrine harmonized best with the corresponding doctrine of Plato, rather than because of a preponderance of textual evidence. For example, Aristotle indicates in several places in the *De Anima* and elsewhere that the human soul, or at least the intellectual part of the human soul, transcends the human body. These hints were seized upon by commentators of the Ammonian school in order to show that Aristotle, like Plato, believed in the separability of the human soul (or at least the intellect), in spite of what appeared to be Aristotle’s more extensive and explicit statements contradicting this: namely, that the human soul is inseparable from the body it inheres in, just as form is inseparable from the body it inheres in.¹⁸

In a similar way, post-Avicennian philosophers were confronted by the discrepancy between the overarching, highly detailed, and philosophically compelling system of knowledge presented in the *Shif¯a* and other works, and internal inconsistencies and contradictions within Avicenna’s system – some quite serious – that were exposed upon close examination. For example:

- When speaking about necessity and possibility in a metaphysical context, Avicenna usually adds the rider “in itself” or “through another,” thereby reducing necessity to being-uncaused and possibility to being-caused. But when discussing necessity and possibility in the context of modal logic, Avicenna explains the distinction between necessity and possibility in statistical terms: what is necessary is what is always, and what is possible is what is sometimes. Is there some deep basis of commonality between the two ways of understanding the distinction between necessity and possibility? Is the metaphysical understanding a specially qualified application of the more fundamental logical understanding? Or are the two understandings ultimately irreconcilable?¹⁹
- Avicenna distinguishes between mental existence and concrete existence, and implies that these two categories of existence encompass all beings, both universals in the mind and concrete individuals in the extramental world. Yet when he states that the necessary of existence through another is convertible with the possible of existence in itself, he implies that all intrinsically possible things are concretely existing effects. This in turn

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¹⁸ I describe the Ammonian synthesis at length in the first half of Wisnovsky 2003.

¹⁹ On this, see Street 2005. An attempt to create a basis of commonality between some of Avicenna’s metaphysical and modal-logical notions can be found in Thom 2008.
seems to restrict existence to concrete existence, and to exclude the mental existence of possibilities that remain unrealized in the extramental world.\(^{20}\)

- In several canonical passages, Avicenna claims that essence and existence are extensionally identical but intentionally distinct. In other passages he seems to privilege essence over existence, by implying that essence enjoys the kind of priority over existence that a subject has over a predicate and a substance has over an accident. What then is the best way of describing the relationship between essence and existence such that essence is seen to enjoy a priority over existence, yet without implying that there are essences to which existence need not attach, since this would undermine their extensional identity?\(^{21}\)

- In one famous passage, Avicenna says that essence (or quiddity, \(\text{māhiyya}\)) has three aspects: one when the essence is considered as a universal, i.e. as a mental existent; another when the essence is considered as a concrete individual, i.e. as an extramental existent; and a third aspect, when the essence is considered in and of itself, i.e. as unrelated to either mental or concrete existence. If it has neither the ontological status of a universal nor the ontological status of a concrete individual, what exactly is the ontological status of essence when it is considered “in and of itself” in this third way?

- Avicenna’s theory that the human rational soul survives the death of the body seems to lead him, indirectly, towards maintaining that our role in intellection is almost entirely passive, and restricted to preparing our intellects to absorb the gush of intelligibles from the Active Intellect. If this is the case, how can we actively cause ourselves to know things, through our engagement in the process of abstraction?\(^{22}\)

- Avicenna’s theory that God knows particulars in a universal way seems, \textit{prima facie}, to involve a self-contradiction.\(^{23}\)

- When Avicenna claims that God’s essence is identical to His existence, does that mean that God has only existence, and no essence? Or could it be construed to mean that His essence is sufficient to cause His existence?\(^{24}\)

The exposure of these and other apparent inconsistencies and contradictions prompted post-Avicennian thinkers to create a newly systematized version of Avicenna’s philosophy; that is, to create an Avicennian


\(^{22}\) On this, see Hasse 2001 and McGinnis 2007.

\(^{23}\) On this, see Marmura 1962 and Adamson 2005.

\(^{24}\) On this, see the discussion in the penultimate section of this chapter.
philosophy that was less vulnerable to attack than Avicenna’s own philosophy. Broader attempts were also made to synthesize core elements of Avicenna’s metaphysics, logic, and psychology with older *kalām* doctrines. As with Alcinous’ and Plotinus’ appropriations of Aristotelian conceptual vocabulary against the Stoics, so the Sunni *mutakallimūn* immediately following Avicenna, such as the Ashʿarite al-Juwaynī (d. 478/1085) and the Māturīdite al-Pazdawī (d. 493/1099) seized upon core elements of Avicenna’s metaphysics, logic, and psychology in order to strengthen their own doctrines against their opponents’. One example of this was the Sunnis’ appropriation of Avicenna’s distinction between intrinsically and extrinsically necessary existence, which was motivated by the Sunnis’ need to strengthen their own theory of the divine attributes (*sifāt*) against the theory of their main rivals, the Muʿtazilites. A century later, al-Rāzī appropriated elements of Avicenna’s ontology, and specifically his distinction between essence and existence, in order to distinguish his newly systematized, and deeply Avicennian, Neo-Ashʿarite metaphysics from that of the Neo-Muʿtazilite followers of Abū l-Ḥusayn al-Baṣrī, who (ironically) were closer in their ontology – at least on this one fundamental issue – to al-Ashʿarī himself than they were to the early Muʿtazilites. At the beginning of this period of synthesis, the Sunnis’ appropriation of Avicenna’s ideas was justified rhetorically by their claim that the ideas were not really Avicenna’s to begin with, but were prefigured in the texts of earlier Sunnis, such as the Ashʿarite al-Bāqillānī (d. 403/1013). Later on, as the synthesis broadened and deepened such that Neo-Ashʿarism and Avicennism became more and more indistinguishable, philosopher-theologians such as al-Rāzī and al-Samarqandi appealed to the notion of *taḥqīq* (the independent verification of a theory through philosophical analysis) as a way of justifying their departure from the doctrines of earlier authorities.

iv uses of the *shifāʾ*

The fact that no one commented on the *Shifāʾ* in the eleventh–sixteenth centuries – apart from ‘Allāma al-Ḥilli (on the *Maqūlāt* of the *Mantīq*) and possibly Ibn Zayla (we cannot be sure until we have seen the relevant manuscript, which is in an Indian archive and difficult to access) – does not mean that no one read or studied or taught the *Shifāʾ* during that period. On the contrary: commentators on the *Ishārāt* made constant

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25 See Wisnovsky 2004b.
27 For example, al-Bayḍāwī/İsfahānī and his commentator al-İsfahānī (d. 749/1348) followed al-Rāzī in openly embracing Avicenna’s theory of existence, in flagrant opposition to the ontology of their school founder, al-ʿAshʿarī; Bayḍāwī/İsfahānī, *Maṭālīʿ al-anzār: Sharḥ ḫawāṣṣ al-anwār*, 36.
reference to the *Shifā* in order to decompress (the term that is often used is *tasrih*) the *Ishārāt*’s dense, epigrammatic assertions. They also turned to the *Shifā* in order to buttress their own interpretation of a particular term, distinction, example or argument from the *Ishārāt*, and to prove that a competing interpretation was not supported by close examination of Avicenna’s *magnum opus*. For example, there are at least 31 occasions when al-Ṭūsī, in his commentary on the *Ishārāt*, explicitly cites, quotes and paraphrases passages from the *Mantīq*, *Ṭabī‘iyyāt* (especially the *Fil-Nafs* and *Hayawān* sections) and *Ilāhiyyāt* of the *Shifā*.

The *Shifā*’s usefulness to those engaged in commenting on the *Ishārāt* was not the only reason why post-Avicennians read, studied, taught, and made copies of that great text. Other than commenting on the *Ishārāt*, another way to systematize Avicenna’s thought, and thereby create a relatively coherent *Avicennian* philosophy (as opposed to the sometimes inconsistent philosophy contained in Avicenna’s own philosophical texts), was to compose one’s own summary version of the *Shifā*, though usually without including the mathematical sciences. This was the case with the *Kitāb al-Tahsīl* of Avicenna’s star student, Bahmanyār ibn Marzubān (d. 430/1038), as well as the *Bayān al-Haqq* of al-Lawkārī (d. 517/1123), a third-generation pupil of Avicenna’s. The desire to present a summa of philosophy based largely on the *Shifā* and its internal structure also motivated those like Abū l-Barakāt al-Baghdādī, whose *Kitāb al-Mu’tabar* contains criticisms of some Avicennian ideas, while at the same time recapitulating others. The same could be said of the great philosophy textbooks of the thirteenth century, the *Hidāyat al-Ḥikma* of al-Abhārī (d. 663/1264) and the *Hikmat al-Ayn* of al-Kātibī (d. 675/1276), each of which spawned commentary traditions that were just as extensive as that of the *Ishārāt*. Some of the commentators and glossators on the *Ishārāt* (such as Sayyid Sharīf al-Jurjānī, d. 816/1413) also commented on the new works of al-Abhārī and al-Kātibī, thus intertwining the lines of Avicenna’s direct and indirect influence.

The new treatises by al-Abhārī and al-Kātibī (as well as al-Ṭūsī’s *Outline of Dogma* [*Tajrīd al-I‘tiqād*], a deeply Avicennian creedal work) served as a focus of attention for commentators interested in metaphysics, theology, and natural philosophy during the middle of the post-Avicennian period.

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29 For a survey of Avicenna’s pupils, see al-Rahim 2010. On Bahmanyār and al-Lawkārī’s reworkings of Avicenna’s thought, see Janssens 2003b, 2007b, and 2011. A broader examination of the fortuna of Avicenna’s “universal science” can be found in Eichner 2007.

30 On this, see Pines 1979.
in the fourteenth and fifteenth (and to a lesser extent sixteenth) centuries; that is, following the period of intense commentating on the *Ishârat*, which lasted from the late eleventh to the fourteenth centuries. In logic, commentators who had previously focused on the first section of Avicenna’s *Ishârat* were presented with new exegetical opportunities following these authors’ composition of two shorter treatises – the *Isâghûji* by al-Abhârî, the *Shamsiyya* by al-Kâtîbî – devoted exclusively to logic. The *Isâghûji* and the *Shamsiyya*, along with the *Maṭâli‘ al-anwâr* by al-Urmâwî (d. 682/1283) and the *Tahdhib al-Manṭiq* by Taftâzânî (d. 791/1389), dominated the attention of commentators interested in logic during the fourteenth–sixteenth and the sixteenth–seventeenth centuries, respectively. Again, in contrast to the direct influence that Avicenna exerted on those commenting on the logic section of *Ishârat*, Avicenna had an important but indirect influence on those who read and commented on al-Abhârî’s *Isâghûji*, al-Kâtîbî’s *Shamsiyya*, al-Urmâwî’s *Maṭâli‘ al-anwâr*, and al-Taftâzânî’s *Tahdhib al-manṭiq*. Avicenna’s indirect influence is also obvious in other great textbooks in fields that are ancillary to logic and which were also extensively taught in madrasas, due to their cross-disciplinary appeal to scholars and students working in the various Islamic sciences. These textbooks include original treatises on dialectic and argumentation theory, especially al-Samarqandî’s (*c. 690/1291*) *Risâla fî Adâb al-Bahiṭ*, which dominated the attention of commentators from the fourteenth to the sixteenth centuries, and al-Îjî’s *Risâla fî Adâb al-Bahiṭ*, which was popular in the fifteenth and sixteenth centuries; as well as on philosophy of language and semantic theory, especially al-Îjî’s *al-Risâlat al-Wadîyya*, which predominated in the fifteenth and sixteenth centuries. Clear signs of Avicenna’s indirect influence also mark the great textbooks of Sunnî *kalâm*, such as al-Bayḍâwî’s (d. *c. 716/1312*) *Ṭawâlî‘ al-anwâr* (which was highly popular among commentators in the fourteenth and fifteenth centuries), and al-Îjî’s (d. 756/1355) *al-Mawâqif* (popular in the fifteenth and then in the seventeenth–nineteenth centuries, usually through the intermediary of Jurjânî’s commentary) and ‘Aqîda (i.e., the *`Adudiyya*, al-Îjî’s philosophical creed, which served in the sixteenth–nineteenth centuries as a Sunni alternative to the Shi‘ite al-Ţûsî’s *Tajrîd al-I’tiqaḍ*).

**V Setting the Agenda**

Avicenna’s impact extended even beyond his indirect influence on those composing and commenting on new philosophical treatises that were

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31 These and other extant philosophical commentaries and glosses are listed in Wisnovsky 2004a: 161–90.
modeled on and borrowed heavily from Avicenna’s own works, even as they corrected elements of his thought and harmonized the apparent incongruities. Even those who presented themselves as breaking away from either Avicenna’s philosophy or the Avicennian philosophy that succeeded it, still remained in his shadow in the sense that they largely responded to the philosophical agenda he had set, either decades or centuries earlier. Such was the case with al-Ghazālī, generally supposed to have been a philosophy-hater, but whose *Incoherence of the Philosophers* (*Tahāfut al-Falāsifa*) had a relatively limited direct impact on subsequent Islamic thought, with only three major commentaries written on it: the famous *Tahāfut al-Tahāfut* by Averroes (d. 1198) and two lesser-known commentaries by the Ottoman thinkers Khwājājāzāda (d. 893/1488) and Alā al-Dīn al-Ṭūsī (d. 887/1482). As has become increasingly clear, al-Ghazālī’s importance in Islamic intellectual history rests at least as much on the role he played in integrating core elements of Avicenna’s metaphysics and psychology into Sunnī theology and prophetology as well as into Sufi spirituality, and in appropriating the basic framework of Avicenna’s syllogistic into Sunni jurisprudence.

In a similar fashion, some central ideas of al-Suhrawardī and Ibn ‘Arabī—two thinkers usually viewed as mystics who departed radically from Avicenna’s philosophy—can be seen upon closer examination to be responses to Avicenna’s theories. To be more precise, their ideas can be seen to be responses to the systematized theories of the new Avicennian philosophy of thinkers such as al-Rāzī. An example is al-Suhrawardī’s and Ibn ‘Arabī’s rejection of al-Rāzī’s Avicennian (as opposed to Avicenna’s own) theory that existence is “something superadded to” (maʿnan ḥāʾidun alā) the quiddities of contingent beings. This is not to say that al-Suhrawardī and Ibn ‘Arabī simply dispensed with Avicenna’s metaphysics. On the contrary, al-Suhrawardī’s insistence that existence and quiddity are mental constructs, as opposed to things that themselves possess existence (a picture that could be construed from al-Rāzī’s stated view that existence is “something superadded to” essence), is in some ways just a strong interpretation of Avicenna’s *Ilāhiyyūt* 1.5 distinction between essence and existence, which Avicenna holds to be intentionally distinct but extensionally identical. And Ibn ‘Arabī’s rejection, in his *Inshā’ al-Dawāʾīr,*

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32 On the later *Tahāfut* tradition, see now van Lit 2011.

33 On this, see the extensive recent work of F. Griffel, including Griffel 2004, 2006, and 2009, as well as Wisnovsky 2004b.

34 Al-Suhrawardī’s position would be akin to a strong denial of the reality of matter and form. Matter and form are distinguishable only at the conceptual level (*kata ton logon*) since they are always found together in the extrametrical world; but most philosophers hold that matter and form nevertheless
of the theory that existence is something superadded, can be seen as part of his larger effort to come up with a theory of oneness of existence (\textit{wahdat al-wujūd}) and thereby salvage Avicennian ontology in the face of another attack on the Avicennian claim that existence is superadded to quiddities, but this time by Averroes, not al-Suhrawardi.\textsuperscript{35} Averroes, like al-Suhrawardi, objected to the Avicennian theory of existence by holding that it entailed an infinite regress of existences. The theory holds that any existent that does not exist in itself exists by virtue of a superadded existence that it shares with other existents (This is the theory of 	extit{mushārakat al-wujūd}, another example of al-Rāzi’s systematization of Avicenna’s philosophy.) Now, is this superadded existence – the existence that a possible existent exists in virtue of – itself an existent or not? If that existence is not an existent, we will face the apparent contradiction of a non-existent existence. But if it is an existent, then it will presumably be existent through yet another existence, and so on \textit{ad infinitum}. One way of skirting this problem is to hold that all existence is just existent in itself. But again, Avicenna says that existence in itself applies only to one existent: God, the Necessary of Existence in itself. Ibn ‘Arabi’s solution is to embrace the idea that there is only one existence, and that this existence is God. To do so, Ibn ‘Arabi collapses the distinction that Avicenna made in \textit{Ilāhiyyāt} \textsuperscript{viii}.4 of the \textit{Shifā’}, a distinction between a pure existence (\textit{mujarrad al-wujūd}) that does not allow for things to participate in it, and an existence that does allow for things to participate in it. The former existence is what Avicenna thinks God is, and what he calls being “with the condition of negation” (\textit{bi-shart al-salb}); the latter type of existence is what Avicenna thinks existents possess, and is what he calls being “without the condition of affirmation” (\textit{lā bi-shart al-ījāb}).\textsuperscript{36} Although al-Suhrawardi and Ibn ‘Arabi were placed by later historians of Islamic philosophy in direct opposition to each other (following the intellectual genealogy that Mullā Şadrā presented in his \textit{Asfār}), each is largely responding to and reworking then-current Avicennian metaphysical theories, while employing Avicenna’s conceptual vocabulary.

Given the above, there seems to be a trajectory in the history of Islamic Avicennism, from Avicenna’s directly influencing subsequent thinkers to exist in the extramental world. The analogue of Suhrawardi’s position would be to infer, from the fact that matter and form are distinguishable only conceptually, the conclusion that matter and form are merely mental constructs, in the sense that there is nothing in the extramental world to which they actually correspond.

\textsuperscript{35} On Averroes’ attack on Avicenna’s ontology, see now Menn 2011.

\textsuperscript{36} \textit{Cure. Metaphysics}: 276.16–277.3.
his influencing them indirectly. Post-Avicennian thinkers began by pointing out problems in Avicenna’s *Ishārāt* as a way of undermining his impact; then commented comprehensively on the *Ishārāt* as a means of systematizing his philosophy; then turned to his *Shifā*’ as a source of proof-texts and as a template with which to structure their newly composed treatises of Avicennian philosophy, in which they appropriated his conceptual vocabulary, distinctions, examples, and arguments; and finally responded to the philosophical agenda he set by rejecting some elements of his philosophy while seizing enthusiastically upon others.

**VI AD FONTES**

Why, then, did commentators in the sixteenth century reverse this trend by turning back to commenting directly on Avicenna’s texts, and specifically, to commenting on the *Shifā*’? There were local and personal reasons as well as broader religio-political reasons. As mentioned above, the *Ishārāt* commentators’ initial interest in the *Shifā*’ was motivated by their desire to find proof-texts in the *Shifā*’ with which they could support their own interpretation of the *Ishārāt* and undermine competing interpretations. This was the case with al-Ṭūsī, who cited, quoted, and paraphrased the *Shifā*’ quite extensively in his commentary on the *Ishārāt*; and with his student, al-Ḥilli, was one of the first to write a commentary on the *Shifā*’, or at least on a part of it (the *Maqūlāt* of the *Mantiq*). But it also appears to have motivated a debate in Shiraz, where the philosopher Ṣadr al-Dīn al-Dashtakī (d. 903/1498), followed by his son Ghiyāth al-Dīn (d. 949/1542), turned to the *Shifā*’ in order to extract proof-texts that they could wield in attacking their fellow Shīrāzī (and a contemporary), Jalāl al-Dīn al-Dawānī (d. 907/1501). The rivalry between al-Dawānī and the two Dashtakīs played out in a series of competing glosses and counter-glosses on ʿAlī al-Qushjī’s “New Commentary” on al-Ṭūsī’s *Tajrib al-Fīqād*. This arena differed from the *Ishārāt* commentaries of al-Rāzī, al-Āmīdī, and al-Ṭūsī, who were separated one from the other by a total of three generations rather than just one. But the motivation was the same: turning to the *Shifā*’ in order to make one’s own version of Avicennian philosophy impregnable to attack from opponents. In the case of the rivalry between the Shīrāzī scholars, the two competing versions of Avicennian philosophy were al-Dawānī’s looser interpretation, which was largely shaped by ideas from Ibn ‘Arabi’s metaphysics (at least during al-Dawānī’s early and middle periods); and the Dashtakīs’ stricter interpretation, which they thought represented Avicenna’s
original intent more faithfully than al-Dawâni’s version did. This rivalry would later play out between the great Safavid philosophers Mîr Dâmad (d. 1040/1630) and Mullâ Šadrâ (d. 1050/1640), both of whom commented upon the Ilâhiyyâât of the Shifâ’, with Mîr Dâmad taking the baton from the Dashtakîs and Mullâ Šadrâ taking the baton from al-Dawânî.

This local and personal motivation to go back to the original source-texts – here, to the Shifâ’ – seems to have meshed with something larger that was emerging in sixteenth- and seventeenth-century Iran: a Neoclassicism which, like that of the contemporary Italian Renaissance thinkers, called upon philosophers to bypass the edifice of scholasticism that had been built up during the preceding centuries, and return to the classical sources. Another symptom of this Neoclassicism was an intensification of the copying of the Arabic texts of the “ancients” (al-qudamâ’) – al-Fârâbî, Yahyâ ibn ‘Adi and Avicenna (al-mutaqaddimûn), as well as Aristotle and his Greek commentators (al-awâ’îl) – which took place in the late sixteenth and seventeenth centuries in Iran. Analogous to the effort by Italian Renaissance thinkers to recover the ancient Greek heritage, the Iranians’ return to the classical sources also served the purpose of the Safavid Empire’s religious ideology, which created an impetus to leap-frog over the massive corpus of Sunni philosophical and theological works (including commentaries) that had dominated Islamic intellectual discourse from Avicenna’s death to the late fifteenth and early sixteenth centuries, that is, up to the time when the two Dashtakîs and al-Dawânî were arguing in Shiraz. This Safavid imperial ideology was spurred by Shah Ismâ’îl’s forced conversion of Iran to Shi‘ism, and the subsequent emptying of Iran’s madrasas of the Sunni scholars who had dominated them for centuries. Centered not in Shiraz but in the new Safavid capital of Isfahan, this ideology succeeded in creating a Shi‘ite intellectual genealogy that linked contemporary Safavid thinkers to Avicenna through al-Ţûsî, a genealogy that could lay claim to Avicenna and thereby vie for his authority with the far richer Sunni intellectual tradition. Part of this effort was a new, direct engagement with the great texts of the past, such as the Shifâ’.

The deeper effect of the Safavid revolution was the fracturing of the Avicennian tradition. Following the implementation of the policy of forced conversion to Shi‘ism, some of the Sunni Shirazi (e.g. Qâdî Mîr Ҫhûsûn al-Maybudî (d. 910/1504–5)) were executed for their Sunni views. Others (e.g. Muşlih al-Dîn al-Lârî (d. 971/1569)) chose exile in India and in

37 On the main thinkers of this crucial period, see the survey contained in the Introduction to Pourjavady 2010: 1–44, as well as his summary of the main points of dispute between al-Dawânî and the Dashtakîs, 74–105.
Anatolia, and went on to play major roles in shaping subsequent Mughal and Ottoman philosophy. From the late sixteenth to the late nineteenth and early twentieth centuries, there was no longer a unified Avicennian tradition, but three separate traditions, differentiated by competing imperial-confessional ideologies: one that flourished in Iran during the Safavid and Qajar dynasties, another that flourished in Anatolia and the Arab world during the Ottoman dynasty, and a third that flourished in India during the Moghul dynasty. (A fourth Sunni tradition, in Central Asia, sometimes served as a bridge between Ottoman and South Asian philosophy and theology.) Philosophers were not wholly cut off from each other; the dependence of Indo-Muslim authors and thinkers on Persian literary and intellectual culture was strong enough to support some intellectual interaction. But the fracturing of the Avicennian tradition meant that Sunni philosophers and theologians now commented far less often than they had before on works by Shi‘ite philosophers and theologians in Iran. Before the Safavid revolution, al-Ţusi’s heavily Avicennian creed, the Tajrīd al-I’tiqād, had been mainly commented upon by Sunni scholars, and together with the philosophical and logical textbooks of al-Abharī and al-Kātibī, it had dominated the attention of philosophers in the middle of the post-Avicennian era. By the end of the sixteenth century, however, the Tajrīd had lost its popularity among Sunni scholars of the Ottoman and Moghul lands. These scholars now turned their attention to alternative philosophical creeds that were also subject to Avicenna’s indirect influence, especially al-Ĭji’s ‘Aqīda ‘Aдушیyya and, to a lesser extent, and mainly in North Africa, al-Sanusi’s Umm al-Barāhīn; as well as to Sunni philosophical-theological textbooks, especially al-Ĭji’s al-Mawāqif (usually with al-Jurjānī’s commentary).

In his Gloss on al-Dawānī’s Commentary on the ‘Aqīda ‘Aдушیyya of al-Ĭji, Muhammad ‘Abduh is fully engaged with the tradition of Avicennian philosophy described above. As has been discussed, Avicennian thinkers such as al-Rāzī and al-Ţūsī (as well as those, like al-Suhrawardī and ‘Ibn ‘Arabī, who reacted against the newly systematized versions of Avicennian philosophy) focused much of their attention on a central problem of Avicenna’s metaphysics. If existence is distinct from essence, as Avicenna holds, how should its relation to essence be best described, both in the case of God, the Necessary of Existence in itself, and in the case of all other beings, which are possible of existence in themselves and necessary of existence through another? Building on and systematizing Avicenna,
al-Rāzī held that the existence of all beings other than God is superadded to their essences. In the case of God, however, al-Rāzī broke with Avicenna, who held that essence and existence are identical in the Necessary of Existence in Itself. Al-Rāzī maintained that in God as well as in possible beings, essence and existence remain distinct; but that God was unique because God’s essence is sufficient to cause its own existence, in contrast to possible beings, whose essences are not sufficient to cause their own existence. In this way, al-Rāzī says, God’s essence is a complete cause (‘illah tāmmah) of His existence. (I mentioned earlier how this aspect of al-Rāzī’s theology was itself built on another Avicennian distinction, from Ilāhiyyāt 1.6, 38.17–39.4: between the existence of a thing whose essence is sufficient for it to exist, and the existence of a thing whose essence is not sufficient for it to exist.)

These two basic positions on how essence and existence are related in God as well as in all other beings appear quite far apart. In al-Dawānī’s Commentary on a line from the Áḍudiyā, where al-Ījī states that:

[... the world has a Maker, eternal,] who has always been and will always be, necessary of His existence in Himself, and impossible of non-existence in respect of Himself...

al-Dawānī assigned the two opposing theories to “the majority of mutakallimūn” on the one hand, and, on the other, to “the falāsifa and a group of verifiers (muḥaqiqūn) among the mutakallimūn.” On al-Dawānī’s account, the majority of mutakallimūn hold that existence is distinct from essence in the sense that existence is superadded to essence, in the case of both necessary and possible beings; and that necessary existence is distinguished from possible existence because God’s essence is a complete cause of His existence, since His essence is sufficient to cause His existence. Although al-Dawānī does not name them, it seems clear that when he speaks of “the majority of mutakallimūn” here, he is thinking of al-Rāzī, al-Samarqandi, al-Ījī, al-Baydawī, al-İsfahānī, and other neo-Ashʿarite thinkers who adopted this view. According to al-Dawānī, the falāsifa and the muḥaqiqūn among the mutakallimūn, by contrast, stick more closely to Avicenna by maintaining that existence is superadded to essence only in possible beings; in the case of the necessary being, essence

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38 At least this is Avicenna’s position in two canonical passages, Ilāhiyyāt viii.4, 343.10–15 and 345.6–347.16. Elsewhere Avicenna indicates that the Necessary of Existence has no essence whatsoever, but is pure existence.

39 I call them “Neo-Ashʿarite” in order to distinguish their position on existence from that of al-Ashʿarī himself, who held that in created beings (i.e. possible beings – mumkinât), essence and existence could be distinguished neither intensionally nor extensionally.
and existence are identical. Again, al-Dawānī does not say exactly who the falāsifa and the muḥaqiqiqūn among the mutakallimūn are. But given the position he describes, “falāsifa” seems to refer to al-Kātibī and al-Abhari, amongst others; whereas “muḥaqiqiqūn among the mutakallimūn” seems to refer to al-Ṭūsī and al-Hillī, amongst others. Al-Dawānī clearly aligns himself with the falāsifa and muḥaqiqiqūn. He furthermore rejects the view of some thinkers (again, he is not explicit about who he is referring to here) who argue that the two opposing positions can be reconciled and that the difference between them is reducible to a disagreement about terminology. This is absurd, according to al-Dawānī: if the necessary being’s essence or self were the cause of its own existence (as the majority of mutakallimūn hold), this would entail that the necessary being’s essence or self must precede its existentiation of itself. And this would result either in circularity (if the preceding existence were identical to the subsequent existence), or in an infinite regress of preceding existences.

Although ‘Abduh accepts al-Dawānī’s schematic description of the view held by the majority of mutakallimūn, he disagrees with his portrayal of the position of the falāsifa and the muḥaqiqiqūn among the mutakallimūn. As a result, he maintains — unlike al-Dawānī — that the two apparently contrasting views can in fact be harmonized. How? According to ‘Abduh, when the falāsifa and muḥaqiqiqūn claim that God’s essence is identical to His existence, they are holding, in effect, that the necessary being’s self or essence is sufficient on its own to derive or extract (intīzā) the concept of “existence” that it shares with possible beings. Possible beings, by contrast,

40 Dunyā 1958: 245.1–9 (no. 76).
41 Ibid.: 247.1–6 (no. 77) and 248.1–249.6 (no. 78). Al-Dawānī’s use of the term muḥaqiqiqūn may be confusing, because, as mentioned earlier, al-Rāzī and al-Samarqandī and others saw themselves as muḥaqiqiqūn, in the sense that they engaged in taḥqiq (independent verification through philosophical analysis) rather than taqīd (slavish imitation of an earlier authority), the most obvious example of this being their explicit rejection of the ontology of their school’s founder, al-Ash’arī (as well as their rejection of Avicenna’s theology). By al-Dawānī’s time, however, the term had been appropriated by al-Ṭūsī and al-Hillī and those who held that al-Rāzī and other Ash’arites — al-Hillī refers to them as “Ash’arite ignoramuses” (al-juhbāl min al-Asbā’irab) — still adhered slavishly to the Kullābīte-Ash’arite theory of God’s sifāt, according to which a divine attribute is somehow meaningfully distinct from the divine self, yet without any implication of “otherness” (ghayriyya). Al-Ṭūsī and al-Hillī imply that this is not real taḥqiq, since al-Rāzī and the other Neo-Ash’arītes should in fact have rejected the Ash’arite theology as well as the Ash’arite ontology, and wholly embraced Avicenna’s view. However, al-Ṭūsī and al-Hillī were sufficiently wedded to kalām positions — at least in the context of al-Ṭūsī’s Taḥrīd al-L’tiqād and al-Hillī’s commentary on it — to reject the inference from God’s being wājib al-wujūd to God’s necessitation (iğāb) of the world; in fact, God is an agent (fi‘ī) with will (iğāb) and choice (iḥtiyār). See ‘Allāmā al-Hillī 1988: 305.17–306.4 (on iğāb) and 314.11–18 (on Ash’arīte theology).
42 It is not entirely clear, but intīzā here seems to refer to extracting second-order concepts (e.g., “colorness”) from first-order concepts (e.g., “blackness” and “whiteness”); i.e. as opposed to taqīd, which involves abstracting first-order concepts (e.g., “blackness”) from concrete individuals (e.g. “this black car” and “that black table”).
require another being – their cause – from which to derive or extract their existence. And holding that the necessary being’s self or essence is sufficient to derive its own existence ultimately amounts to holding that the self or essence is the complete cause of its existence – and this is the position of the majority of *mutakallimūn*.

Apart from its importance as a window onto an Avicennian tradition that by that time was 850 years old, ‘Abduh’s *Gloss* on al-Dawānī’s *Commentary on al-Ījī’s Creed* is itself indicative of a deep transition in Islamic thought in the late nineteenth century. The early modern period of Islamic intellectual history, from the mid-nineteenth to the early twentieth centuries, was dominated by the determination, among many Muslim intellectuals, to meet the challenge of European ideas. Yet in an irony of history, the very success of the British (and to a lesser degree, the French) imperial projects had the effect of returning the Islamic intellectual scene back to its pre-Safavid state. The vast breadth of the British Empire created new possibilities for the movement of ideas across Muslim lands that had formerly been divided by imperial-sectarian divisions. An individual instantiation of this movement of ideas can be seen in ‘Abduh’s encounter with al-Afghānī. Originally from Hamadān, in Iran, al-Afghānī appears to have studied some Islamic philosophy in the style of the Shī‘ite seminaries, possibly in Najaf, in Southern Iraq. Yet he moved between British India and Ottoman Istanbul, picking up some training in Sunni *kalām* here and there, so that when he arrived in Cairo he was able to introduce ‘Abduh and other Sunni Azhar students to a range of creedal works (along with their main commentaries) above and beyond al-Sanūsī’s *Umm al-Barāhīn*, which had been dominant in North Africa and (to a lesser extent) in Egypt up to that point. These other creedal traditions included al-Taftāzānī’s *Commentary on the Creed of al-Nasafī*, al-Dawānī’s and the Dashtakīs’ *Glosses on al-Qūshjī’s Commentary on the Tajrīd of al-Ṭūsī*, and, of course, al-Dawānī’s *Commentary on the Creed of al-Ījī*. Al-Afghānī also introduced ‘Abduh to Avicenna’s *Ishārāt*, which the two read together in Cairo. In ‘Abduh’s *Essay on Monotheism*, therefore, what we see is the synthesis of Avicenna’s direct and indirect influences: the direct encounter with Avicenna’s ideas, through ‘Abduh’s reading of the *Ishārāt* with al-Afghānī; and the indirect encounter with Avicenna’s ideas, through ‘Abduh’s *Gloss* on al-Dawānī’s *Commentary on al-Ījī’s Creed*.

43 Dunyā 1958: 248.12–257.13 (no. 78).
CHAPTER II
The reception of Avicenna in Jewish cultures, East and West
Gad Freudenthal and Mauro Zonta

The reception of Avicenna by medieval Jewish philosophers and scientists presents an under-appreciated enigma.1 Despite his philosophical and scientific stature, and although Avicenna opened a “golden age” of Arabic science and philosophy,2 his philosophical writings were relatively little known in Jewish milieus, be it in Arabic or in Hebrew.3 However, although the familiarity with Avicenna’s philosophical works is slight, especially in comparison to that of Averroes, paradoxically some of Avicenna’s philosophical ideas were widely known among Jewish scholars. Things are different with Avicenna’s medical writings: they were widely disseminated among Jews, especially in Hebrew, and remained very influential until at least the seventeenth century.

When discussing the “reception” of a philosopher like Avicenna by later generations of scholars, it is important to distinguish between sheer acquaintance with his works, and actual adherence to his ideas – or failing that – serious engagement with his positions, without necessarily adopting those positions. We here focus mainly on the historical questions of dissemination of and acquaintance with Avicennian texts and ideas, but also try to determine whether a given author who evinces familiarity with Avicenna actually accepted some of his ideas or drew on them in developing his own views. Another important distinction is that between direct

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1 Owing to space limitations, bibliographical references have been reduced to a minimum; more extensive references will be found in a fuller version of this chapter: Freudenthal and Zonta 2012. For having kindly read an early version of this study and made helpful comments and suggestions, we are very grateful to: Ofer Elier, Ruth Glasner, Jules Janssen, Hagar Kahana-Smithsky, Y. Tzvi Langermann, Lukas Mühlethaler, Dov Schwartz, and Alexander Treiger.
2 Langermann 2010; see also Gutas 2002b.
reception (reading Avicenna’s own works) and indirect reception (becoming acquainted with Avicenna via another author’s works). As we will see, many medieval Jewish scholars became acquainted with Avicennian ideas via works by others, notably al-Ghazâlî’s *Maqāsīd al-falāsifa* (*Intentions of the Philosophers*), either in its original Arabic version or in one of three Hebrew translations. We will avoid following the widespread parlance of “influence” – we prefer to deem past thinkers as active borrowers, rather than as passive minds succumbing to outer influences – and instead will try to identify in the writings of Jewish authors what we will designate as “Avicennian doctrinal items.”

Medieval Jews entered into contact with Greek–Arabic science and philosophy in two phases: first in Arabic (beginning in the late ninth century), in both East and West, and subsequently in Hebrew (beginning essentially toward the middle of the twelfth century), in southern Europe (Christian Spain, Southern France (the Midi), Italy). We will therefore have to consider separately the attitude to and reception of Avicenna in these two distinct cultural spheres. We will include in our purview all of Avicenna’s oeuvre: in philosophy, science, and medicine, and even compositions we now know to be pseudo-Avicennian, but which are part of the story of the reception of Avicenna.

**I AVICENNA AMONGST ARABOPHONE JEWS**

Jews under Islam read Arabic and also wrote their own works in Arabic (usually in Hebrew characters). Therefore, in principle they had direct access to Avicenna’s Arabic writings. Given Avicenna’s prominence, one might therefore expect deep and pervasive engagement with him. This does not, however, prove to be the case: the reception of Avicenna among arabophone Jews in both East and West was rather limited. In the East, we are essentially dealing with four thinkers: Abû l-Barakât al-Baghdâdî, Moses Maimonides, David II Maimonides, and ‘Izz al-Dawla Sa’d ibn Manṣûr Ibn al-Kammûna.

As has been shown by the late Shlomo Pines, in his *Kitāb al-Mu’tabar* Abû l-Barakât al-Baghdâdî (*c*.1080–after 1165), a Jew who converted to Islam late in life, seriously engaged with Avicenna’s *al-Shifā*, although he may also have adopted ideas from *al-Isharât wa-l-tanbihât*. Abû l-Barakât’s magnum opus is a purely philosophical work addressed to the philosophical community; the author’s Jewish identity plays no role. This work includes large excerpts from the *Shifâ*, and Abû l-Barakât’s
innovations resulted from a critical dialogue with it. Thus the starting point of Abū l-Barakāt’s psychology is Avicenna’s, from which he borrows in particular the idea that the individual’s self-awareness is an apodictic proof of the existence and activity of the soul; but contrary to Avicenna, Abū l-Barakāt does not try to integrate this idea into Aristotelian psychology. In physics, Abū l-Barakāt accepts Avicenna’s notion of “violent inclination” (mayl qasrī), to explain the continued motion of projectiles. But in contrast to Avicenna (who held that in the absence of an obstacle motion would continue indefinitely), Abū l-Barakāt holds that the “violent inclination” is “consumed” by the violent motion, whereby he explains that it comes to an end.

Maimonides (1138–1204), like Avicenna himself, was both a philosopher and a physician. Accordingly, we will consider Avicenna’s presence in Maimonides’ philosophy and then in his medical works. We assign Maimonides to the “East,” where he wrote the great majority of his works; it should, however, be kept in mind that he was already partly educated in Andalusia, whose intellectual climate continued to reverberate in his thought throughout his life. The question whether or not Maimonides drew on Avicenna’s philosophy is of great importance, given the momentous influence of his writings on Jewish philosophy throughout the ages. The topic has been repeatedly debated by scholars, and what follows is a summary account of the “state of the art.”

To begin with, we know from Maimonides himself how he viewed and appreciated Avicenna. In a celebrated letter which he addressed late in life to Samuel Ibn Tibbon, the future Hebrew translator of the Guide, he commented on the relative worth of a number of Arabic philosophers. Avicenna is the last to be assessed. This passage of the letter, not preserved in Arabic, is extant in two slightly different Hebrew translations:

[Version 1] The books of Ali Ibn Sīna, although they evince fine carefulness [or: thoroughness; diyyuq too] and subtle inquiry ['iyyun daq], are not like those of Abū Naṣr al-Fārābī. Nonetheless, his books are useful and he, too, is an author whose utterances you should examine and into whose works you should probe.

[Version 2] The books of Ibn Sīna, although it is appropriate to take issue with them [le-haqeshot ‘alehem] and [although] they are not like al-Fārābī’s utterances – there is usefulness in his books and one should study his utterances and probe into their [lit. its] ideas.

4 Another work by Abū l-Barakāt, a Judeo-Arabic translation of and commentary on Ecclesiastes, remains largely unstudied; but it seems to be unrelated to the doctrines presented in Kitāb al-Mu’tabar, and hence to Avicenna. See Pines 1977.

5 Pines 1979.

6 For reviews of the question, see Zonta 2005.

7 Maimonides 1934–5: 380; the full text of one of the translations (with the extant fragments of the Arabic original) is also in Maimonides 1988: 553–4.
This short passage, in its two versions, has been diversely interpreted, but it seems warranted to conclude the following: first, Maimonides was acquainted with works he took to be Avicenna’s; second, Maimonides had a fairly good opinion of Avicenna’s philosophy which he deemed worthy of study, although he did not esteem Avicenna as highly as al-Fārābī and although (most explicitly according to Version 2) he may have believed some matters in them needed to be reconsidered. With this in mind, let us consider the presence of Avicenna in Maimonides’ philosophical works.

We begin with Maimonides’ *The Guide of the Perplexed*, written in Fustat and completed by 1191. Already medieval Jewish scholars, most notably the very erudite arabophone scholar Shem-Tov Ibn Falaqera (c.1280), followed by Moses Narboni (d. after 1362), identified in the *Guide* distinctively Avicennian ideas. More recently, Shlomo Pines has shown that although Avicenna is never named in the *Guide*, a number of Avicennian doctrines are an integral part of its philosophy. Pines summarizes his thesis, which also accounts for Maimonides’ slightly reserved words on Avicenna noted above, as follows:

At a certain level of philosophic thought Avicenna had considerable influence upon Maimonides; this is indicated by the latter’s adoption of negative theology, of the distinction between essence and existence, and of various particulars of Avicenna’s prophetology and theory of the worship of God. This influence, however […] did not essentially modify Maimonides’ fundamental position, which he inherited from al-Fārābī, and the Spanish Aristotelian school.

W.Z. Harvey has confirmed and deepened Pines’ suggestions in a number of studies, and so has H.A. Davidson. Dov Schwartz has convincingly argued that Maimonides’ ideas about the afterlife also follow Avicenna. Steven Harvey has suggested that Maimonides borrowed from Avicenna some of his ideas on the notions of ‘ishq and prayer. Thus, there is no question that the most influential Jewish philosopher of all time incorporated in his major philosophical work some fundamental ideas going back to Avicenna (while yet maintaining more traditional Aristotelian positions on others). Some of these Avicennian doctrinal items Maimonides also exposed in the short metaphysical section of *Sefer ha-Madda’* (The Book of Knowledge), the first part of his prominent *Code of Jewish Law* (Mishneh

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8 In his commentary on the *Guide*, Falaqera repeatedly compares Maimonides’ statements with Avicenna’s views.


10 Notably in Harvey 2008.


13 Harvey 2009: 27–8, referring to two as yet unpublished articles.
written in Hebrew. We can thus say that Maimonides appropriated a number of Avicennian “doctrinal items,” which he integrated into his own thought.

Maimonides’ works, both the *Guide* and even more so, *The Book of Knowledge*, were widely read by Jews in many cultural contexts over many generations. Avicenna’s ideas (partly simplified) thus secured themselves a wide dissemination: they were familiar to all students of Jewish philosophy from the early thirteenth century onward, although they could become aware that these ideas derived from Avicenna only with the help of suitable commentaries.

Davidson has shown that whenever in the *Guide* Maimonides refers to “Aristotle’s *Metaphysics,*” in fact he has in mind Avicennian doctrines. How did Maimonides get acquainted with these ideas? Davidson has forcefully argued that Maimonides was not acquainted with works by Avicenna: had he read a work by Avicenna he would have become aware of the difference between Aristotle’s and Avicenna’s doctrines and would not have ascribed Avicennian views to Aristotle. He has further suggested that Maimonides’ source for these ideas was al-Ghazāli’s *Maqāsid al-falāṣifa.* Al-Ghazāli, the astute critic of philosophy, thus emerges as a crucial conduit of Avicennian ideas to Maimonides, and through him to Jewish thought, an apparently paradoxical situation that we will encounter again in what follows. Alternatively, it is also possible that Maimonides read Avicenna’s own *al-Najāt,* which like the *Maqāsid,* offers a summary exposition of Avicenna’s ideas. Since Maimonides’ discussions are quite general and devoid of details, it may be impossible to decide the issue definitely. In any event, it would seem that Maimonides did not see Avicenna’s major philosophical work, *al-Shifā’.*

But why does Maimonides ascribe to Aristotle the doctrines he apparently appropriated from al-Ghazāli’s *Maqāsid* (or Avicenna’s *al-Najāt*)? We suggest the following conjecture. Many readers of Ghazāli’s *Maqāsid* thought of it as a convenient summary of the “standard position,” as it were, of the *falāṣifa,* as opposed to anything specifically Avicennian. Since, in Andalusia, Aristotle continued to be viewed as the leader and fountainhead of the philosophical mode of thought, Maimonides (and his milieu) may have associated the doctrines found in the *Maqāsid* with Aristotle’s emblematic name. Similarly, when Maimonides passes judgment on Avicenna’s philosophy, without saying which, if any, work he has:

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16 Gutas 2002b: 90.
17 Gutas 2002b: 90.
in mind, he may simply be expressing one of the mashhurāt – generally accepted ideas – current and accepted in his basically Andalusian cultural milieu.

The reception of Avicenna in Maimonides’ medical works also presents an enigma. Although Avicenna was doubtless by far the most famous Arabic doctor in East and West throughout the Middle Ages, Maimonides nowhere refers to his magnum opus, al-Qānūn fī l-ṭibb (The Canon). Maimonides’ only explicit reference to a medical work by Avicenna seems to be in his On the Causes of Symptoms, where he quotes some prescriptions deriving from Avicenna’s al-Adwiyya al-qalbiyya (Cardiac Drugs). Maimonides may have borrowed from Avicenna’s main medical work, without naming Avicenna as a source; but this requires further study.

Because in the Guide Maimonides identified as deriving from “Aristotle” ideas that we know to be Avicennian (such as that of the Necessary Existent), Jewish readers frequently took these ideas to be Aristotle’s. We thus have a widespread phenomenon of Avicennian knowledge without Avicenna. One result of this was to blur the opposition between Avicennism and orthodox Aristotelianism (as represented by Averroes) for many Jewish readers, especially those without access to Arabic literature. This may help explain the lack of any consolidated Avicennian movement among Jewish philosophers and the almost total absence of Arabic-into-Hebrew translations of Avicenna’s works (see below).

Maimonides’ descendants can hardly be described as continuing their forefather’s rationalist philosophy, but some of them nonetheless drew on Avicenna. Both Maimonides’ son Abraham (1186–1237) and especially his great-great-great-grandson, David II Maimonides (1335–c.1415), were interested in the question of the transmigration of souls, denying that it is possible. As Paul B. Fenton has shown, for their rationalist arguments they drew on a passage of Avicenna’s al-Najāt. A Hebrew translation of R. David Maimonides’ text was subsequently one of the sources used in a celebrated discussion of transmigration between two Jewish scholars that took place in Candia in 1468.

Finally, we should briefly consider Ibn Kammūna (d. 1284). “Briefly” only, because while he was both Jewish and a philosopher, he wrote exclusively as a philosopher for philosophers, never as a Jew on Jewish philosophy (in this he differs from Abū l-Barakāt al-Baghdādī, discussed above). Avicenna looms large in Ibn Kammūna’s thought. Pourjavaday and Schmidke

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observe: “As a philosopher, Ibn Kammūna was a follower of Ibn Sinā. With some modifications, his cosmology is Avicennian. His distinction between the One as the Necessary Existent (wājib al-wujūd) and other existents as contingents (mumkināt) is also Avicennian, as is his notion of prophecy, explained in detail in the first chapter of his Tanqih. [... ] The main sources of his psychology are again Ibn Sinā’s writings.”

Ibn Kammūna wrote a commentary on Avicenna’s al-Ishārat wa-l-tanbihāt and Y. Tzvi Langermann has pointed out the importance of Avicenna’s concept of intuition (ḥads) for Ibn Kammūna. By contrast, Ibn Kammūna parted company from Ibn Sinā concerning the eternity a parte ante of the human rational soul, although his interest in soul itself “can be understood only in the context of the Avicennian legacy.” Ibn Kammūna was read by a few arabophone Jewish scholars in the East: he is cited by David Maimonides, and a number of his writings were copied in Hebrew characters. None of his writings is known to have been translated into Hebrew.

Turning now to the West, between the twelfth and the fourteenth centuries we find no fewer than four Jewish authors writing in Arabic who were familiar with Avicenna’s works and drew on them: Judah Hallevi, Abraham Ibn Da’ud, Moses ha-Levi, and Joseph Ibn Waqār. The use of Avicenna in their Judeo-Arabic compositions is important in its own right, and also because in Hebrew translation these works contributed to the transmission of Avicennian ideas to the Hebrew philosophical culture.

As early as 1876, S. Landauer recognized that Judah Hallevi (c.1080–1141) incorporated in his magnum opus Kitāb al-radd wa-l-dalīl fī al-dīn al-dhalīl (also called Kitāb al-Khazarī, or The Kuzari; completed 1140) entire sections of Avicenna’s Risāla fī al-nafs (Compendium on the Soul). Subsequently, Harry A. Wolfson, and especially David H. Baneth, confirmed the thesis through a detailed comparison of Hallevi’s and Avicenna’s texts. Hallevi’s dependence on Avicenna establishes that at least the latter’s Compendium on the Soul was available in Andalusia before 1140. Elsewhere in the Kuzari, Hallevi also borrows various doctrinal items from Avicenna (and al-Fārābī).

22 Pourjavaday and Schmidke 2006: 59–63; see also 129.
23 Langermann 2005.
27 Landauer 1876: 335–6.
28 See Wolfson 1935.
In the case of Abraham Ibn Da’ud (1110–c.1180), the acquaintance with and borrowing from Avicenna is no less clear. Ibn Da’ud wrote his book *al-ʿAqīda al-rafiʿa* (*The Exalted Faith*) in Toledo (then the capital of the Kingdom of Castile) in 1160–1. The Arabic original of the book is lost, but two late fourteenth-century Hebrew translations survive. Avicenna’s name is again not mentioned, but Ibn Da’ud’s direct or indirect borrowings from Avicenna have been noted by scholars. Recently, A. Eran pointed out in detail Ibn Da’ud’s direct dependence on Avicenna’s *al-Najāt*. For example, in Book 1, Chapter 6, Ibn Da’ud’s discussion of the five “internal senses” follows *al-Najāt*, which on this topic deviates from the *Compendium on the Soul*, excluding a dependence of Ibn Da’ud on Judah Hallevi. Moreover, there is a correspondence between the order of discussion in the first part of *The Exalted Faith* – bearing on logic, physics, and metaphysics – and the structure of *al-Shifāʾ*.33

More than half-a-century ago, M.T. d’Alverny suggested that Abraham Ibn Da’ud is to be identified with the noted Jewish translator Avendauth, who, between 1154 and 1166, cooperated with the Christian philosopher and translator, Domingo Gundisalvi, in translating from Arabic into Latin the entire text of the section *On Soul* of Avicenna’s *al-Shifāʾ* (*The Cure*). In addition, Avendauth himself rendered into Latin the introduction and some chapters of the logical section of *al-Shifāʾ*. If he is indeed to be identified with Avendauth, then Ibn Da’ud’s acquaintance with a large corpus of genuine Avicennian texts would be confirmed. We would then face a quite remarkable and interesting situation, inasmuch as the attitude to Avicenna of Avendauth, the translator, is different from that of Ibn Da’ud, the writer on Jewish religious thought: the former, far from being a mere translator, played an active role in initiating the Arabic-into-Latin translations of Avicenna; the latter, by contrast, conceals his borrowings from Avicenna’s writings and never mentions Avicenna by name. Unless Ibn Da’ud wrote *The Exalted Faith* before he became acquainted with further texts by Avicenna through his translation activity, this would mean that in a way he exerted self-censorship on the Avicennian materials on which he drew in his work directed to Jewish readership. In any event, Avendauth’s activity as an Arabic-into-Latin translator had no impact on subsequent Jewish intellectual life.

Probably around the middle of the thirteenth century in Andalusia Moses ben Joseph ha-Levi from Seville (or Müsa Ibn al-Lāwi al-Ishbīlī)

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32 See this passage in Ibn Da’ud 1852: 20–30.
34 D’Alverny 1954: 20–43.
wrote a number of works following Avicenna, of which the only one to survive is the short *Maqāla ilāhiyya* (*Metaphysical Treatise*), preserved both in the original Arabic and in a Hebrew translation. Steinschneider, followed by Georges Vajda, showed that Moses ha-Levi defends Avicenna’s metaphysical ideas about the difference between God and the First Mover against those of Averroes (who identified them). In particular, one passage in Moses ha-Levi’s work closely paraphrases the treatment of the Necessary Existent in the metaphysical section of Avicenna’s *al-Najāt*. Here we have a first and rare use of Avicenna in a direct criticism of Averroes by a Jewish author, a circumstance that justifies viewing Moses ha-Levi as a committed Avicennian. It is also noteworthy – and not haphazard – that whereas Judah Hallevi and Abraham Ibn Da’ud never explicitly mention Avicenna by name (even in passages directly depending upon him), this committed Avicennian explicitly refers to “Abū ‘Alī Ibn Sīnā” at several points in his work.

Fourth, and finally, we have Joseph ibn Waqār, who worked in Toledo around 1360. His main work, *al-Maqāla al-jāmi’a bayna l-falsafa wa-l-sharī’a* (*Treatise Reconciling Philosophy and Religious Law*), extant in the original Arabic and in a fragmentary Hebrew version, has again been studied in detail by Vajda. Ibn Waqār’s goal is to “reconcile” philosophy and the superior science of Kabbalah. He devotes some space to the discussion of the relationship between God and the First Mover, and in this context incorporates in his book the complete text of Moses ha-Levi’s Avicennian treatise just considered. Ibn Waqār’s Avicennian sympathies are further confirmed by his explicit references (including quotations) to Avicenna himself and to a number of other philosophers with Avicennian tendencies. Ibn Waqār mentions Avicenna by name more than once, in connection with the “giver of forms,” divine providence, and the difference between the First Cause and the First Mover. He also refers to an account of the activities of the five senses as found in *al-Shifā‘*. According to Vajda, Ibn Waqār, unlike other arabophone Spanish philosophers (notably Ibn Tufayl and Averroes), did not have extensive first-hand knowledge of Avicenna’s oeuvre. Although he was clearly familiar with many doctrines of Avicenna and his followers, he had at his disposal only some parts of *al-Shifā‘* and *al-Najāt*; certain Avicennian doctrines he knew only through summary presentations by other authors. His Avicennian leanings notwithstanding,

36 See Vajda 1948: 484.
Ibn Waqār does not follow Avicenna uncritically and distances himself from some of his ideas.

The textual evidence presented above is complemented and confirmed by the evidence of Arabic manuscripts copied in Hebrew script. The existence or absence of Arabic texts in Hebrew characters offers an excellent, if under-appreciated indicator whether or not arabophone Jews were interested in a given text. There is no trace of a total or partial Judeo-Arabic copy of the key-texts *al-Shifā‘* or *al-Najāt*, and even al-Ghazālī’s *Maqāṣid* is represented by only a single extant manuscript in its Judeo-Arabic version (some additional fragments were found in the Genizah). Clearly, Avicenna’s philosophy was low on the priority list of arabophone Jewish scholars.

By contrast, arabophone Jews much appreciated Avicenna as a physician. Between c.1300 and 1600, Avicenna’s *Canon* was totally or partially copied a number of times, and even some minor medical works were disseminated among Judeo-Arabic physicians.

We conclude that Avicenna the philosopher was little read by arabophone Jews. Maimonides’ attitude to Avicenna is enigmatic. Maimonides commended the quality of Avicenna’s philosophical writings, but, as it seems, without actually seeing them; apparently he was acquainted with Avicenna’s ideas mainly through al-Ghazālī. Significantly, he adopted some Avicennian doctrinal items as important building blocks of his own thought, thereby contributing to their diffusion (albeit as “Aristotle’s”). Maimonides’ descendants appropriated only Avicenna’s refutation of metempsychosis. In the West, arabophone Jewish philosophers turned to Avicenna mostly for specific topics. The extant manuscripts, too, suggest that only a few minor works, bearing on some specific themes, notably on the nature of soul, were copied and read. This state of affairs is consistent with our observations concerning the presence of Avicennian doctrinal items in Judeo-Arabic works of philosophy: two authors (Judah Hallevi and Joseph Ibn Waqār) drew on Avicenna for their discussions of the human soul, a theme that seems to have been a major focus of interest for most arabophone Jewish philosophers (with the notable exception of Maimonides). Moses ha-Levi is exceptional in his clear self-identification as an Avicennian. Avicenna the physician, by contrast, although all but ignored by Maimonides, was very popular among his arabophone Jewish confrères.

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38 For a much more detailed discussion see the fuller version of this study (see note 1 on p. 214).
39 Langermann 1996a, 156–8.
In most locations and periods, arabophone Jews wrote their theoretical works (linguistics, religious philosophy, biblical exegesis, etc.) in Arabic. In parallel, belles-lettres (mainly poetry, but occasionally some prose, too) flourished in Hebrew, especially in Spain. In the early twelfth century, a movement of Arabic-into-Hebrew cultural transmission gathered momentum, having started in the previous century. The channels of transmission were twofold: arabophone Jewish scholars wrote in Hebrew works that drew on knowledge acquired in Arabic, thereby transmitting it to their brethren unfamiliar with Arabic; arabophone scholars translated into Hebrew works authored in Arabic by Jews, Muslims, and pagans. This translation project spanned four centuries, during which a great number of works was translated, laying the basis for what was to become medieval philosophy and science in Hebrew.  

Remarkably little of Avicenna’s philosophical œuvre was translated into Hebrew. This is a very significant datum of medieval Jewish cultural history, which calls for explanation and for which we will try to account in the conclusion. Specifically, only the following texts by Avicenna were translated: (1) of Avicenna’s great philosophical work *al-Shifāʾ*, only a few unrelated short passages were translated, and the work was not even given a Hebrew title; (2) the only philosophical work by Avicenna of which substantial parts were translated into Hebrew is *al-Najāt* (*The Salvation*), of which the sections on physics and metaphysics were translated, by Ṭodros Ṭodrosi in c.1334–40, under the title *Haṣalat ha-nefesh*. The section on logic was omitted, apparently deliberately. The reason may have been that in 1337 Ṭodrosi had already translated (or was about to translate) Averroes’ commentary on the *Rhetoric*, and that he had given an account of logic in his “philosophical anthology” (on which, see below). In any case, *Haṣalat ha-nefesh* is preserved in only two manuscripts, and did not play a notable role in the reception of Avicenna in medieval Jewish thought. (3) Strikingly, the only works by Avicenna that were appropriated *in toto* in Hebrew are two of the three compositions that Henry Corbin has described as “visionary”: *Hayy Ibn Yaqqān* (adapted into Hebrew by the great polymath Abraham Ibn Ezra (1089–1167)) and the less-well-known

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40 The summa on this subject is still Steinschneider 1893. See also Zonta 1996. A sociologically informed account is offered in Freudenthal 1993; 1995. For a chronological listing and bibliography, see Zonta 2011.

41 Steinschneider 1893: 285.

42 Corbin 1990.
Risālat al-tayr (Epistle of the Birds), adapted in Hebrew in the form of a *maqāma* by no less than three different authors.

Mention should lastly be made of the Hebrew reception of Avicenna’s *Risāla fī al-nafš* (Epistle on Soul). As noted, Judah Hallevi incorporated it in his *Kuzari*, and when that work was translated into Hebrew (by Judah Ibn Tibbon in 1167) the epistle was translated with it, albeit unattributed. For his part, the encyclopedist Shem Tov Ibn Falaqera included in his *De‘ot ha-pilosofim* (The Philosophers’ Opinions; 1270s) an equally unattributed Hebrew version of the Epistle.

All this was little and far between, certainly not a sufficient basis for a direct acquaintance with Avicenna’s thought by a Hebrew-reading public. Nonetheless, Avicenna was undoubtedly a household name among Hebrew-reading intellectuals. This was owing to Hebrew translations of works by Muslim scholars other than Avicenna, containing accounts of his thought; to Avicennian doctrinal items in Hebrew translations of works by arabophone Jewish authors; and to works by arabophone Jewish scholars who wrote in Hebrew. Let us consider these three channels in turn.

The Muslim authors whose works contained substantial material on Avicenna and reached the Hebrew-reading public are mainly al-Ghazālī and Averroes; some additional information came via Fakhr al-Dīn al-Rāzī. As we have seen, al-Ghazālī’s *Maqāsid al-falāsifa* was an important conduit for Avicennian ideas. In his introduction to this work, al-Ghazālī states that his intention is to describe the philosophers’ ideas in order to refute them, a passage that was included in all Hebrew translations (but is not found in most Latin manuscripts). Nowhere in this work does al-Ghazālī mention Avicenna. Jewish scholars appreciated what al-Ghazālī says of the goal of his composition variously: some (like Moses Narboni in the fourteenth century) were persuaded that al-Ghazālī’s real intention was to teach philosophy and that it was only the fear of his anti-philosophical contemporaries that led him to present his philosophical work as if it were a criticism of philosophy; others (like Isaac Albalag and Judah ben Solomon Natan, also in the fourteenth century) took al-Ghazālī at his word and either applauded his anti-philosophic intentions (Judah Natan) or criticized them (Albalag). Between c.1290 and 1330, the *Maqāsid* was translated into Hebrew, perhaps even three times, and was the object of a considerable number of commentaries in Hebrew. It was very popular for many centuries, as indicated by the great number of extant manuscripts

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44 Steinschneider 1893: 309, distinguishes three translations, but Wolfson casts doubt on this; see Wolfson 1929: 10 n. 44.
of all versions. Thus, *The Intentions of the Philosophers* in Hebrew garb brought Avicennian ideas within the reach of Hebrew-reading scholars. It is important to realize, however, that the text itself did not allow its readers to become aware of its Avicennian pedigree – this they had to be told by someone having access to external sources of information, notably in Arabic, such as the translators.\(^45\)

The first Hebrew version of the *Maqāsid* was made in the late thirteenth century by the philosopher Isaac Albalag, possibly from Narbonne.\(^46\) He accompanied the translated text with his running commentary, which criticizes the opinions expressed in the text, siding with Averroes against Avicenna and al-Ghazâlî, thereby alerting his reader to discrepancies between their views. A second, anonymous version was made in the first decades of the fourteenth century. It is extant in a number of manuscripts, and the part on logic has been published.\(^47\) Finally, a third version was made by Judah ben Solomon Natan (extant in a dozen manuscripts), a physician who also translated a number of medical works. In his introduction to the translation,\(^48\) he says that al-Ghazâlî presented the philosophers’ ideas in logic, natural science, and philosophy most exactly and comprehensively. The composition, therefore, suited Judah Natan’s purpose, which was to serve the needs of Talmudic scholars. By offering Jewish scholars in a single volume a digest of the entire philosophical science, Judah Natan would allow them to avoid losing precious time with philosophy – they could put their time to better use by studying the Talmud. Judah Natan was a conscientious and meticulous scholar. Realizing that he did not always understand al-Ghazâlî’s text, and recognizing, moreover, that it expressed ideas deriving from Avicenna, he also consulted works by the latter. He notes that he added to his translation explanatory glosses from these works by Avicenna (and others), but these glosses are lost. Still, Judah’s introduction made it clear to the users of his translation that al-Ghazâlî’s work was Avicennian in its tendencies.

The three translations of the *Maqāsid* are extant in a great number of copies, and became the object of marginalia, commentaries, and super-commentaries. A commentary written by the noted Averroist scholar Moses Narboni in 1344 is extant in more than 30 copies. All in all, no fewer than twenty commentaries, written in south-western Europe as well as in

\(^{45}\) Manekin (2000: 287–92) discusses the intentions of the translators of *Maqāsid* and the success of the work.


\(^{47}\) Chertoff 1952.

\(^{48}\) Published in Steinschneider 1878: 130–2; summarized in Steinschneider 1893: 307–8; Harvey 2001: 372.
the East, are known (some of them not fully extant). Thus, al-Ghazālī’s work became a major conduit of Avicennian ideas into Hebrew philosophical thought. It is doubtful, however, that the readers of the Hebrew versions of the Maqāsid embraced specifically Avicennian modes of thought. The Maqāsid seems to have been perceived and used simply as a convenient short textbook on science, not as an exposition of anti-Aristotelian (or anti-Averroist) science. More often than not, authors “lifted” doctrinal items without connection to the global Avicennian outlook. Moreover, the Maqāsid was often, perhaps mostly, studied with one of its commentaries, of which the most widely disseminated were Albalag’s and Narboni’s, both of which were Averroist in tendency. (The famous study program of Yohanan Alemanno (1435–after 1504), for instance, includes the study of the Maqāsid accompanied with these two commentaries.) Thus, at least until more detailed studies show otherwise, the Maqāsid cannot be construed as an effective fountainhead of a clearly discernible tradition of “Hebrew Avicennism.” The first scholar to use the Maqāsid to criticize science may be Hasdai Crescas at the very end of the fourteenth century.

Averroes, the staunch critic of Avicenna, sought to re-establish the authority of “orthodox” Aristotelianism as he understood it. Yet in his earlier works, notably the epitomes of Aristotle, his positions on many subjects were not too far removed from those of Avicenna. Most of these works were translated into Hebrew, and their readers encountered in them positions fairly close to Avicenna’s, which, however, were not labeled as such. In his later works, by contrast, Averroes takes Avicenna to task, often naming him explicitly when he does so. These later works of Averroes were also massively translated into Hebrew – both the commentaries and the monographs. Particularly important in this context is Averroes’ Tahāfut al-tahāfut (The Incoherence of the Incoherence), the refutation of al-Ghazālī’s critique of the philosophies of al-Fārābī, and, especially, Avicenna. Averroes’ Tahāfut, translated into Hebrew twice in the first half of the fourteenth century, contained much information on Avicenna’s ideas, albeit that these are mentioned only in the course of rejecting them. As a result of the substantial availability of Averroes’ compositions in Hebrew,

49 Harvey 2001.
50 Idel 1978: 9: 308 (Heb.): “whoever wishes to investigate religion (baqirat ha-dat) will read in the morning The Intentions of the Philosophers with the commentary of Narboni and Isaac Albalag and the Incoherence of the Incoherence by Ibn Rushd, and the Kuzari and Emunah Ramah and the Guide with its commentaries . . .”
51 As suggested in Harvey 2001: 376. See also Wolfson 1929: 10.
52 Pointed out in Davidson 1992: 181.
Avicenna’s positions on a great number of issues were known to Hebrew-reading scholars through their refutations.

Another critic of Avicenna, Fakhr al-Din al-Razi (1149–1209), was also known to a few readers of Hebrew. There is a fourteenth-century Hebrew translation of *Uyun al-mas’il* (*The Fountains of Questions*, or *The Principal Questions*) ascribed to al-Farabi.\(^5\) made by Ţodros Ţodrosi of Arles (active 1330–40), whom we have already encountered as the translator of *al-Najat*. In his translation of this work, Ţodrosi incorporated two passages from al-Razi’s *al-Mabâhith al-mashriqiyya* (*Eastern Investigations*). These passages bear on the logical concept of “definition” (*ta’rîf*) and the Avicennian emanative system.\(^5\) Quite likely, more Arabic texts containing Avicennian materials were translated into Hebrew. They await identification by scholars.

We should now consider the presence of Avicenna in Hebrew translations of Judeo-Arabic philosophical works. The Arabic-into-Hebrew translation movement, whose beginnings go back to the eleventh century, became more massive and continuous after the Almohad takeover of Muslim Spain, which compelled Jews (along with Christians) to leave the country. Many reached the Midi, among them the Ibn Tibbons, who hailed from Granada. Judah Ibn Tibbon (c.1120–90) settled in Lunel in c.1155 and started a systematic translation movement under the patronage of Meshullam ben Jacob, a powerful and erudite local head of the local yeshivah. Translations were undertaken by members of the Ibn Tibbon family for at least three generations. The first works to be translated into Hebrew by Judah Ibn Tibbon were in religious philosophy, and the translation of Judeo-Arabic works of this kind continued throughout the thirteenth and fourteenth centuries, in parallel to the translation of profane works by non-Jewish authors.

Three Judeo-Arabic compositions incorporating Avicennian doctrinal items were among those translated: *The Kuzari* of Judah Halevi, Abraham Ibn Da’ud’s *Exalted Faith*, and, of course, Maimonides’ *Guide of the Perplexed*. These works introduced Avicennian doctrines – concerning especially the notion of the Necessary Existent (from the *Guide*) and the theory of soul (from the *Kuzari* and the *Exalted Faith*) – into Jewish philosophical discourse. However, none of these works ever referred to Avicenna by name. Only learned arapophone readers who were acquainted with Avicenna through their readings in Arabic could identify the Avicennian doctrinal

\(^{54}\) See on this work, Davidson 1992: 128–9.

\(^{55}\) On these two passages and their source, see Zonta 1997a: 567 n. 151, and 2000: 655. One of Fakhr al-Din’s works survives in a transcription in Hebrew letters; see Langermann 1996b.
items encountered in these works. The Guide is to some extent a special case: in their erudite commentaries, Shem-Ṭov Ibn Falaqera and Moses Narboni informed their readers of the Avicennian origin of certain ideas. Presumably, however, their observations did not essentially alter most readers’ perception that the doctrines in question were “Aristotle’s,” as stated by Maimonides. The translations of these influential Judeo-Arabic works thus introduced Avicennian ideas into Jewish philosophical thought, but Avicenna himself remained mostly unknown. Much the same can be said of the Hebrew adaptations of Avicenna’s two “visionary” texts, which more often than not were believed to be original compositions in Hebrew.56

As for works written originally in Hebrew and incorporating Avicenian doctrinal items, chronologically first among them are those of Abraham Ibn Ezra, already encountered as one of the adaptors of Hayy ibn Yaqzan. Ibn Ezra adhered to and expressed some Avicennian views. In a biblical commentary, he shows in passing that he is aware of and accepts Avicenna’s notion of God as the Necessary Existent.57 More important, his obscure and elusive exegesis of the account of creation in Genesis has been interpreted as following Avicenna, much along the lines of the interpretation put forward by Samuel Ibn Tibbon a few decades later. However, Ibn Ezra does not mention Avicenna and only commentators familiar with the latter’s theory could identify it in Ibn Ezra’s commentary.

Of an incomparably stronger impact was Sefer ha-Madda, the philosophical first part of Maimonides’ great Codex of Jewish Law, Mishneh Torah. Maimonides composed this work in Hebrew in Egypt (concluded 1178–80), and it reached Europe in the last decade of the twelfth century. The first chapters of Sefer ha-Madda present the basics of the Avicennian notion of the Necessary Existent and the contingent world. This was the first substantial exposition of these Avicennian ideas in Hebrew, but again, they were not labeled as such. Inasmuch as Sefer ha-Madda is a part of Maimonides’ authoritative legal codex written in Hebrew, this statement of fundamental Avicennian tenets made them – albeit in a very simplified form – into obligatory articles of belief for countless Jewish individuals throughout the ages. (Maimonides indeed also included a succinct formulation of them in his “Thirteen Principles” of faith.) The importance of

56 Two further translations, of Moses ha-Levi’s Metaphysical Treatise and Joseph Ibn Waqar’s Arabic Treatise Reconciling Philosophy and Religious Law, had a small circulation and contributed essentially nothing to the knowledge of Avicenna among Hebrew-reading students of philosophy. Indeed, one can wonder whether the near disappearance of these two works was not related to the general lack of interest in Avicenna’s thought in Jewish circles.

this channel of transmission cannot be overemphasized: it was certainly
the largest and most significant conduit of Avicennian ideas to Jewish
minds from the late twelfth century onward. Indeed, they became so well
known as to appear trite, rather than as one specific way to construe the
relationship of the deity to the world.

Even after most Jewish authors began to write on philosophy in Hebrew,
many scholars, although by no means the majority, still possessed a knowl-
dge of Arabic. In some families, of physicians notably, Arabic was passed on
from generation to generation. Among these bilingual and bicultural intel-
lectuals, some became Arabic-into-Hebrew translators, while others wrote
books in Hebrew that drew on knowledge available only in Arabic. Among
the latter, one of the most original and impressive scholars is Samuel Ibn
Tibbon (c.1160–1232), the well-known translator of Maimonides’ Guide,
who played a major role in introducing Avicenna into Hebrew thought.
To his meticulous Arabic-into-Hebrew version of Aristotle’s Meteorology,
finished in 1210, Ibn Tibbon added glosses giving information culled from
various sources, among them Avicenna. 58 More consequential is the use
of Avicenna in his important original composition, Ma’amar Yiqqawu ha-
mayim (Treatise on “Let the Water Gather,” concluded c.1231), devoted to
the question: why does the element water not entirely cover the surface of
the terrestrial globe, as implied by the four-element theory? Ibn Tibbon
recounts that he had considered this problem for twenty years without
finding a satisfactory solution. The breakthrough came, he says, through
Avicenna’s “great book al-Shif‘a‘,” in which he finally discovered a satisfac-
tory naturalistic solution. Ibn Tibbon next inserts his Hebrew translation
of a lengthy passage from the section on meteorology in al-Shif‘a‘, and then
proceeds to show that Avicenna’s theory – an infinite succession of sub-
lunar “worlds” naturally emerge from under the water and subsequently
are covered by it again – wonderfully ties in with biblical texts. An essen-
tial premise of Avicenna’s theory is that humans can be generated “not
from man,” i.e. through “spontaneous generation,” like any other animal
species. This bold, indeed, blasphemous statement, is included in the pas-
sage quoted from Avicenna, and Ibn Tibbon was audacious enough to
endorse it explicitly. 59 Ibn Tibbon incorporated in his Ma’amar Yiqqawu
ha-mayim yet another passage from al-Shif‘a‘, now from the section on

58 See Ibn Tibbon 1995: Introduction, xvi, lvii–lxi. See, in particular, passages ii.438, 480–1, 489–1, iii.96–101. We thank R. Fontaine for her assistance.
59 Ibn Tibbon 1837: 7. The passage is translated in Freudenthal 1991. Samuel Ibn Tibbon’s theory is
studied in detail in Freudenthal 2008.
“Generation and Corruption,” but without indicating its source. It concisely presents the theory of the mutual transformation of the four elements, albeit with an original and consequential twist that provides the basis for the theory of the infinite succession of sublunary worlds. It would therefore seem that he had access to the entire work, or at least large parts of it. Contrary to most other authors who silently integrated Avicennian ideas in their writings, Samuel Ibn Tibbon proclaims his indebtedness to al-Shīfā’ loudly and explicitly: the Avicennian thrust of his work is clearly asserted.

The sequel of the translation movement is marked by the almost total absence of Arabic-into-Hebrew translations of Avicennian works. An exception is Ţodros Ťodrosi of Arles, who, as already noted translated, Avicenna’s al-Najāt. We should now mention also his Hebrew “philosophical anthology” (Liqqūṭīm, i.e. compilation), dated 1334, which includes a number of passages from Avicenna. Ťodrosi begins with logic: this section includes a nearly complete translation of the first four chapters of the logic of al-Shīfā’ (recapitulating Porphyry’s Eisagoge) and some passages from the section on the Prior Analytics, including Avicenna’s own classification of Aristotelian syllogisms. Ťodrosi complements these long quotations with a few short passages from the logical part of Avicenna’s Remarks and Admonitions, and from al-Ghazālī’s and Fakhr al-Dīn al-Rāzī’s interpretations of Avicennian ideas concerning Aristotelian logic. The inclusion of quotations from authors with Avicennian tendencies suggests that Ťodros compiled his anthology guided by an interest in Avicennian ideas, running against the dominant Averroist consensus. However, the anthology, now preserved in only one manuscript and probably incomplete, clearly had a very limited circulation. It bespeaks the interests of an individual, not a widespread intellectual tendency.

Ťodros Ťodrosi was not unique in having such interests. His friend Judah Natan, as we saw, translated into Hebrew al-Ghazālī’s Maqāṣīd, and took care to complement unclear passages by drawing on works by Avicenna. In fact, the two scholars acted in tandem. Now, from Judah Natan we know something about his motivation for appropriating Avicennian bodies of knowledge in Hebrew, and perhaps he shared it with Ťodrosi. Judah Natan says that al-Ghazālī’s work, whose affinity with Avicenna he recognized, would allow one to rebuke the stance of “the philosophers” and thereby fortify that of the Torah. He observed that al-Ghazālī

60 Ibn Tibbon 1817: 3–5. Freudenthal 2008: Appendix B, esp. 118–19 (with n. 144, in which M. Ahmed Hasnaoui is thanked for helping to identify the passage in al-Shīfā’).


62 For details, see ibid.: 654–5. 63 Ibid.: 655.
“deviates” from Aristotle, i.e. from the Averroist philosophy that was the focus of the controversies over the legitimacy of the study of philosophy of the early fourteenth century. Judah intended that his translation would lend support to the adversaries of the contested “philosophy” identified with “Aristotle.” Put differently, Judah Natan – and presumably Todoros Todrosi – apparently sought to promote Avicenna and al-Ghazālī as a philosophical alternative to radical Averroism.

But this does not mean that Todoros Todrosi and Judah Natan were fully consequential Avicennians, on a par with Samuel Ibn Tibbon or Moses ha-Levi. Their choices of works for translation (assuming that these choices reflect their own preferences, not those of patrons) were eclectic: Todoros translated not only a work by Avicenna, but also works by Averroes, whereas Judah Natan also translated medical works. Since neither author composed an original work that would have allowed us access to his own thought, it seems preferable not to describe them as true Avicennians. Instead, the two scholars can be described as champions of moderate philosophical study. The controversy over the legitimacy of the study of philosophy of 1305 revealed that the early split between anti-philosophical conservatives and radical Maimonidean philosophers had given way to a more stratified picture. After almost a century of controversy over the value and the danger for faith of the study of philosophy, most intellectuals of a conservative temper ended up accepting that the study of philosophy was indispensable even for them. These “moderate conservatives” thus shared some interests with the committed students of philosophy, although their objective was not philosophy for its own sake, but rather, a philosophical defense of Torah study. The translation of the *Maqāsid* was apparently intended to provide such moderates with adequate intellectual tools, notably works of science that presented an alternative to Aristotle.

Shem Tov Ibn Falaqera (c.1225–95), a highly erudite author who lived in Provence or northern Spain, played a pivotal role in the Arabic-into-Hebrew cultural transfer. His Hebrew works are grounded in a deep knowledge of Arabic science and philosophy. He read a substantial number of works by Avicenna, including *al-Shifā’, al-Najāt, Compendium on the Soul*, the *Epistle on the Parts of Sciences*, as well as at least one medical work

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64 In his introduction to the translation of Averroes’ commentary on the *Rhetoric*, Todoros does not mention any author except Averroes himself and says that he did the translation for the benefit of “our brothers who seek out philosophy” (*ahenu dorshey ha-pilosofiah*). This is not how a committed Avicennian would write.


66 See further, Jospe 1988.
(with much philosophical content), *The Cardiac Drugs*. Falaqera sought to acquaint the Hebrew reading public with Arabic philosophical lore. He was certainly a most important agent of transmission of Avicennian ideas in Hebrew. We cannot survey here the entire range of quotations from Avicenna found in Falaqera’s voluminous writings, and content ourselves with a few representative examples.

In his *Re’shit Hokhmah* (*The Beginning of Science*, c.1250), Falaqera devoted a section to the division of the sciences, in which he included a partial translation (not ascribed) of Avicenna’s *Epistle* on this subject. We already noted that manuscripts of this Arabic text in Hebrew letters circulated among arabophone Jews. In a small popular treatise, *Sefer ha-Mevaqqesh* (*The Book of the Seeker*), he included an adaptation of a passage on logic derived from the beginning of *al-Najāt*. In these synthetic works, addressed to the layman, ideas from Avicenna (and from other authors) are incorporated into the text without any ascription. Falaqera’s most wide-ranging work is his *De’ot ha-pilosofim* (*The Opinions of the Philosophers*) written around 1270, a comprehensive summary of what “the philosophers” stated with respect to various problems. Avicenna is referred to frequently, usually explicitly. For example, one of the main sources of Book 8, Section 1, on the human intellect, is Avicenna’s *Compendium on the Soul* (which, we saw, was also incorporated into the *Kuzari*). Similarly, his discussion of *ḥads* quotes from *al-Shifāʾ*. Elsewhere the work draws on, for example, the zoological section of *al-Shifāʾ* as well as some passages of *The Cardiac Drugs*. Similarly, Falaqera’s *Sefer ha-Nefesh* (*Book on the Soul*) is full of Avicennian doctrines borrowed from *al-Najāt* and *al-Shifāʾ*. While *De’ot ha-pilosofim* is impressive for its erudition and the synthetic capacity of its author, it was little read (only two incomplete manuscripts are extant). More important and influential is Falaqera’s large commentary on Maimonides’ *Guide: Moreh ha-Moreh* (*Guide to the Guide*, 1280), an ambitious work that meticulously comments on Maimonides’ text from the stance of an expert in the history of philosophy. Avicenna (with Aristotle and Averroes) is one of the most quoted authors.

Falaqera was the first scholar to point out Maimonides’ dependence

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68 See Zonta 2005.
69 Zonta 1997b: 456–7; the passage concerns the two Avicennian philosophical key-terms of *taṣawwur* and *taḏiq* (conceiving and verifying).
70 Harvey 2000: 232. This notion was of great importance to Avicenna; see, e.g., Gutas 1988: 159–77.
on Avicenna and to corroborate this statement with explicit quotations, notably from *al-Shifâ’* and *al-Najât*.72

Falaqera was acquainted with Maimonides’ letter to Samuel Ibn Tibbon, but, like the addressee himself, was not negatively impressed by Maimonides’ evaluation of Avicenna. Rather, he seems to have understood Maimonides as recommending Avicenna (even if less than al-Fârâbî).73 Indeed, Falaqera discussed Avicenna at great length and repeatedly showed that Maimonides himself was indebted to him. In his works of erudition addressed to the intellectual elite (*De’ot ha-pilosofim* and *Moreh ha-Moreh*) Falaqera refers to Avicenna explicitly. This is significant, inasmuch as Judeo-Arabic writers usually incorporated Avicennian ideas or quotations only implicitly. When Falaqera injected Avicennian ideas into Hebrew philosophical thought, he made his readers aware of their origin, a circumstance that allowed them to deepen their acquaintance with Avicenna’s thought despite the paucity of the Hebrew translations of his works. Specifically, his *Moreh ha-Moreh* identified as Avicennian many of the ideas exposed in Maimonides’ *Guide*. Undoubtedly *Moreh ha-Moreh* (preserved in more than 10 manuscripts) and Falaqera’s other numerous and informed writings were a major source of information on Avicenna’s thought available to Hebrew-reading scholars.74

 Hayward Israeli (fl. 1320), a member of a well-known family from Toledo that brought forth a number of distinguished scientists, wrote at least three scientific treatises, only one of which is extant.75 In this treatise, discussing the physical location of the Garden of Eden,76 Hayward Israeli explicitly draws on Avicenna’s *al-Shifâ’*. He says that the philosophers identify the deity with the ninth sphere and explains the proof from motion of God’s existence. Some Muslim philosophers, however, “first and foremost among them the wonderful sage, Abû ‘Ali Ibn Sînâ,” hold that “the Creator, blessed be he, is the cause of the First Mover, not the First Mover itself.”77 Again, referring to the meteorological section of *al-Shifâ’*, he paraphrases Avicenna’s account according to which the equator is the most balanced region of the earth, so that the temperaments of its inhabitants are best

72 For a detailed analysis of the use of Avicenna in *Moreh ha-Moreh*, see Falaquera 2001: 48–60 (Heb.). The work also includes some passages on metaphysics from *al-Shifâ’*; for a complete list, see Zonta 2012: Appendix.

73 We are grateful to Hagar Kahana-Smilansky for this suggestion. For Falaqera’s acquaintance with Maimonides’ letter to Samuel Ibn Tibbon, see Harvey 1992: 61.

74 For other authors who wrote works in Hebrew and show some knowledge of Avicenna, see the fuller version of this study mentioned in note 1 on p. 214.

75 He may also be the author of one of the Hebrew versions of Avicenna’s *Urjûza*.

76 In Perreau 1884: text, 20–42 (Hebrew section); introduction, 141–2 (non-Hebrew section).

77 Perreau 1884: 21 ll. 32–4.
balanced, and adds that Avicenna reiterated this view in “his medical work.” He observes that Avicenna mentions a composition proving this point that “has not reached us.” Consequently Ḥayyim Israeli felt obliged to prove the point himself. He notes that Averroes held the opposite view and comments:

Abū-al-Walid Ibn Rushd is a great scientist in the eyes of the wise men of our generation, especially among the Christian philosophers. In his epitomes of Aristotle’s books he wrote that he wished to take exception to Avicenna’s view, [affirming] that the zone under the [celestial] equator is not balanced. I wish to probe into the claims of this scientist [Averroes] – who is wise in his own eyes – that are directed against Avicenna. [. . .] I wish to show to truly wise men that the matter is not as Averroes holds. It is the same thing wherever Averroes diverges from Avicenna in other philosophical matters, where his claims are false [too].

Ḥayyim Israeli emphasizes that only scholars trained in both natural philosophy and astronomy are capable to investigate this issue appropriately, and that Averroes lacked Avicenna’s astronomical competence and therefore failed to understand his position. He also alludes to Avicenna’s theory of the formation of dry land that, as we saw, was enthusiastically embraced by Samuel Ibn Tibbon. He does not mention Ibn Tibbon’s treatise on precisely this topic, but believes Avicenna’s theory to have been upheld by Abraham Ibn Ezra in his biblical commentary. Ḥayyim Israeli audaciously affirms that Avicenna’s naturalistic account is identical with the belief in creation (ḥiddush) as “affirmed by our perfect Torah”: regrettably he does not explain this thesis, to which Samuel Ibn Tibbon had devoted an entire volume. “It is extraordinary,” Ḥayyim Israeli comments, “that a man [Avicenna] would arrive through his own intellect at the foundations of the Torah as transmitted by Tradition.” “I embraced the opinion of the sage Avicenna,” he adds, “because I found that his belief[s] on any philosophical subject, which he reached by the power of his intellect, are close to the belief of the tradition of our perfect Torah.”

Ḥayyim Israeli was neither prolific nor influential: two of his three treatises are lost, and the third is extant in three manuscripts only. He is interesting as an instance of a dedicated Avicennian, who does not hesitate to go against what he knows to be the Averroist consensus of the day. (Noteworthy also is his awareness of the climate of opinion among Christian philosophers.) What brought him to this Avicennian commitment

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78 Ibid.: 25 ll. 17–27. 79 Ibid.: 26 l. 36–27 l. 1; similarly 30 ll. 6–7. 80 Ibid.: 30 ll. 9–14. Ḥayyim Israeli mentions Ibn Tibbon’s Commentary of Ecclesiastes (39 ll. 11–12), but does not seem to have seen Ma’amor yiqqaww ha-mayim. 81 Perreau 1884: 30 ll. 9, 18. 82 Ibid.: 14–15. 83 Ibid.: 7–8.
is unclear, but it may be mentioned that Hayyim Israeli seems to have translated Avicenna’s *Urjūzah fi l-tibb* into Hebrew. Together with Samuel Ibn Tibbon and Moses ha-Levi, he is one of the few Jewish scholars who decidedly and consistently side with Avicenna against Averroes.

Finally, a word should be said about the reception of Avicenna among Latin-reading Jewish scholars. Whereas in the Midi, translations from Latin were scarce, a number of Jewish scholars in Italy were in close contact with the Latin majority culture and engaged in a Latin-into-Hebrew knowledge transfer. One of them was Hillel ben Shmuel of Verona, who integrated in his Hebrew works translations of long passages from Latin works. As Giuseppe Sermoneta, the editor of Hillel’s work, has pointed out, this includes “several fragments of the Latin version of Avicenna’s book on the soul, *Liber sextus naturalium* [i.e. the treatise on soul from *al-Shifā’*].”

Recently, Yossef Schwartz has complemented and updated Sermoneta’s findings.

It is also in the Latin ambit that two apocryphal works that the medieval European philosophical-scientific tradition falsely ascribed to Avicenna were translated, becoming part of the Hebrew reception of Avicenna’s philosophy. These were the *Liber celi et mundi* (*On the Heaven and the World*), ascribed to Avicenna in the Latin tradition and printed in the 1508 edition of Avicenna’s works in Latin, and *Aristotle on Sleep and Wakefulness*, translated into Hebrew from Latin (although no Latin Vorlage has been discovered so far). The translator of the latter work correctly thought that the text was by Aristotle and most of its readers also accepted Aristotle’s authorship. But Gershon ben Solomon, in his widely-circulated *Sha’ar ha-Shamayim* (*c.1280*), ascribed the text to Avicenna.

Unlike Avicenna’s philosophical works, which were little translated into Hebrew, his medical works, especially *The Canon*, were the object of an enthusiastic reception. This is reflected in a multitude of translations, profusion of extant manuscripts, and an early printing history. *The Canon*, Avicenna’s major medical work, was translated into Hebrew, partially or totally, at least seven times. Its translation history begins in Italy, and this is no mere chance. As the late Hayyim Rabin explained, in the Midi, Jewish physicians usually knew Arabic and used *The Canon* in Arabic. But in the Italian peninsula very few Jews knew Arabic, nor, for that

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84 Hillel ben Shmu’el 1981: Editor’s English Introduction, vi, and Index, 268, s.v.
86 On the two Hebrew versions of these texts, see Glasner 1996; Kahana-Smilansky 2010.
87 On the Hebrew versions, commentaries, and summaries of *The Canon*, see Steinschneider 1893: 678–95 (§§ 430–42).
Reception of Avicenna in Jewish cultures

matter, Latin. When in the thirteenth century gentile medicine in Italy became increasingly based on Avicenna, Jewish doctors badly needed a Hebrew version of The Canon in order to compete with their non-Jewish contemporaries. More than 150 manuscripts contain partial or complete versions of The Canon, making this the best-disseminated Hebrew work of science. In addition, about thirty commentaries on The Canon were written.

Urjūzah fi l-ṭibb, Avicenna’s medical poem, was translated into Hebrew four times, always accompanied by Averroes’ commentary. This work was little read in Hebrew – only some 5 manuscripts are extant. Nonetheless, it contains some interesting psychological ideas, mainly on the relationship of soul to body, and attracted some attention, notably in the fifteenth century. Avicenna’s The Cardiac Drugs was translated into Hebrew twice. The Short Canon (al-Qānūn al-saghir), another pseudoepigraphical work, was likewise translated into Hebrew twice.

Clearly, then, Avicenna was a major figure in Hebrew medicine. Even before the heyday of Avicennian medicine, Shem-Tov Ibn Falaqera, in a sort of roadmap for the layman, recommends the medical books of Hippocrates, Galen, al-Rāzī, IsaacIsraeli and then continues: “the books of Avicenna are very meticulous (meduqdaqim) and enlighten [even] the unsophisticated, [but] they can be [truly] understood only by the experts in this science who are proficient in the science of logic.”

III CONCLUSION

Why, then, was Avicenna so little translated into Hebrew? The following facts seem to us germane for an answer. (1) In the mid-to-late twelfth century, two philosophical programs were running in parallel in Andalusia. One – in tune with the tendencies in the East – treaded notably in the footsteps of Avicenna (and al-Ghazālī). It was followed by most scholars, notably the Judeo-Arabic philosophers, who are in fact the earliest witnesses of the reception of Avicenna in the Iberian Peninsula (Ibn Da’ud, Judah Hallevi, etc.). The other, specifically Andalusian, tradition consisted in a literal, philologically-grounded reception of Aristotle and his commentators and it culminated in Averroes. These Andalusian anti-Avicennian

91 The following section owes much to David Wirmer’s insightful suggestions; we express to him our sincere thanks.
92 Burnett 2001: 265.
and pro-Aristotelian tendencies can be viewed as a component of a more global “attempt [. . .] of the Andalusians to construct an alternative to the syntheses which were produced in the East.”  

The two parallel and partly competing traditions gave rise to the two translation programs in Toledo as described by Charles Burnett: Dominicus Gundissalinus favored Avicenna’s philosophy, whereas Gerard of Cremona preferred “the authentic works of the Greeks and their Arabic commentators.”  

(2) The reception of Avicenna was quite problematic even among arabophone Jewish scholars. Almost no manuscripts in Hebrew letters of his philosophical works exist and his works do not appear in Jewish book lists. By the same token, when Judeo-Arabic works of religious philosophy drew on Avicenna – and some of the more important ones did so quite substantially – they did not mention Avicenna’s name; even quotations or paraphrases remained unattributed. (Maimonides is a baffling special case, inasmuch as he presents Avicennian ideas that he apparently drew from the Maqāṣid al-falāṣifa but ascribes them to Aristotle.) Only the few committed Avicennians (Samuel Ibn Tibbon, Ḥayyim Israeli, Moses ha-Levi) discuss Avicenna’s ideas with full attribution, as do arabophone commentators on Maimonides (Falaqera, Narboni).  

(3) Beginning in the third decade of the thirteenth century, Averroes’ commentaries on Aristotle began to be systematically translated into Hebrew, a trend that started with Jacob Anatoli and became a torrent with Moses Ibn Tibbon. This Averroean trend culminated in the work of Gersonides (1288–1344), who greatly furthered it by writing supercommentaries on most of Averroes’ commentaries and by teaching them to his students.  

(4) Some of Avicenna’s views were rather controversial: not only the tenet of the eternity of the world (shared by all philosophers), but also the particularly audacious thesis that the surface of the earth is repeatedly flooded and that humans are (“spontaneously”) generated without a human parent. These are precisely the ideas embraced by two of the committed Avicennians (Samuel Ibn Tibbon and Ḥayyim Israeli), who emphatically ascribed them to Avicenna.  

If we bring these threads together, the following account may be submitted. Of the two parallel trends active in late twelfth-century Andalusia – the Avicennian and the more “purist” Aristotelian one – the early Andalusian Jewish scholars followed the first, heavily borrowing from Avicenna. But they did so without attribution (Judah Hallevi, Abraham Ibn Da’ud, Maimonides) and thus did not contribute to Avicenna becoming an “authority” for Jewish intellectuals. Now the intellectual climate in

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94 Burnett 2001: 269.  
Provence, the region where the first Arabic-into-Hebrew translations were written, naturally depended to a considerable extent on that in Andalusia, from where the first translators originated. The “father of the translators,” Judah Ibn Tibbon, did not translate any work by a non-Jewish author. His son, Samuel, the translator of the Guide, was the first to translate such works, but only one or two and only in the beginning of his career; although he embraced Avicenna’s cosmology, he did not translate any of Avicenna’s works, probably because he was more interested in his own research program and also because he discovered them only late in life. With Samuel Ibn Tibbon’s death in 1231 or 1232, it seems, the last chance to have a Hebrew translation of parts of al-Shifa’ vanished. For Samuel’s son, Moses Ibn Tibbon, turned away from his father’s Avicennian commitments to become a leader of Jewish Averroism — he dramatically epitomizes the Averroean development among Jewish thinkers in the Midi. In fact, as of the 1230s, all Arabic-to-Hebrew cultural transmitters already followed the Averroean agenda. This is exemplified notably by the translation activity of Jacob Anatoli, and by Judah ben Solomon Ibn Matqah’s Midrash ha-Hokhmah, a précis of Averroes’ philosophy composed in Arabic, probably in Toledo, and subsequently (1248) translated by the author himself into Hebrew.

Thus, whereas the early Judeo-Arabic scholars in Andalusia silently followed the Avicennian tradition, their Hebrew-writing successors in thirteenth-century Provence switched allegiance to the competing philosophical program. This shift seems to owe much to chronology. By the early thirteenth century, Avicenna already appeared to be outdated and was superseded by Averroes. The Cordovan had refuted Avicenna’s positions systematically in many of his treatises, which were translated into Hebrew en masse. Potential Arabic-to-Hebrew translators and patrons had good reason to think that Averroes made Avicenna’s philosophy obsolete and replaced it. Here it should not be forgotten that Maimonides identified his main philosophical authority in the Guide as “Aristotle.” Maimonides’ followers in Provence could plausibly believe that Averroes’ writings, which exposed Aristotle’s philosophy so minutely, gave them the key to interpreting the Master’s writings. Thus, whereas Latin scholars (aided by Jewish ones) had translated al-Shifa’ in the second half of the twelfth century with the intention “to provide Western scholars with a commentary on Aristotle’s works,” al-Shifa’ could no longer fulfill this function in the post-Averroean Hebrew philosophical culture a century later. Moreover, as Averroes’ star rose, manuscripts of Avicenna’s works must have become

increasingly difficult to obtain, especially since (as it seems) Avicenna’s works had never been copied in Hebrew letters. In addition, contacts with Islamic culture loosened in the fourteenth century, making access to manuscripts held by Muslim scholars more difficult.

We thus suggest the hypothesis that the Arabic-into-Hebrew translation activity picked up momentum at a time when it was too late to translate Avicenna. From the second third of the thirteenth century onward, Jewish scholars generally believed that Averroes’ thought represented the true philosophy, namely, that developed by Aristotle. The study of philosophy became largely coextensive with the study of the works of the philosopher par excellence, namely Aristotle, as presented by Averroes. Accordingly, Hebrew-reading Jewish scholars assumed that Avicenna’s thought had been replaced by the Averroean system. This conviction, we suggest, curbed the potential motivation among translators and patrons to produce Hebrew versions of works by Avicenna.

Finally, one may surmise that the reception of Avicenna in Hebrew was also hampered by his image, which to some extent was associated with the controversial naturalistic theories mentioned above: the theory of the repeated flooding of the surface of the earth (itself part of the doctrine of the eternity of the world) and the theory that a human can be generated “not from a human.” Avicenna came to be associated with both theses, which were acceptable only to radical philosophers. We have an eloquent statement about this by the noted Hebrew poet, Immanuel of Rome. Writing in Italy in the third decade of the fourteenth century, he suggested that Avicenna’s philosophical positions had earned him eternal damnation. Following in Dante’s footsteps, Immanuel describes his voyage through Hades and reports having sighted there, among others, Aristotle, Galen, al-Fārābī, Plato, and Hippocrates; Avicenna is the last on this list of illustrious freethinkers.97

Interestingly, Dante does not criticize Avicenna: he refers to him as a physician (not a philosopher) and lists him, together with Hippocrates and Galen, among the so-called spiriti magni or “high souls” (Inferno IV, 143). This highlights that the reticence about Avicenna was specific to Jewish intellectuals.

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97 Immanuel ha-Romi 1957: 28.90–98. In all likelihood, Immanuel derived his knowledge of Avicenna’s geology from Samuel Ibn Tibbon’s summary, perhaps via Sha’ar ha-shamayim. The following translation has absolutely no pretensions of doing justice to the poetical qualities of the original:

Ibn Sinā is there,  
an object of mockery and ridicule.  
Because he said that the generation of man not from man is possible over a long time,  
And that the mountains were born in a natural process.  
If only he had kept his mouth shut!  
For he followed the belief in the eternity of the world.

Interestingly, Dante does not criticize Avicenna: he refers to him as a physician (not a philosopher) and lists him, together with Hippocrates and Galen, among the so-called spiriti magni or “high souls” (Inferno IV, 143). This highlights that the reticence about Avicenna was specific to Jewish intellectuals.
What translator would volunteer to be the mouthpiece of a thinker condemned to hell?
Chapter 12

The reception of Avicenna in Latin medieval culture

Amos Bertolacci

Avicenna is famous for the enormous impact of his philosophical and medical works on subsequent thinkers belonging to the three monotheistic religions (Islam, Christianity, Judaism) and on the three cultures embracing the Mediterranean Sea (Arabic, Latin, Hebrew) during the Middle Ages. Outside the boundaries of the Arab-Islamic world, beginning with the last decades of the twelfth century, the two main branches of Avicenna’s thought (philosophy and medicine) deeply influenced a great variety of Christian thinkers who used Latin as the language of communication, arousing among them a wide array of different reactions and attitudes. Borrowing the scheme coined by Dimitri Gutas for the reception of Avicenna in Arabic,¹ we can envisage also the Latin fortuna of the shaykh ra’īs according to a three-fold division, given by (more or less) faithful followers of the master, independent thinkers capable of revising some crucial tenets of his teaching, and outspoken critics who were not only polemical, but also indebted towards him. Avicenna’s writings entered the official curricula of medieval universities, and were copied and commented upon, although less intensively than Aristotle’s;² as a consequence, they were mentioned frequently by philosophers, theologians, and physicians. But the scope of Avicenna’s authority overcame the boundaries of the disciplines taught in universities, and the borders of academic faculties: his thought also entered other fields of Latin culture, like literature (as in the case of Dante Alighieri, among others), and society in general (as its traces in ecclesiastic documents witness).³ Given this massive impact throughout the medieval period, it is

¹ Gutas 2002b.
² The Latin translation of three excerpts of the fifth section on natural philosophy of the Shifa’ (taken from chapters 1.1 and 1.5), under the cumulative title of De Mineralibus, was appended to the Latin translation of Aristotle’s Meteorologica. For this reason, this was by far the most often copied philosophical text by Avicenna in Latin translation (see Mandoisio and Di Martino 2006). On the use of the Canon of Medicine in academic contexts, see Jacquart 2002.
³ See Strohmaier 1993–4. The possibility that Avicenna’s doctrine of love might have influenced the poetry of the troubadours is discussed in Denomy 1945. On the presence of Avicennian themes in the bulla Detestandae feritatis of Bonifacius VIII (d. 1303), see Santi 1987.
not surprising that the Western reception of Avicenna's philosophy did not end with the Middle Ages: thanks to the edition of the Latin translation of the main parts of Avicenna's Book of the Cure (Kitâb al-Shifâ’), accomplished by the Augustinian friars of San Giovanni in Verdana in Padua and printed by Ottaviano Scoto in Venice in 1508, it reached modern authors such as Descartes, Spinoza, and Leibniz. The same scenario applies, mutatis mutandis, to Avicenna's medicine as represented by the Latin translation of the Canon of Medicine (Qanûn fî l-ṭibb).

The Latin Middle Ages are among the areas of the reception of Avicenna's philosophy and medicine that have been most durably and intensively studied. Nonetheless, a clear and complete picture of Avicenna's influence in Latin is still lacking: although references to Avicenna can be found wide and large in studies on Latin medieval thinkers, relatively few contributions deal directly with this topic, and only cursory and selective overviews of the history of Avicenna's influence are available. Besides the width of the field of study, the ideological spin of recent scholarship on the Latin reception of Avicenna has made this goal difficult to attain. For at least a hundred years, the precise mode of the reception of Avicenna's thought, especially in philosophy, has raised a lively debate, in which alternative – and in a way “artificial” – historiographical labels involving the name of Avicenna have been proposed to characterize philosophical authors and currents variously indebted to the shaykh ra’îs: thus, it is quite common to find expressions like “Avicennizing Augustinism,” “Latin Avicennism,” “Avicennizing Aristotelianism,” just to mention the

4 On the genesis of this edition of Avicenna’s works (Avicenna 1508), see D’Alverny 1966: 89–91. On the reception of Avicenna’s philosophy after the Middle Ages, see Hasse 2000: 80 n. 5.
7 According to some scholars, parts of Avicenna’s philosophy were thoroughly revised in order to comply with the tradition of Christian faith and theology, thus providing the secondary ingredient of a specific philosophical current that has been called “Avicennizing Augustinism,” i.e. the identification of Avicenna’s agent intellect with the enlightening God postulated by Augustinus (see Gilson 1929; on the ensuing historiographical debate, one may consult Arnaldez 1993.)
8 “Latin Avicennism” is regarded as the unconditioned adoption of Avicennian tenets in metaphysics (emanation) and noetics (separated agent intellect) even against Christian dogma, thus producing an autonomous philosophical trend analogous to the “Latin Averroism.” This trend would be positively witnessed, for example, by the Liber de causis primis et secundis, certain statements by Roger Bacon, and attacked by William of Auvergne (see De Vaux 1934). For the different reactions to De Vaux’s thesis, see De Libera 1990 and Sileo 2011.
9 Other scholars have portrayed the adoption of Avicenna’s philosophy as a nuance or tendency that occasionally characterizes the reception of Aristotle’s philosophy in the first half of the thirteenth century, thus specifying the common “eclectic” or “Neoplatonizing Aristotelianism” in certain authors and contexts as “Avicennizing Aristotelianism” (Van Steenberghe 1966: 451–8).
This proliferation of labels, conflicting in some cases, shows positively the multiplicity of modes and the different areas of the Latin reception of Avicenna; but it can also be regarded as a symptom of a still immature stage of research, in which the interpretation of data precedes their gathering and analysis, and in which the mutual clash of very general stereotypes proposed by prestigious scholars monopolize the discussion. Much more basic research – regrettably hampered, rather than helped, by the sort of debate just described – is needed before a comprehensive history of the Avicenna Latinus can be written. At the present stage, fundamental questions like the elements of originality and the factors of innovation of Latin philosophy with respect to the Avicennian heritage, and the possible evolution of the Latin thinkers’ attitude towards the authority of Avicenna and the understanding of his doctrines, have yet to be answered in a satisfactory way.

The following pages aim to contribute to this task by outlining the current state of the art and by proposing some guidelines for future research on the Latin reception of Avicenna. The considerations proposed here specifically regard Avicenna’s philosophy, with a particular focus on his metaphysics, but are also meant to be valid for the other areas of his Latin influence.

1 Status quaestionis

An uneven level of research

Unsurprisingly, some areas of Avicenna’s influence on Latin philosophy are better known than others. For instance, the starting-point of the movement of reception, the Arabic-Latin translations of Avicenna’s philosophical works, is relatively well known.11 The same can be said of the Latin translation of the Canon of Medicine made by Gerard of Cremona in Toledo in the second half of the twelfth century.12 Before the revival of interest in Avicenna’s philosophical and medical works promoted by Andrea Alpago’s (c.1450–1521) translations in the Renaissance,13 Latin readers were acquainted with only one of the numerous Arabic philosophical summae

10 The expression “Avicennizing Boethianism” refers to Gundissalinus’ epistemology in Fidora 2003: 89–95.
11 For an overview of the Latin translations of Avicenna, see Janssens 2011; Bertolacci 2011a, and the bibliography quoted therein. For the importance of the Latin translation as a witness of the Arabic text of the Shifā’, see Janssens 2012, Bertolacci 2013a, and below, n. 43.
12 See Campbell 1926 and its various reprints; Burnett 2001 and 2011.
13 See d’Alverny 1966; Burnett 1999.
Reception of Avicenna in Latin medieval culture

of Avicenna, the already mentioned Shifāʾ. Significantly, within Avicenna’s immense philosophical output, Latin translators selected a work different from the summae of Avicenna that were most intensively studied and commented upon in the coeval Arabic tradition (Book of Pointers and Reminders, Kitāb al-Ishārāt wa-l-tanbihāt) and in the Hebrew tradition (Book of the Salvation, Kitāb al-Najāt). This fact sheds interesting light on the different philosophical trends and doctrinal needs at work in the various cultures that hosted Avicenna’s thought.

It might be useful to provide an overview of the assessed data regarding the Latin translations of the Shifāʾ (see Table 12.1).14

Under the transliterated general title Asshiphe, interpreted as Sufficientia, the overall translation was the result of the efforts of distinct scholars and took place in two distinct phases. The first (c.1150–1250) involved translators who were active in Toledo, or had resided in this city in the previous stages of their career (like Michael Scot). The second phase (c.1250–1300) occurred in Burgos. The Spanish environment is not the only common feature of these two phases. Both focused on logic, natural philosophy, and metaphysics (no section of the mathematical part of the Shifāʾ was ever translated). Both were characterized by the cooperation of Jewish and Latin scholars under the patronage of Christian ecclesiastic authorities. The main difference lies in the diffusion of the translations: whereas the versions accomplished during the first phase had a wide circulation (with tens of manuscripts), the ones composed during the second phase had a much more limited dissemination (only 1 manuscript).

Of the three main sections of the Shifāʾ translated into Latin (logic, natural philosophy, and metaphysics), translations regarded primarily natural philosophy and metaphysics (philosophia realis), and only to a lesser degree logic (philosophia rationalis). Natural philosophy and metaphysics were almost entirely translated into Latin, whereas translations of only one entire section of logic, and of some excerpts of the other two sections, are

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14 In the left-hand column, the four main parts of Avicenna’s work, after the Preface, are reported in bold and, within each of them, the various sections are numbered sequentially. The abbreviated Arabic title of each section is followed by its Latin medieval title (where available), by a reference (cf.) to the corresponding work of the Aristotelian corpus, and, in case of partial translations, by the indication of the treatises and chapters actually translated into Latin. Thus, the indication “(5) Burhān (De Convenietia et Differentia Scientiarum) (cf. Analytica Posteriora) ii.7” means that the fifth section of logic of the Care, known as Kitāb al-Burhān, namely, Book of the Demonstration and corresponding to Aristotle’s Posterior Analytics, was translated only partially: ch. 7 of treatise ii circulated under the title De Convenietia et Differentia Scientiarum. More precise information on the translators mentioned in the central column can be found in Bertolacci 2011a, and the bibliography quoted therein. In the right-hand column, the siglum Al, followed by the year of publication, stands for the critical editions of the Avicenna Latinus series; on previous printings and transcriptions, see below nn. 15, 17.
<table>
<thead>
<tr>
<th>Part of the Shifā’</th>
<th>Latin translation: place, date, translator(s)</th>
<th>Latin translation: no. of mss.: editions/transcriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preface</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Logic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) <em>Madkhāl</em> (cf. Porphyry’s <em>Isagoge</em>)</td>
<td>Toledo, c.1150–1200, Avendeuth</td>
<td>13; Venice 1508, ff. 2–12v</td>
</tr>
<tr>
<td>(5) <em>Burhān</em> (<em>De Convenientia et Differentia Scientiarum</em>) (cf. <em>Analytica Posteriora</em>) II. 7</td>
<td>Toledo, c.1150–1175, extant in Gundissalins’ <em>Divisione Philosophie</em></td>
<td>5; ed. Baur 1903 of Gundissalins’ <em>Divisione Philosophie</em></td>
</tr>
<tr>
<td>(8) <em>Khitāba</em> (cf. <em>Rhetoric</em>) fragments</td>
<td>Burgos, 1240–6 and 1256, extant in Hermann the German’s translation of the <em>Rhetoric</em></td>
<td>2</td>
</tr>
<tr>
<td><strong>Natural Philosophy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) <em>Samā’</em> (<em>Liber primus naturalium</em>) (cf. <em>Physica</em>)</td>
<td>Toledo, c.1150–75</td>
<td>22 (2 recensions: 12 and 10 mss.); AL 1992, 2006; Venice 1508, ff. 13–36v</td>
</tr>
<tr>
<td>I-III. 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III. 1–10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) <em>Samā’ wa-‘Ālam</em> (<em>De Caelo</em>) (cf. <em>De Caelo</em>)</td>
<td>Burgos, 1274–80 Johannes Gunsalvi and Salomon</td>
<td>1; transcr. Renaud 1973</td>
</tr>
<tr>
<td>(3) <em>Kawn wa-Fasād</em> (<em>De Generatione et Corruptione</em>) (cf. <em>De Generatione et Corruptione</em>)</td>
<td>Burgos (?), 1274–80 (?), Johannes Gunsalvi and Salomon (?)</td>
<td>1; AL 1987</td>
</tr>
<tr>
<td>(4) <em>Afāl wa-Insī‘ālāt</em> (<em>De Actionibus et Passionibus Qualitatum Primarum</em>) (<em>cf. Meteorologica Δ: A, 3; B, 1–3</em>)</td>
<td>Burgos (?), 1274–1280 (?), Johannes Gunsalvi and Salomon (?)</td>
<td>1; AL 1989</td>
</tr>
</tbody>
</table>
### Table 12.1 (cont.)

<table>
<thead>
<tr>
<th>Part of the <em>Shifāʾ</em></th>
<th>Latin translation: place, date, translator(s)</th>
<th>Latin translation: no. of mss.: editions/transcriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.1 + I.5 (<em>De Mineralibus</em>)</td>
<td>Toledo (?), end 12th–beginning 13th c., Alfred of Sareshel</td>
<td>36 (+ 112 mss. of <em>Aristoteles Latinus</em>); transcr. Holmyard-Mandeville 1927, French 1999</td>
</tr>
<tr>
<td>(6) <em>Nafi</em> (<em>De Anima</em>) (cf. <em>De Anima, Parva Naturalia</em>)</td>
<td>Toledo, 1152–66, Avendeuth and Gundissalinus</td>
<td>50 (2 recensions: 31 and 19 mss.); AL 1968–72</td>
</tr>
<tr>
<td>(8) <em>Hayawān</em> (<em>De Animalibus</em>) (cf. <em>Historia, De partibus, De generatione Animalium</em>)</td>
<td>Southern Italy; finished between 1227 and 1234–6, Michael Scot</td>
<td>33; Venice 1508, ff. 29–64</td>
</tr>
</tbody>
</table>

### Mathematics

- **Metaphysics**
  - *Ilāhiyyāt* (*Philosophia Prima sive Scientia Divina*) (cf. *Metaphysica*)
    - Toledo, c.1150–75, Gundissalinus
    - 25 (2 recensions: 15 and 10 mss.) + fragments; AL 1977–83

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**Source:** A. Bertolacci.

...extant. The greater interest in natural philosophy and metaphysics than in logic shown by Latin translators does not reflect the importance that Avicenna himself ascribes to these disciplines (logic is, overall, the most...

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55 Also, the Latin translation of the Preface had scarce manuscript diffusion, probably because of its connection with the part of the *Shifāʾ* on logic (which, however, had wider circulation). A transcription of the Preface is available in Birkenmajer 1934; also in 1970: 89–101. Among Latin scholars, only Roger Bacon and, possibly, Albertus Magnus knew it (see Bertolacci 2002a).
extensive part of the *Shifā*). Rather, it mirrors the scientific needs of the Latin readers, who were much more attracted by the new and comprehensive world-view proposed by Avicenna in this *summa*, than by a logical theory that, despite its originality, was comparatively less novel in the Latin world.

The project of a critical edition of these translations within the series *Avicenna Latinus*, initiated by Simon Van Riet, is still in progress. Editors have so far focused on natural philosophy (*Liber Primus Naturalium*, treatises 1–11; *Liber tertius naturalium de Generatione et Corruptione*; *Liber Quartus Naturalium de Actionibus et Passionibus Qualitatum Primarum*; *Liber de Anima seu Sextus de Naturalibus*) and metaphysics (*Liber de Philosophia Prima sive Scientia Divina*), whereas logic, for the time being, has made no appearance in the series.16 Important sections of natural philosophy, however, are still lacking critical editions and scholars must presently rely on faulty printings and provisional transcriptions.17

As a consequence of the availability (or lack thereof) of critically edited texts, studies on the impact of the translations have focused on certain parts of the *Shifā* rather than others. Thus, the Latin reception of Avicenna’s psychology as expressed in the *Kitāb al-Nafs* (*Book of the Soul*) of the *Shifā*, whose Latin translation (*Liber de Anima*) was the first to appear in the series *Avicenna Latinus* (1968–72), has so far received the lion’s share of attention.18 The reception of some other parts of the *Shifā* available to Latin medieval readers is comparable, in terms of spread and impact, to that of the *De Anima*, but an overall study of their influence is still a desideratum.19 Avicenna’s metaphysics, as expressed in the *Ilāhiyyāt* (*Science of Divine Things*) of the *Shifā*, is a case in point, and a comprehensive history of the influence of its Latin translation (*Liber de Philosophia Prima*) in the Middle Ages is yet to be written.20

An important aspect of the diffusion of the Latin translations of Avicenna, scarcely considered so far, is the independent circulation of

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16 Textual analysis of the Latin translation of the parts corresponding to Porphyry’s *Isagoge* and Aristotle’s *Rhetoric* is provided, respectively, by Di Vincenzo 2012 and Celli 2012.
17 Avicenna 1508; Gundissalinus 1901: 124–33; Avicenna 1927; Alonso 1949; Renaud 1973; French 1999. A preliminary analysis of the Latin translation of the part of the *Shifā* dealing with zoology can be found in van Oppenraay 1999.
18 The use of Avicenna’s *De Anima* by Latin thinkers has been thoroughly investigated by Hasse 2000; see also 2008.
19 A preliminary account of the Latin translation and reception of Avicenna’s reworking of Aristotle’s *Physics* (*Liber Primus Naturalium*), *De Generatione et Corruptione* (*Liber Tertius Naturalium*) and *Meteorologica* of the *Shifā* is available, respectively, in Janssens 2007c, Mandosio-Di Martino 2006 and van Riet 1999.
20 The overviews of the Latin impact of the *Ilāhiyyāt* in Anawati 1978 and Verbeke 1982 are quite general and selective. Insightful complements are Wippel 1990 and Sondag 2006.
single chapters, a phenomenon regarding logic (the famous \text{chapter i. 12} \text{ of Madkhal} on universals, and \text{chapter ii. 7} \text{ of Burhān}), natural philosophy (\text{chapters i. 1, i. 5, and ii. 6} \text{ of Maʾādin wa-āthār ’ulwiyya}), and metaphysics (\text{chapter iii. 5 and treatise v} \text{ of the Ilāhiyyāt, on, respectively, the essence of number and universals}).

\textbf{Lacunae in individual areas}

Scholarship dealing with the various branches of the Latin reception of the \textit{Shifā’} has paid different amounts of attention to the constitutive elements and stages of development of each of them. Whereas the diffusion of the \textit{De Anima} has been investigated more systematically,\textsuperscript{22} the study of the \textit{fortuna} of the \textit{Philosophia Prima}, for example, consists so far only of discrete accounts of the influence of this work on “great masters” from the middle of the thirteenth century onward, such as William of Auvergne (d. 1249),\textsuperscript{23} Albertus Magnus (d. 1280),\textsuperscript{24} Thomas Aquinas (d. 1274),\textsuperscript{25} Henry of Ghent (d. 1293),\textsuperscript{26} John Duns Scotus (d. 1308),\textsuperscript{27} and others.\textsuperscript{28} The picture that emerges from these studies, however, is incomplete in two respects. In a diachronic perspective, besides excluding equally important figures like Roger Bacon, it leaves a gap of several decades between the period of the translation of the work and the first representatives of its influence. In fact, in this gap came a crucial phase of the Latin history of the \textit{Philosophia Prima}, during which this work started to be quoted by the translators themselves in original treatises of metaphysics (see, for instance, its use by Gundissalinus), often in connection with the central topics of other recently translated works of Arabic or Jewish philosophy; its main doctrinal trends began to interact with the traditional Latin metaphysics of Boethian inspiration, which they will eventually replace; and its area of influence gradually moved from Spain into the major European universities. It is therefore important to fill this historiographical lacuna by means of a systematic investigation.

\textsuperscript{21} On the independent circulation of \textit{Ilāhiyyāt iii.5}, see below, n. 74. On that of treatise v, see Avicenna \textit{Latinus} 1994: 92, with regard to ms. Vat. Lat. 2186, ff. 64v.–70v (I owe this information to Silvia Di Vincenzo). It is noteworthy that in the aforementioned manuscript, treatise v of the \textit{Ilāhiyyāt} is called “tractatus logicae,” a concrete sign of the interconnection of the different parts of the \textit{Shifā’} in Latin translation (see below, section ‘In search of a synopsis’).

\textsuperscript{22} See the authors and works discussed in Hasse 2000: 13–79.

\textsuperscript{23} See Teske 2002.

\textsuperscript{24} See Bertolacci 2011b and 2013a; Hasse 2012.


\textsuperscript{26} See Porro 2002; Janssens 2010.

\textsuperscript{27} See Druart 2010; Pini 2012.

\textsuperscript{28} On Meister Eckhart (d. 1328) see, for example, Palazzo 2008, On Gerard of Bologna (d. 1317), and Peter Aureol (d. 1322), see Brown 1965, On Berthold of Moosburg (d. after 1361), see de Libera 1994. Through some of the aforementioned authors, Avicenna’s influence in metaphysics was also propagated in post-medieval scholasticism (for the Avicennism of early modern Scotists, see Hoenen 1998).
of the circulation of the *Philosophia Prima* in Latin philosophy before William of Auvergne and Albertus Magnus, namely, since the last decades of the twelfth century until around 1250, when William ended his main theological works and Albertus started his Aristotelian commentaries.\(^{29}\) Even as regards the later period, the aforementioned accounts are partial, since they clarify the recourse to the *Philosophia Prima* in particular works or phases of development of the selected masters, without providing a comprehensive view of the influence of Avicenna’s metaphysics in the authors under consideration.

Analogous considerations apply to the doctrinal level. Within the *De Anima*, scholars have focused on the crucial doctrines of the definition of the soul, the internal senses, and noetics.\(^{30}\) Likewise, among the countless doctrines of the *Philosophia Prima*, only a few interrelated topics, regarding various facets of Avicenna’s doctrine of being, have received proper attention. This is the case, for example, with Avicenna’s epistemological sketch on “existent” or “being” as the subject-matter of metaphysics in *Philosophia Prima* i. 1–4;\(^{31}\) the famous distinction of essence and existence in chapter I. 5;\(^{32}\) the related topic of universals and individuation in chapter V. 1–2;\(^{33}\) the scattered remarks on the primary concepts, or transcendentals (beside “existent,” also “thing,” “one,” “necessary” etc.), throughout the work;\(^{34}\) and the considerations regarding the divine essence in chapter VIII. 5.\(^{35}\) Although central and crucial in various respects, these doctrines do not exhaust the theoretical breadth of Avicenna’s metaphysics. A more inclusive view of the recourse to the *Philosophia Prima* surfaces, for the time being, only in the case of Thomas Aquinas.\(^{36}\)

A related issue is the impact of the style of the *Shifā’* on the *modus componendi* of the Latin thinkers who read Avicenna’s work as an authoritative text. Avicenna’s exposition *per modum auctoris* certainly inspired the literary genre of a number of philosophical treatises written during the thirteenth century.\(^{37}\) But the category of “paraphrase,” commonly used in this regard for Avicenna and his Latin followers, represents a too general rubric, under which different types of exposition coexist. A discrimination of the peculiarities of the distinct styles whose common remote model can be traced in the *Shifā’* would certainly be desirable.

\(^{29}\) See Sileo 2011; Bertolacci 2012a.  
\(^{32}\) See the useful surveys in Wippel 1982 and 2010.  
\(^{35}\) See Flynn 1973–4; Steel 2002.  
\(^{36}\) See Gilson 1960 and 1962.  
\(^{37}\) See Hasse 2011.
In search of a synopsis

The current picture of the Latin reception of Avicenna presents a series of rises and falls, in a texture of ascending and descending phases. Thus, according to a widespread narrative, after the period of translation and the first diffusion of Avicenna’s philosophy until roughly William of Auvergne, there would have been a first progressive decline of Avicenna’s influence, due to the success of Averroes’ commentaries on Aristotle; a resurgence of the prestige of the shaykh ra’is after the condemnation of the Latin Averroists in 1277, witnessed by the massive recourse to Avicenna by Henry of Ghent and John Duns Scotus; a second decline, conveyed by the nominalist attack on traditional philosophy by William of Ockham; and a second resurgence, marked by the Venetian editions of Avicenna’s oeuvre, against the dominant Paduan Averroism, at the turn between the fifteenth and sixteenth centuries. One may find the number of these discrete phases and the rationale of their connection puzzling. In the section on Avicenna and Averroes below, for example, I will question the thesis that the impact of Avicenna’s philosophy began to decrease when the Latin translations of Averroes’ commentaries on Aristotle started to gain success, arguing that the diffusion of Averroes’ Aristotelian commentaries prompted not a progressive eclipse of Avicenna’s thought in Latin philosophy, but a better grasp of Avicenna’s philosophy, an outspoken acknowledgment of its value, and a strenuous defense of Avicenna’s positions against Averroes’ frequent and harsh criticisms. But regardless of the raisons d’être of its single elements and their persuasiveness (or lack thereof), what is most perplexing in the aforementioned narrative is the overall discontinuity conveyed by the recurrent ups-and-downs, and the difficulty of explaining the periodical breaks within a lasting event of the history of philosophy.

Moreover, the Shifā’ is one of the leading instances of a summa, a literary genre that Avicenna can be considered to have initiated. It is a collection of independent disciplines (22 sections) arranged in four macro-areas (logic, natural philosophy, mathematics, and metaphysics), according to a precise organization that mirrors the philosophical curriculum and culminates in metaphysics. This implies that the four main parts and the discrete sections of the work are intimately interconnected and converge collectively in first philosophy as, at the same time, the crowning and grounding science of the system. Internal cross-references and anticipations or resumptions of

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38 See Bertolacci 2006: 265–302 (Ch. 7: “Avicenna’s Conception of the Relationship Between the Metaphysics and the Other Parts of the Aristotelian Corpus: Metaphysics as the Founding Discipline”); 2011c.
certain doctrines in different sections are the connectives that Avicenna uses to articulate his *summa* according to a unified and coherent architecture. This organic framework is a salient trait of the *Shifāʾ*, which – although on a reduced scale, due to the lack of mathematics and the partial transmission of logic – was preserved in the Latin translation. The scholar interested in the Latin influence of Avicenna must therefore be prepared for a kind of “transversal” reception, in which the single sections of a certain part of the *Shifāʾ* partially overlap (as in the case, for example, of *De Anima* and *De Animalibus*), and logical, physical, and metaphysical doctrines do not stay within rigid disciplinary boundaries, but mutually interact. As a consequence, the range of influence of the *Philosophia Prima*, for example, is not limited to Latin works of metaphysics and theology, but also includes works of logic and natural philosophy; the same inclusiveness with regard to “alien” parts of the *summa* also affects the Latin reception of the logic and the natural philosophy of the *Shifāʾ*. Research in this direction is only just beginning.39

But the scope of the possible interconnections regarding Avicenna Latinus can be enlarged. It is well known that in the *Divine Comedy*, Dante Alighieri mentions Avicenna as a physician in the company of Hippocrates and Galen.40 Biographical documents inform us that Avicenna composed the *Book of the Cure* and the *Canon of Medicine* at the same time, applying to them the same methods of teaching. Written and taught together, these two Avicennian masterpieces were also translated into Latin at the same time in the same city (Toledo). Conversely, studies have shown that certain sections of the *Shifāʾ* (especially the zoology of the *De Animalibus*) are doctrinally and textually connected with the medicine of the *Canon*.41 The scope of the mutual relation between Avicenna’s medicine and philosophy in Latin, however, is not restricted to the zoology of the *Shifāʾ*, thus opening a wide and still largely unexplored field of research.42 Significantly, the Latin translation of Avicenna’s *De Anima* – following the Arabic exemplar on which it is based – includes the translation of some chapters of his medical treatise *Al-Adwiya al-qalbiyya* (*De Viribus Cordis*, or *De Medicinis Cordialibus*).43 This being the case, the study of the Latin

42 References to the *Philosophia Prima* in the Latin medieval commentaries on the *Canon* are signaled by D’Alverny 1966: 85–6.
reception of the *Shifāʾ* must take into account the diffusion and use of the *Canon*, and vice-versa.

Finally, Latin thinkers disposed of a group of pseudo-Avicennian writings, which in some cases replaced original parts of the *Shifāʾ* (like the *De Caelo et Mundo* that substituted Avicenna’s own *De Caelo*, being a product of Gundissalinus’ translation activity, and figures among the Latin translations of the *Shifāʾ* in the Venetian edition of 1508), and in other cases were appended as complements to the *corpus* (like the *De Intelligentiis*, also known as *Liber de Causis Primis et Secundis et de Fluxu qui Consequitur eas*, likewise included in the 1508 edition). Alchemical works, like the *Avicennae ad Hasen Regem Epistula* or the *De Anima in Arte Alchemiae*, should also be taken into consideration in this regard. Certainly influential, all these works have introduced tensions and distortions in the Latin appreciation of Avicenna’s original thought (let us think, for example, of Avicenna’s declared aversion towards alchemy, expressed in his original writings), and contributed to an image of the *shaykh raʾis* that is different from the one that modern scholarship on his Arabic œuvre is trying to delineate. This shadowy area of Avicenna’s Latin reception would deserve a more systematic investigation.

**II Agenda**

Some basic data regarding the *fortuna* of Avicenna’s philosophy in Latin may have been lost forever, due to the loss of codices and the dispersion of library collections; others, however, still wait to be properly investigated. The following suggestions point to some of the methodological guidelines that it would be advisable for future research to follow.

**Different types of quotations**

The first important step in order to evaluate exactly the influence of Avicenna on Latin thinkers is to assess precisely the quantity and modality of the quotations of this philosopher. At the formal level, Latin authors

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44 See the remarks by Siraisi 1980: 393.
45 See Avicenna 1508: ff. 37v–42v. This pseudo-Avicennian treatise has recently been edited: Pseudo-Avicenna Latinus 2003.
46 Avicenna 1508: ff. 64v–67v; see “*Le Liber de Causis Primis et Secundis et de Fluxu qui consequitur eas*,” in De Vaux 1934: 83–140.
47 See Burnett 2005: 383–6 ("Para-philosophical Works").
refer to Avicenna and their other sources either through explicit quotations, where the source author is named, or implicitly. The most evident case of explicit quotation is the one in which the name of Avicenna occurs, although in various Latin forms (“Avicenna,” “Albuali” etc.). This type of quotation can be called “explicit nominal.” A less transparent case of explicit quotation is the one in which the Latin scholar refers to Avicenna not through his name, but by means of an indefinite description, like *philosophus arabus*, or an indefinite pronoun (usually in the plural), like *quidam*, *aliquii*, *nonnulli*. This quotation can be called “explicit indeterminate.”

From the point of view of “content,” on the other hand, the quotations of Avicenna, regardless of whether explicit or implicit, can convey either a theoretical tenet (a doctrine), or a portion, of variable length, of a text. I call these two types of quotations, respectively, “doctrinal” and “textual.” Finally, quotations can be either consensual or critical. Further articulations are possible (like the distinction of the doctrinal and textual quotations into *ad litteram* and *ad sensum*).

Critical editions, if accompanied by reliable indices, do usually provide a complete list and identify the exact provenance of the explicit nominal quotations, and of some, if not all, of the explicit indeterminate quotations. Unfortunately, these two types of quotation, frequently critical, are only the tip of the iceberg when it comes to Avicenna in Latin philosophy. The quotations that are most frequent, most extensive (when they are textual rather than doctrinal) and most often consensual – in other words, the most important in order to evaluate the Latin readers’ debt to Avicenna – are, in fact, the implicit ones. Being the least evident and betraying no sign of their presence, they are obviously also the most difficult to detect. This calls for substantial revision of the indices and the *apparati fontium* of the existing editions that did not engage in a comprehensive *Quellenforschung*, and requires future editors of Latin philosophical texts to be also competent connoisseurs of Avicenna’s thought.

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48 In Bertolacci 2006: 318–21, I have called “explicit determinate” the quotations made by means of definite descriptions, rather than proper names, like Avicenna’s quotations of Aristotle as “First Teacher.” I am not aware of any “explicit determinate quotation” (in this sense) regarding Avicenna in the Latin tradition.

49 This scheme of analysis has been applied to the quotations of Avicenna in Albertus Magnus’ Commentary on the *Metaphysics* in Bertolacci 1998b and 2011c. For Thomas Aquinas’ Commentary on the *Sentences*, see Borgo 2007 and forthcoming.
Translation and reception

For virtually all Latin scholars Latin translations were the exclusive way of access to Avicenna’s thought. I have already stressed above the importance of bridging the gap between the phase of translation and that of reception of the Avicenna Latinus, and the necessity of a careful investigation of the crucial “formative” period represented by the phase of translation. I would like to substantiate this contention with a couple of examples that show how deep was the doctrinal impact of the Latin translation of the Philosophia Prima on the dissemination of Avicenna’s metaphysical thought in Latin, and on Latin metaphysics in general.

The first example regards the primary concept “something” (aliquid), which figures in Latin philosophy among more traditional transcendentals like “existent” (ens), “one” (unum), “good” (bonum) etc., and represents in this context a sort of duplicate of the more famous transcendental “thing” (res). This latter has a clear Avicennian background, in so far as it is expressly recorded twice among the primary concepts in the “official” list provided by Avicenna in chapter 1. 5 of the Philosophia Prima. But the transcendental aliquid also has a place in the Philosophia Prima, although it does not come from Avicenna’s pen, but rather, it is a choice of the Latin translator. In the same chapter 1. 5, Avicenna proposes two synonyms for “existent” (mawjūd), namely, “established (in reality)” (muḥbat) and “realized” (muḥaṣṣal). These two terms are rendered jointly by the Latin translator with the single term aliquid, thus encouraging readers of the Philosophia Prima to regard aliquid as one of the transcendentals, as a synonym of the transcendental “existent.” With the progress of research, other examples of similar interferences might surely be discovered.

The second example concerns the long debate whether Avicenna regards existence as a bare accident of essence or as an attribute more intimately linked to the quiddity, in his famous distinction of essence and existence. Advocates of the former alternative are illustrious. On the one hand, al-Ghazālī rephrases Avicenna’s doctrine by saying that existence “occurs accidentally” (yaʿridu) to the essence. On the other hand, Averroes ascribes to

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50 Aertsen 2002: 39–41 (p. 31.2–3); 30.3–4 (p. 33.25–7) (in parentheses are the number of pages and lines of the Latin translation). See Aertsen 2002. According to Aertsen 2012: 42–4, aliquid might have already figured among the transcendentals before the translation of Avicenna’s Philosophia prima, in Latin logical treatises whose dating to the twelfth century is, however, conjectural.

51 1. 5, 31.3 (34.51–2).

52 Al-Ghazālī 1961: 173.1–6 (26.10–15); “Hence, it has been established that existence is an accidental feature (aradī) of all things, and that existence accidentally occurs (yaʿ aridu) to quiddities in virtue
Avicenna the view that existence is an “attribute superadded” (ṣifā zā’ida, Lat.: dispositio addita) to the essence, in order to refute it. Al-Ghazālī’s account of Avicenna’s doctrine and Averroes’ criticism of it were endorsed by Thomas Aquinas, who merged and strengthened the predecessors’ understanding of Avicenna’s position by saying that existence in Avicenna is “something superadded to essence like an accident” (aliquod superadditum ad modum accidentis). Although Aquinas’ own version of the distinction was only one of the many positions on this issue held by medieval philosophers, his interpretation of Avicenna’s distinction of essence and existence was adopted by many exponents of neo-Thomism, including the author of the ground-breaking monograph on the topic, A.M. Goichon. The “Thomistic” interpretation, a kind of communis opinio among Avicennian scholars, started to be rejected by É. Gilson in 1948, who took Duns Scotus, rather than Thomas Aquinas, as a reliable witness of Avicenna’s true standpoint.

As a matter of fact, Avicenna speaks of existence as an accident of essence very rarely, and his actual statements also allow different interpretations. Table 12.2 (below) gathers the most relevant passages of the Ilāhiyyāt that deal, directly or indirectly, with the relationship between essence and its added features, among which is existence. The third column from the left reports the relevant Latin translations.

Table 12.2 shows that Avicenna only very rarely uses the verb “to occur accidentally” (ʿarada) to designate the relationship of essence and existence. This happens only once (n. 30); another case (n. 13) does not regard existence in particular, but, in general, all the features external to essence. The verb that Avicenna most frequently employs to indicate the relationship of essence and existence is rather “to accompany inseparably” (lazima), marked in bold in the second column from the left (nn. 1–3, 29, 31–2). The verb “to occur accidentally” is employed in all other cases to characterize the relationship of essence with universality and particularity and related of a cause, since existence does not belong to them per se, and everything that does not belong to something per se, it belongs to it in virtue of a cause. Therefore the First Cause is existence without an added quiddity, as you will see. Existence therefore is not a genus to any quiddity.” On the Latin reception of this passage, see De Libera 1994: 165–6.

55 Goichon 1937: “très certainement il croit à une distinction réelle entre l’une et l’autre (i.e. essence and existence)” (p. x); “Voici la distinction cette fois nettement posée a parte rei” (p. 141). Although at p. 118, Goichon acknowledges that “l’existence est un lazim, et non un pur accident,” she maintains more than once elsewhere that existence is an accident of essence: “il écarte l’existence de l’essence, au point d’en faire un accident” (p. 13); “. . . l’existence n’étant pas mise à un rang supérieur aux autres accidents” (p. 136).
56 Gilson 1948: 128.
<table>
<thead>
<tr>
<th>Locus of \textit{Ilāhīyyāt}</th>
<th>Arabic</th>
<th>Latin translation</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) I.5, p. 32, 3 (p. 36, 60)</td>
<td>\textit{luzūm}</td>
<td>comitantia</td>
<td>“existent,” with regard to “thing”</td>
</tr>
<tr>
<td>(2) I.5, p. 32, 3 (p. 36, 61)</td>
<td>\textit{yalzamu}</td>
<td>comitabitur</td>
<td>“existent,” with regard to “thing”</td>
</tr>
<tr>
<td>(3) I.7, p. 45, 10 (p. 52, 94)</td>
<td>\textit{lāzim}</td>
<td>comitans</td>
<td>\textit{existence}, with regard to animality</td>
</tr>
<tr>
<td>(4) I.7, p. 45, 11 (p. 52, 95)</td>
<td>\textit{dākhil 'alā}</td>
<td>superveniens</td>
<td>\textit{existence}, with regard to animality</td>
</tr>
<tr>
<td>(5) V.1, p. 196, 6 (p. 228, 25)</td>
<td>\textit{talbaqu}</td>
<td>accidit</td>
<td>universality, with regard to thing</td>
</tr>
<tr>
<td>(6) V.1, p. 196, 10 (p. 228, 32)</td>
<td>\textit{ta’ridu}</td>
<td>accidit</td>
<td>universality, with regard to \textit{equinity}</td>
</tr>
<tr>
<td>(7) V.1, p. 196, 13 (p. 229, 37)</td>
<td>\textit{taqtarinu}</td>
<td>adiungitur</td>
<td>unity, with regard to \textit{equinity}</td>
</tr>
<tr>
<td>(8) V.1, p. 198, 6 (p. 229, 39)</td>
<td>\textit{dākhila}</td>
<td>accidentes</td>
<td>attributes of \textit{equinity}</td>
</tr>
<tr>
<td>(9) V.1, p. 198, 3 (p. 230, 64)</td>
<td>\textit{yalbaqu}</td>
<td>sequitur</td>
<td>“one” and “many” with regard to \textit{the huwiyya} of man</td>
</tr>
<tr>
<td>(10) V.1, p. 198, 6 (p. 230, 68)</td>
<td>\textit{yalbaqu}</td>
<td>accidit</td>
<td>“one” and “many” with regard to \textit{the huwiyya} of man</td>
</tr>
<tr>
<td>(11) V.1, p. 198, 8 (p. 230, 71–2)</td>
<td>\textit{lauwāhiq}</td>
<td>consequentia</td>
<td>“one” and “many” with regard to \textit{the huwiyya} of man</td>
</tr>
<tr>
<td>(12) V.1, p. 201, 3 (p. 233, 29)</td>
<td>\textit{tuqārinu}</td>
<td>quae</td>
<td>attributes of man</td>
</tr>
<tr>
<td>(13) V.1, p. 201, 9 (p. 233, 38)</td>
<td>\textit{amr ‘āriḏ}</td>
<td>quiddam</td>
<td>to be united to external features, \textit{with regard to animality}</td>
</tr>
<tr>
<td>(14) V.1, p. 201, 9 (p. 233, 39–40)</td>
<td>\textit{lāzim}</td>
<td>aliquid quod</td>
<td>to be united to external features, \textit{with regard to animality}</td>
</tr>
<tr>
<td>(15) V.1, p. 201, 10 (p. 234, 41)</td>
<td>‘awāriḏ</td>
<td>accidentia</td>
<td>individuality, with regard to \textit{animality}</td>
</tr>
<tr>
<td>(16) V.1, p. 201, 14 (p. 234, 44)</td>
<td>\textit{yalzamu}</td>
<td>comitatur</td>
<td>“one” and “many,” with regard to \textit{animal}</td>
</tr>
<tr>
<td>(17) V.1, p. 201, 15 (p. 234, 46)</td>
<td>\textit{lāzim min}</td>
<td>comitans</td>
<td>“one” and “many,” with regard to \textit{animal}</td>
</tr>
<tr>
<td>(18) V.1, p. 202, 1 (p. 234, 48)</td>
<td>\textit{yalzamu}</td>
<td>extrinsecus</td>
<td>to be a certain animal, with regard to \textit{animal}</td>
</tr>
<tr>
<td>(19) V.1, p. 203, 9 (p. 235, 81)</td>
<td>\textit{yalzamu}</td>
<td>consequitur</td>
<td>to be proper or common, with regard to \textit{animal}</td>
</tr>
<tr>
<td>(20) V.1, p. 203, 12 (p. 235, 86)</td>
<td>\textit{luzūm}</td>
<td>sequatur</td>
<td>to be proper or common, with regard to \textit{animal}</td>
</tr>
</tbody>
</table>

(\textit{cont.})
issues (nn. 6, 15, 22, 23, 26), rather than the relationship of essence with existence. Moreover, the same verb ‘arada is occasionally used as a synonym of lazima (cp. n. 13 with n. 14; nn. 20–1 with nn. 22–3; n. 30 with nn. 31–2).

We cannot enter into the intricacies of Avicenna’s distinction between existence and essence here. What is noteworthy is that the Philosophia Prima joins the company of al-Ghazâli and Averroes in emphasizing the accidental character of existence with regard to essence, and might therefore lie, together with these Muslim authors, in the background of an interpretation like that of Thomas Aquinas. As a matter of fact, in the Philosophia Prima the verb accidere occurs much more frequently than the verb ‘arada in Arabic (see the instances given in bold in the third column from the left). The Latin translation renders with accidere three distinct Arabic verbs: “to

\[^{57}\text{An overview of previous scholarship can be found in Bertolacci 2012b.}\]
occur accidentally” (‘arada) in all its instances (nn. 6, 13, 15, 22, 23, 26) except one (n. 30), which is not translated; “to be afferent” (lahiqa) in some of its instances (nn. 5, 10, 27); and “to supervene” (dakhala ‘alā) in its second instance (n. 8). Whereas the first rendering can be regarded as correct, in the other two cases it is highly interpretative (for this reason it is underlined in the table and accompanied there, between square brackets, by a Latin translation more faithful to the original). The verb accidere in these improper uses is sometimes found in direct connection with existence (like in n. 27), thus emphasizing the idea of this latter’s accidental nature.

The Latin translator of the *Philosophia Prima* (very likely Gundissalinus) is famous for a radical intervention on the text of the *Ilāhiyyāt*, namely, the “de-Islamization” of its final part (X, 3–4) that deals with practical philosophy (ethics, family management, and politics) and contains frequent references to Muslim religion. This change obviously aimed at avoiding inter-religious confrontation at the time of the introduction of the *Ilāhiyyāt*, by means of its Latin translation, into a Christian context. Less evident and more subtle cases of unfaithful rendering of Avicenna’s *littera*, however, like the ones documented here, might have had an equal influence on the debate over the metaphysical views of Avicenna in Latin philosophy.

**Avicenna and Aristotle**

It is significant that the *Shifā* – by Avicenna’s own admission, the *summa* of his most indebted to the Aristotelian tradition – was selected for translation into Latin, rather than the other, more original, Avicennian *summae* available in Andalusia at the time.\(^{58}\) This suggests that the translators of this work aimed at emphasizing the link between Aristotle and Avicenna and at presenting the latter as a follower and interpreter of the former. Indeed, there is evidence that the first translators regarded the *Shifā* as a derivative, a complement, or an explanation of Aristotle’s *corpus*. Three significant examples can be adduced.\(^{59}\) In the Prologue of the Latin translation of Avicenna’s *Liber de Anima*, Avendauth (in all likelihood the Jewish philosopher, Abraham Ibn Daud) portrays this work as a book that, in the most complete form (*plenissime*), gathers and replaces what Aristotle says in his *De Anima* and *De Sensu et Sensato* (Avendauth also mentions the pseudo-Aristotelian *De Intellectu et Intellecto*). Likewise, Alfred of Sareshel expanded Aristotle’s meteorology by including the mineralogy contained in chapters I, 1 and I, 5 of Avicenna’s corresponding section, which reveals an acute perception of

\(^{58}\) See the evidence adduced by Cortabarria Beitia 1989.

\(^{59}\) I have discussed this topic in Bertolacci 2011a: 51–2.
the Aristotelian inspiration of the *Shifā‘*, especially if Alfred regarded these chapters as written by Avicenna rather than by Aristotle himself. Significantly, Alfred commented not only on Aristotle’s *Meteorology*, but also on Avicenna’s chapters, and described Avicenna as imitator of Aristotle and the second main philosophical authority after Aristotle (‘*imitator Aristotelis precipuus, immo ipso Aristotele excepto, philosophorum maximus*’). Finally, Michael Scot’s translation of Avicenna’s zoology (a reworking of Aristotle’s *Historia Animalium, De Partibus Animalium* and *De Generatione Animalium*) followed shortly after his translation, from Arabic, of these three Aristotelian works (as a single unit, with the title *De Animalibus*). It is reasonable to suppose that, after having translated Aristotle’s zoology, Michael wanted to provide an exegetical tool for its interpretation. In light of all this evidence, it is safe to say that the first translators of the *Shifā‘* ‘intended to provide Western scholars with a commentary on Aristotle’s works’.\(^{60}\)

The early Latin reception of Avicenna can thus be divided into distinct periods on the basis of the relationship between the parts of the *Shifā‘* translated into Latin and the corresponding writings of Aristotle’s corpus. Taking as examples, respectively, the *Philosophia Prima* and the *Metaphysics*, we can distinguish three main approaches to Avicenna’s work, corresponding roughly to three chronological phases. The first phase goes from the second half of the twelfth century, when the *Philosophia Prima* was translated, until the beginning of the following century, when the first attestations of its use in European universities occur. The second phase is documented since the beginning of the thirteenth century. The third started around 1240. The first phase was geographically centered, either directly or indirectly, in the Spanish city of Toledo. The other two phases were both institutionally linked, in different ways, with the universities of Paris and Oxford, although they followed distinct paths until Albertus Magnus.\(^{61}\)

In the first phase, represented by Gundissalinus and by anonymous treatises like the already mentioned *De Causis Primis et Secundis*, the *Philosophia Prima* is both quoted and silently reproduced within independent treatises, in which it represents the main text, or one of the main texts, on metaphysics. Recourse to Aristotle’s *Metaphysics*, on the contrary, is absent or very scanty, since the Latin translations of this work still have a very limited diffusion. In the absence of the metaphysical text *par excellence* (Aristotle’s *Metaphysics*), the *Philosophia Prima*, on account of its comprehensiveness and articulacy, performs the role of “vicarious” canonical text. Averroes’ Long Commentary on the *Metaphysics* is not yet available.

\(^{60}\) D’Alverny 1982: 451. \(^{61}\) I deal in detail with this periodization in Bertolacci 2012a.
The second phase is marked by the joint consideration of Aristotle’s \textit{Metaphysics} and Avicenna’s \textit{Philosophia Prima} by philosophers and theologians in universities. Aristotle’s \textit{Metaphysics} is now regarded as the main text on the subject, but Avicenna’s \textit{Philosophia Prima} represents the privileged means of access to Aristotle’s work and its main tool of interpretation. Traces of this tendency can be found in Robert Grosseteste in Oxford; its full development occurs, however, in philosophical and theological works produced in Paris. Here, the \textit{Philosophia Prima} is frequently mentioned together with Aristotle’s \textit{Metaphysics} by masters of arts such as John Blund (in whose \textit{Tractatus de Anima}, written presumably in Paris at the beginning of the thirteenth century, the \textit{Philosophia Prima} is referred to, for the first time, as a \textit{commentum} on the \textit{Metaphysics}), and professors of theology such as William of Auvergne, Roland of Cremona and Roger Bacon. All these authors read the \textit{Metaphysics} through the lens of the \textit{Philosophia Prima}. The University of Paris documents a progressive acceptance of Avicenna’s work: initially used with no restriction in the arts faculty, as John Blund witnesses, and possibly involved in the Parisian condemnations of 1210 and 1215, the \textit{Philosophia Prima} was critically scrutinized, but also widely endorsed, by prime exponents of the faculty of theology such as William of Auvergne and Roland of Cremona, and enthusiastically received, with very few caveats, by Roger Bacon. Averroes’ Long Commentary on the \textit{Metaphysics}, on the other hand, once it became available, was substantially ignored, or instead, criticized.

The third phase starts with the earliest extant Latin commentaries on the \textit{Metaphysics}, around 1240 (Roger Bacon’s commentaries on the \textit{Metaphysics} in Paris, and the Oxford commentators of the \textit{Metaphysics}), and attests to the use of the \textit{Philosophia Prima} within the exegesis of the \textit{Metaphysics}. Averroes’ Long Commentary on the \textit{Metaphysics} replaces Avicenna’s \textit{Philosophia Prima} in the role of authoritative interpretation of the \textit{Metaphysics}. Yet, both in Oxford and in Paris, commentators of the \textit{Metaphysics} continue to refer to the \textit{Philosophia Prima}, even though their references to Avicenna are much less frequent and systematic than those to Averroes’ Long Commentary.

A turning point in the history of the \textit{Philosophia Prima}, and the beginning of a more mature and inclusive approach to this work, starts with Albertus Magnus’ Commentary on the \textit{Metaphysics}. Albertus’

\footnote{William of Auvergne, for example, regards Avicenna as an \textit{expositor} of Aristotle (\textit{De Universo} ii. 8, in \textit{Opera Omnia}, vol. 1, p. 690BH: ‘... et Avicenna post eum [sc. Aristotelem] ... Similiter et alii expositores eiusdem Aristotelis’), and often in effect refers to Avicenna when quoting Aristotle by name (as noticed, among others, by Hasse \textit{2000: 44} and n. 184; Teske \textit{2002: 154–5}).}
Commentary (one of the earliest, most extensive and most influential Latin accounts of Aristotle’s work) marks a crucial phase of the transmission of Arabic metaphysics into Latin, insofar as it is the first known example of Latin exegesis of the *Metaphysics* that relies massively on both Avicenna’s and Averroes’ works on the subject. With Albertus, for the first time, the lines of transmission of the *Philosophia Prima* and the Long Commentary of Averroes, which had followed separate paths until then, merge and interact. Albertus accords to both authors an equally important, although distinct, function: he takes from Averroes the exegetical tools to explain the text, whereas he relies on Avicenna for doctrinal enrichment of Aristotle’s text, in a commentary on the *Metaphysics* that is also, in this way, a kind of “super-commentary,” albeit *in nuce*, on the *Philosophia Prima* and the Long Commentary. Accordingly, the format of Albertus’ Commentary on the *Metaphysics*, also adopted in his other Aristotelian commentaries, is an unprecedented sort of “paraphrase with digressions,” i.e. a mix of chapters which clarify, by way of paraphrase, the meaning of Aristotle’s text, and autonomous chapters in which the doctrine of the text previously paraphrased is either accounted for anew, differently and more thoroughly, or confronted with possible objections, or compared with different opinions on the same topic (in other words, it is a sort of conflation of a *sententia* and a *commentum per quaestiones*). In the Commentary on the *Metaphysics*, as well as in Albertus’ other commentaries, this double register of paraphrases and digressions allows the incorporation of Avicenna’s and Averroes’ contributions. Albertus mainly quotes Averroes’ literal exegesis of the *Metaphysics* in the explicative paraphrases, whereas he prefers to cite Avicenna’s doctrinal developments in the digressions. In this way, he keeps the contributions of Avicenna and Averroes separate within two different structural levels of the commentary, but also lets them interact and balance each other in the overall architecture of the work. Of Albertus’ Commentary on the *Metaphysics*, Averroes provides a platform and a connection with the other works of the Aristotelian corpus, whereas the *Philosophia Prima* is used to build on that platform and to help integrate the exegesis of Aristotle’s *Metaphysics* with the Neoplatonic speculation of the *Liber de Causis* (a work which Albertus comments upon after the *Metaphysics* and regards as a writing of Aristotelian origin, albeit not *stricto sensu* a work by Aristotle). The same harmonizing strategy governs the level of doctrine, where Albertus tries to solve and overcome the conflict that opposes his two main Arabic authorities on many issues regarding metaphysics. The phase of the reception of the *Philosophia Prima* that starts with Albertus Magnus should therefore be studied on account of the relationship of Avicenna’s
work not only with Aristotle's *Metaphysics*, but also with its counterpart, Averroes' Long Commentary (see, on this, the section on Avicenna and Averroes below).

A noteworthy sign of the evolving relationship of Avicenna's *Philosophia Prima* and Aristotle's *Metaphysics* are the titles according to which these two works were cited in Latin philosophy. This topic would require a systematic investigation in its own right. But roughly speaking, one finds cases in which Avicenna's and Aristotle's works are both called with the same title, either “Metaphysica” (according to various spellings) or “Prima Philosophia”, and cases in which they are referred to by means of different titles. The overlap between the titles of Aristotle's and Avicenna's metaphysical works indicates either the absence of Aristotle's *Metaphysics* from the philosophical scene and its replacement with Avicenna's *Prima Philosophia*, or the existence of a philosophical project in which the science of metaphysics is modeled according to Aristotelian and Avicennian parameters. The distinction between titles, on the other hand, indicates a more precise awareness of the peculiarities of Avicenna's account of metaphysics as opposed to Aristotle's. Albertus Magnus can be taken as a

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64 In Albertus Magnus’ Commentary on the *Physics*, for example, the *Ilahiyyāt* is referred to by the title *Prima Philosophia* (Albertus Magnus 1993b: viii.4, 5, p. 649.61), occasionally assigned also to the *Metaphysics* of Aristotle (viii.4, 5, 649.40–41; for the title *Metaphysica*, see viii.2, 5, 597.30–31), so that Albertus needs to add the adjective *sua* in order to distinguish Avicenna’s from Aristotle’s work (“in *Prima sua Philosophia*,” 649.63). The same coincidence occurs in Albertus’ Commentary on the *Isagoge* (see, for instance, Albertus Magnus 2004: 1.3, 5.54–5; 11.5, 8.64–5; 11.6, 35.62–3; 4.91.9–10, etc.; 4.9, 93.2–3), where he uses the same distinguishing device (“Propter quod et Aristoteles in *Prima Philosophiae* suae et similitur Averroes dicunt...”, 1.1, 1.24–5; “Et haec est Avicennae determinatio, sicut colligi postes in *Prima Philosophia* ipsius,” v.4, 93, 2–3). John Blund calls *Prima Philosophia* Aristotle’s *Metaphysics* in *Tractatus de Anima* (1970: no. 101, 27.28–9): “sicut testatur tam Avicennae quam Algazel in commento prime philosophie.”

65 This is certainly the case of the *Liber de Causis Primis et Secundis*, where Aristotle’s *Metaphysics* is quoted indirectly through al-Farābī (*Liber Alpharabii de Intellectu et Intellec*to in Gilson 1929: 126, 393–4, cf. 115.9). An echo of this situation is still present in John Blund’s second quotation of Avicenna’s work in the *Tractatus de Anima* (see above, n. 61).

representative of the transition, respectively, from the first to the second typology of cases.\(^{67}\)

**Avicenna and al-Ghazālī**

Another important task for future scholarship is to clarify how the diffusion of the Latin translation of the *Shifā* interacted with the parallel diffusion of the Latin version of al-Ghazālī’s (d. 1111) *Maqāsid al-Falāsiḥa* (*Intentions of the Philosophers*), a work that was regarded by Latin authors as an exposition of, and in some cases a substitute for, the *Shifā*.\(^{68}\) The *Maqāsid* is a reworking of a *summa* of Avicenna written in Persian, the *Philosophy for ‘Alā’ al-Dawla* (Dāneshnāme-ye ‘Alā’ī), with additions from the Book of Pointers and Reminders (*Kitāb al-Ishārāt wa-l-tanbihāt*) and the *Shifā* itself. Its Latin translation was made by one of the initiators of the translations of Avicenna (Gundissalinus, working in Toledo in the second half of the twelfth century), and was coeval to the earliest parts of the *Shifā* translated into Latin.\(^{69}\) The work circulated in Latin under various titles, among which manuscripts record *Summa Theoricae Philosophiae*.\(^{70}\) Known only as the author of the *Summa*, al-Ghazālī (under the Latinized name “Algazel”) was considered by Latin authors to be a disciple of Avicenna, on account of the similarity between the *Summa* and the Latin translation of the *Shifā*.\(^{71}\) In fact, he also authored the *Tabāfut al-Falāsiḥa* (*Incoherence of the Philosophers*), a radical criticism of Avicenna’s and al-Fārābī’s philosophies,\(^{72}\) which, however, remained practically unknown in Latin philosophy until the fourteenth century.\(^{73}\)

Two features of al-Ghazālī’s *Summa* are noteworthy. First, this work comprehends logic, natural philosophy and metaphysics in their entirety, 

\(^{67}\) No coincidence of titles between Aristotle and Avicenna occurs, for example, in his Commentary on the *Metaphysics*, a few years later than the Commentary on the *Physics* and on Porphyry’s *Isagoge*.

\(^{68}\) On the Latin reception of al-Ghazālī, see 1936; Alonso 1958; Cortabarria Beitia 1962.

\(^{69}\) On the Latin translations of al-Ghazālī’s works, see Burnett 2005: 396.

\(^{70}\) See on this, Sileo 2011: 155.

\(^{71}\) Albertus Magnus often remarks that Algazel is a “follower” (sequax, sequens, or insecutor) and a “summarizer” (abbreviator) of Avicenna (see Cortabarria Beitia 1962: 260–2, texts i–7, 12). This idea also surfaces in a remark of the Latin translation of Averroes’ Long Commentary on the *Physics* 8.3 (Averroes 1962: vol. IV, p. 340E–F), possibly introduced in Averroes’ text by the Latin translator.

\(^{72}\) The degree of originality of the *Maqāsid al-Falāsiḥa* with regard to Avicenna’s œuvre, and the nature of its relationship (or lack thereof) with the *Tabāfut al-Falāsiḥa*, are disputed: see Shihadeh 2011.

\(^{73}\) Its first attested Latin translation was accomplished in 1328, when Calo Calonymos translated from Arabic into Latin Averroes’ *Tabāfut al-Tahāfut*, the work in which Averroes reports and refutes al-Ghazālī’s criticism of the philosophers in the *Tahāfut* (see Zonta 1996: 75–6). Roger Bacon knew of the existence of the *Tabāfut* by means of the *Maqāsid*’s Prologue, unknown to other medieval philosophers. Only the *De Pugio Fidei* of Ramón Martí (d. after 1284) reveals acquaintance with the original Arabic text of the *Tahāfut*. 
and is therefore more encompassing, although less detailed, than the parts of the *Shifā’* translated into Latin. Second, it gained diffusion before the Latin translation of the *Shifā’*, and served in a way as a vehicle of transmission of this latter.\(^{74}\) Whereas the second feature attests to the intimate connection of the two works, the first feature should warn us against hastily ascribing to Latin thinkers a knowledge of parts of the *Shifā’*, whose Latin translation is neither extant nor attested:\(^{75}\) hypotheses of this kind should be tested against the possibility of an indirect acquaintance with the portions of the *Shifā’* not translated into Latin via their corresponding sections in al-Ghazālī’s *Summa*. Al-Ghazālī was often quoted together with Avicenna,\(^{76}\) regarded as agreeing in everything with him,\(^{77}\) and sometimes even cited in substitution for his “master.”\(^{78}\) This being the case, it would not be surprising if Latin authors claimed to know parts of the *Shifā’* that were in fact available to them only through the mediation of al-Ghazālī’s *Summa*.

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\(^{74}\) The most ancient extant manuscript of the *Philosophia Prima*, for example, dates from the first half of the thirteenth century (c.1240; see Avicenna Latinus 1977: 125–6). The translation of a chapter of this work (III.5) circulated earlier, attached to the Latin translation of Algazel’s *Summa*, in a manuscript of the beginning of the thirteenth century copied in Spain, as well as in four other codices. D’Alverny 1971 (followed by S. Van Riet in Avicenna Latinus 1977: 125\(^*\), and n. 12), surmises that the five manuscripts that include *ālāḥiyāt* III.5 (placed at the end of Algazel’s *Summa*) might reproduce a collection of works constituted “à la source même des traductions,” on account of the presence of the same collection in a number of distinct codices (a fact that indicates an ancient common ancestor) and of the heterogeneous character of the collection (a fact that suggests a dependence on the *quaterni* of the scholares coming to Toledo from all over Europe).

\(^{75}\) In light of the quotations of Avicenna in Albertus Magnus’ commentaries, Grignaschi 1972 contends that some integral Latin translations of the second, third and fifth section of the logic of the *Shifā’* (corresponding, respectively, to the *Categories*, *De Interpretatione* and *Posterior Analytics*), subsequently lost, must have existed. Although endorsed by some scholars, Grignaschi’s hypothesis is very cautiously considered by others: for a *status questionis*, see Janssens 2003.

\(^{76}\) See, for instance, John Blund 1970: no. 101, 27.28–9: “sicut testatur tam Avicenna quam Algazel in commento primo philosophie” (the reference is, in fact, to Avicenna’s and Algazel’s doctrine of vision in psychology, rather than metaphysics); cf. the joint quotation of Avicenna and Algazel also in no. 15). In the Commentary on the *Metaphysics*, Albertus quotes explicitly five times together Avicenna’s *Philosophia prima* and the metaphysical section of Algazel’s *Summa* (Albertus Magnus 1960: v.1, 4, 217.26–8; III.3, 1, 138, 66–73; v.2, 16, 253.77–254.5; v.6, 5, 286.9–11; Albertus Magnus 1964, xi.2, 34, 526.29–30). He also incorporates some passages of the metaphysical section of the *Summa* within implicit textual quotations of Avicenna’s *Philosophia Prima* (I.1, 2, 4, 31–6; v.1, 3, 212.83–213.32; v.2, 2, 238.27–33; cf. Bertolacci 2001c: 268–71). The only case of (partial) dissent is represented by the quotations of Avicenna and Algazel in xi.2, 10, 495.48–50, 66–7. In the Commentary on the *Liber de Causis*, Albertus quotes explicitly four times the two together (Albertus Magnus 1993a: I.2, 7, 32, 55–6; I.3, 1, 5, 40, 47–8; I.4, 7, 53.3–4; II.2, 36, 129.31). In both commentaries he states that Algazel is an *instructus* of Avicenna (see, respectively, v.1, 4, 217, 26–8, and 1.4, 7, 53.4).

\(^{77}\) See Albertus Magnus 1955: 2, 2, 217.7–8: “Propter quod concludit hic Philosophus (sc. Avicenna) et Algazel, qui eum in omnibus sequitur . . .”

\(^{78}\) In at least one case, Albertus avowedly reports the *sententia Avicennae* according to the phrasing of Algazel (*per verba Algazelis*) (see Cortabarría Beitia 1962: 262, Text 12 e n. 21). Conversely, Albertus uses some doctrines of Avicenna’s *Philosophia Prima* as expression of Algazel’s thought, without any parallel in the *Summa*, in the Commentary on the *Metaphysics* v.1, 4, 217.26–8; v.2, 16, 253.77–254.5.
Here, too, Albertus Magnus is a revealing figure. The connection he draws between Aristotle’s *Metaphysics* and the *Liber de Causis* relies primarily on Avicenna, as we have seen, but also involves al-Ghazâlî. Albertus’ quotations of the ontological part of the *Philosophia prima* (treatises i–vii) in his Commentary on the *Metaphysics* represent the first half of a link he draws between the *Metaphysics* and the *De Causis*. The second half of the same unifying strategy is given by the quotations of the theological part of Avicenna’s work (treatises viii–x), by means of the account thereof that Albertus finds in al-Ghazâlî’s *Summa*, in the first of the two books of Albertus’ Commentary on the *Liber de Causis*. Here he refers indirectly to the doctrine of the theological part of Avicenna’s *Philosophia prima* as he reproduces almost verbatim the text of the corresponding part of al-Ghazâlî’s *Summa*.79 Albertus’ overall project can be appreciated only by realizing that he saw an identity between the views of Avicenna and of his “disciple,” al-Ghazâlî.

Thus, the Latin diffusion of al-Ghazâlî’s *Summa* is an integral part of the dissemination of Avicenna’s *Shifâ* in Latin philosophy, and one cannot have a precise view of the latter without taking the former into consideration.80 The Latin text of the *Summa* still awaits a complete critical edition.81

**Avicenna and Averroes**

After the Latin translations of Averroes’ Long Commentaries on the Aristotelian *corpus* in the first decades of the thirteenth century, Latin thinkers were faced with two alternative views of the theory and practice of philosophy, both coming from Arabic Peripateticism. For Avicenna and Averroes upheld two alternative formulations of philosophy, in terms of style (paraphrase vs. literal commentary), attitude towards Aristotle (free adaptation vs. faithful endorsement), and doctrine (inclusion of non-Aristotelian views vs. strict adherence to the Peripatetic tradition). Moreover, Averroes frequently and harshly criticizes Avicenna in his commentaries on Aristotle – although to varying degrees depending on the type of exegesis adopted (epitome, paraphrase, literal commentary) and the particular Aristotelian work commented upon. His polemical attitude reaches a climax in his Long Commentary on the *Metaphysics*.82 Hence, the Latin reception of

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79 This is confirmed by the independent recourse to *Philosophia Prima* viii.1–3 (three chapters with no parallel in al-Ghazâlî’s *Summa*) in the *Commentary on the Liber de Causis* (I.1, 7).
80 Remarks on the intermingled reception of the two works are available, for example, in Janssens 2006; Podkonski 2006.
81 For the part on logic, see Lohr 1965; for that on metaphysics and natural philosophy, see Al-Ghazâlî 1933. The translator of the Prologue (Salman 1936: 125–7) remains anonymous.
82 Some of these criticisms are taken into account in Menn 2012; see also Bertolacci 2012c and 2013b.
Avicenna’s *Shifāʾ* as an “encyclopedia” of Peripatetic philosophy was certainly influenced by its counterpart, the systematic exegesis of Aristotle’s works by Averroes. The contrast was particularly stark concerning the principles of natural philosophy, psychology, and metaphysics, since Latin thinkers could consult both Avicenna’s and Averroes’ accounts of Aristotle’s *Physics*, *De Anima*, and *Metaphysics* in Latin translation.\(^{83}\)

Two main reactions to this contrast can be observed in Latin culture.\(^{84}\) On the one hand, the idea of a conflict between Avicenna and Averroes pervades Latin philosophy from the thirteenth century onwards, taking inspiration from and amplifying Averroes’ criticisms. This contrast is associated with distinct disciplinary fields and intellectual efforts (the “physician” Avicenna vs. the “commentator” Averroes); it assumes religious connotations (the “pious” Avicenna vs. the “atheist” Averroes), corroborated by pseudoepigraphical writings (the ps.-Avicennian *Epistula ad Sanctum Augustinum* vs. the ps.-Averroean *Tractatus de Tribus Impostoribus*); it inspires fictional biographical tales reporting these two thinkers as murdering one another; and it finds vivid expressions in iconography (the “prince” Avicenna vs. the Averroes upon whom Christian theology triumphs). The same opposition passes to Renaissance philosophy: thus Pietro Pomponazzi (d. 1524) takes the side of Avicenna against the Averroist Agostino Nifo (d. 1538) on human spontaneous generation, whereas a few decades later Jacopo Zabarella (d. 1589) gives an extreme anti-Avicennian spin to Averroes’ doctrine of elementary mixture. In this light, the *editio princeps* of Avicenna’s *Philosophia Prima* (1495) can be taken as a sign of the reaction of some professors of Padua with Scotistic sympathies, against the Averroism otherwise dominant in this university.

On the other hand, in the face of the manifest disagreement between Avicenna and Averroes, Latin thinkers, rather than remarking the opposition of the two Arabic masters, adopted a different strategy – both historically significant and theoretically demanding – namely, the effort of *synthesis*. The harmonization in this case was an arduous path to follow, since it required a profound understanding of Avicenna’s and Averroes’ standpoints and an intelligent disclosure of a “third way” in the interpretation of the single works of Aristotle, in terms of approach, style and doctrine. Albertus Magnus is a significant example of this trend. He is

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\(^{83}\) In Averroes’ Long Commentary on *De Anima*, the points of opposition towards Avicenna are decidedly fewer than in the Long Commentaries on *Physics* and *Metaphysics*. With regard to Aristotle’s *De Caelo*, Latin thinkers had at their disposal Averroes’ Long Commentary and the pseudo-Avicennian *Liber Gaeli et Mundi*, rather than the original part of the *Shifāʾ* corresponding to Aristotle’s *De Caelo* (see above, n. 45). This part of the *Shifāʾ* was known to them only through the quotations by Averroes.

\(^{84}\) I have sketched these two tendencies in the Conclusion of Bertolacci 2013c.
certainly aware of the distance separating Avicenna from Averroes, and in his first Aristotelian commentaries (especially those on Physica and De Caelo) indulges in the *topos* of their antinomy. In his more mature commentaries, however, his attitude evolves and, rather than insisting on the differences between the two Arabic masters, he tries to establish a consensus between them. The Commentary on the Metaphysics shows this tendency with particular clarity. The joint reliance on Averroes and Avicenna in this commentary prompts Albertus to focus on similarities and minimize differences. This harmonizing strategy consists in “hiding,” “disguising,” and “solving” the dissent, and can be measured by the number of criticisms of Avicenna by Averroes to which Albertus draws attention (only a fraction of those present in the Long Commentary on the Metaphysics), the style of the quotations of Avicenna and Averroes (the conflict separating the two is never reported with explicit reference to their names), and the formulation of the various doctrines (Albertus develops a theoretical apparatus for reconciling the positions of the two authors on the crucial issue of the transcendentals).

Albertus’ harmonizing strategy was influential on later authors, as subsequent commentaries on the Metaphysics attest: the *media via* between Avicenna and Averroes on the issue of spontaneous generation, pursued in Thomas Aquinas’ commentary on the Metaphysics, for example, is probably indebted to Albertus’ analogous stance on the issue. In this light, it seems hardly coincidental that later commentaries on the Metaphysics refer to Albertus as *auctoritas* and, at the same time, use both Averroes’ and Avicenna’s contributions. Yet, however momentous the synthetic approach pursued by Albertus might have been, the ideal of a synthesis between Avicenna and Averroes was not unanimously endorsed. Where it was, it sometimes took a different form: an example can be found in the aforementioned Commentary on the Metaphysics of Thomas Aquinas, in which the explicit reference to some criticisms of Avicenna in Averroes’ Long Commentary seems to go openly – and possibly even intentionally – against Albertus Magnus’ effort of silent harmonization.

### III Conclusion

A serious investigation of the reception of Avicenna in Latin medieval culture, free from the many distorting “-isms” of previous scholarship,

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81 See Hasse 2007: 127.
86 See the remarks on Alexander of Alexandria (d. 1314) in Amerini 2004.
faces three basic requirements. The first is that the different parts of the *Shifâ’* translated into Latin will receive an equal share of attention, making the completion of the Avicenna Latinus series of critical editions the starting-point of a collection of independent researches focusing on each section of Avicenna’s *magnum opus*. Second, the impact of these parts on Latin philosophers and theologians must be thoroughly and systematically studied, filling the fictitious gaps that the scholars’ particular interests have disseminated in the field. Third, the impact of Avicenna’s logic, natural philosophy, and metaphysics on Latin culture should be assessed alongside the parallel reception of the *Canon of Medicine*. A study of this kind should also consider the peculiarities of the Latin translations of Avicenna’s works, and take into account the interaction of Avicenna’s thought with the philosophies of his “first master” (Aristotle), “compiler” (al-Ghazâlî), and “adversary” (Averroes).

Besides being a desirable achievement in itself, a clearer view of the overall Latin diffusion of the *Shifâ’*, whose contours have been sketched in the present chapter, is a fundamental step towards a further, more ambitious goal of future research: the comparative study of the *fortuna* of Avicenna’s philosophy and medicine in its three main traditions (Arabic, Latin, and Hebrew). The so-called “religious” character of Avicenna’s philosophy, namely, his attempt to show the congruence of Greek speculation with a monotheistic faith like Islam, seems to have played a pivotal role in this regard. A synoptic investigation of this kind will shed new light on the dialogue of cultures, variously dependent on the Greek heritage, that took place around the Mediterranean Sea during the Middle Ages, in spite of, and “above,” so to speak, the religious confrontation.\(^{88}\)

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\(^{88}\) See, along these lines, Burrell 1993b; Hasse and Bertolacci 2012.
Sections of the *Cure* (*al-Shifāʾ*, also frequently called the *Healing* in English) and a few other frequently cited works by Avicenna are referred to by short title, as follows:


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270
271

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Bibliography

285


Bibliography


Bibliography


Bibliography


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Pointers and Reminders, 14, 19, 22, 45, 48–9, 52–66, 70, 124, 130–1, 173, 175, 177–8, 180–1, 183–5, 186–7, 193–9, 204–5, 208, 215, 220, 231, 245, 264

Provenance and the Return, 12, 13, 20, 22

Refutation of Abī al-Faraj, 17, 20–1

Salvation, 25, 54, 62, 70, 121–2, 123, 126, 128–9, 150, 170, 176, 186, 198, 218, 221, 224, 233, 238, 245

Sermons on Divine Unity, 17

State(s) of the Human Soul, 13–14

Summary on the Almagest, 12

Tirone Philosophy, 25

Universal Observations, 12

Bacon, Roger, 249, 261

“Baghdād Peripatetics”, 9, 15–17, 50–4, 56

Al-Baghdādi, Abū l-Barakāt, 196, 204, 215

Bahmanyār, 15, 19, 196, 204

Al-Bāqillānī, 203

Al-Baydāwī, 205, 211

Al-Bayhaqi, 211, 215

Al-Bīrūnī, 11–12, 13, 27

Blund, John, 261

Common sense (sensus communis), 102–4, 105, 107

composition (ta’lif), 79

culturalization, 46, 113, 121, 123, 126, 140

continuum, 76–81

Crescas, Hasdai, 227

curriculum, philosophical, 7, 8, 25, 31, 37, 43, 92, 199, 251

Dante, 240, 242, 252

Dashtakī, Sadraddīn, 208, 213

Dawānī, Jalālāddīn, 208, 211–12, 213

Distinction between Essence and Existence, 113, 159, 182, 194–5, 197–8, 202, 203, 206, 211, 250, 255

drugs, 98–101

elemental qualities. See elements

epistemology, 36, 38–43, 109–19, 120–42, 196, 202

“esoteric” works of Avicenna, 12, 35

estimation (waḥm), 40, 102–3, 104–5, 106–7, 124, 136, 196

ethics, 43, 45

Euclid, 8, 161

Al-Fārābī, 13, 31, 36, 51–2, 121, 209, 228, 238, 264

Book on the One and Unity, 164

Kitāb al-Hurūf, 111, 153, 164

On the Aims of the Metaphysics, 144, 146

Principles of the Opinions . . ., 147

Flying Man, 23, 40, 138–9

Galen, 90, 91, 96, 98, 102, 108

Gerard of Cremona, 244

Gershon ben Solomon, 236

Gersonides, 238

Al-Ghazālī, 34, 195, 256, 269

Incoherence of the Philosophers, 174, 206, 264

Intentions of the Philosophers, 69, 215, 218, 223, 225–7, 231, 264–6

Ghiyāthaddīn, 208

Giver of Forms, 83, 88, 90, 222


as Necessary Existent, 40, 170–89, 193–8, 201, 207, 210, 220, 222, 229

divine attributes, 171–89, 203

quiddity of, 173–5, 181–3

self-intellection of, 184–5

Grosseteste, Robert, 261

Gundissalinus, 253, 259, 260, 264

Ha-Levi, Moses ben Joseph, 221–2, 223, 232, 236, 238

Hallevi, Judah, 220, 223, 225, 228, 238

Henry of Ghent, 117–19, 249, 251

Hillel ben Shmuel, 236

Al-Hilli, al-‘Allama, 203, 208, 212

Ibn Abī Usaybi‘a, 92

Ibn ‘Adi, Yahyā, 151, 154–5, 157, 168, 209

Ibn al-Bīrīqī, Yahyā, 240

Ibn al-Samīḥ, ‘Ali, 16

Ibn al-Tayyib, Abū l-Faraj, 16, 17, 20–1, 50

Ibn ‘Arabī, 196–7, 210

Ibn Da‘ud, Abraham, 221, 228, 238

Ibn Ezra, Abraham, 224, 229, 235

Ibn Falaqera, 217, 225, 229, 232–4, 237

Ibn Kammūna, 219–20

Ibn Majtāgh, Judah ben Solomon, 239

Ibn Taimiyya, 74

Ibn Tibbon, Judah, 225, 228

Ibn Tibbon, Moses, 238

Ibn Tibbon, Samuel, 229, 230–1, 235, 238, 240

Ibn Waqār, Joseph, 222–3

Ibn Zayla, 19, 203

Al-Iṣḥāqī, 191, 205, 211

Illuminationists, 22

imagination (khayāl), 40, 42, 72, 103–4, 105–6, 115, 126

Immanuel of Rome, 240

infinite divisibility, 77–8
Index

299

Intelect
Acquired, 40, 114
Active, 4, 37, 41, 109–10, 111, 112–19, 166–8, 196, 202
Agent. See Intelect, Active
celestial, 26, 37, 38, 41, 109, 184
intelligibles, 37–9, 40–3, 109, 111–19, 128, 184–5, 202
intention (ma’na), 167–9
internal senses, 39, 40, 102–6, 127, 221, 250
introspection, 138–42
intuition (budi), 21, 130–2, 220, 233
Al-Isfara’ini, 198
Isra’ili, Hayyim, 234–6, 238
Juridical schools’ reception of Avicenna, 34
Al-Jurjani, Sayyid Sharif, 204, 205, 210
Al-Juwayni, 203
Al-Juzjani, 7, 13, 70
Biography, 7, 12, 14, 18, 22, 25, 26, 69
Kalām. See Mutakallimun; Plotinus; Theology of Aristotle
Kant, Immanuel, 127
Al-Katibi, Najm al-Din, 64, 204–5, 210, 212
Al-Khayyam, 196
Al-Khunaji, 63–4, 68
Khwajazada, 206
Al-Kindi, 28, 151, 153
Al-Kirmani, Abu l-Qasim, 15–20, 27, 50
Lari, Muslihaddin, 209
Al-Lawkari, 204
Liber celi et mundi, 236, 267
Liber de causis, 30, 262, 266
Liber de Causis Primis et Secundis, 253, 260
Locke, John, 39
logic, 48–70, 121–3
Avicenna’s works on, 68–70
Maimonides, 170, 216–19, 223, 228, 229, 233–4, 238, 239–40
Maimonides, David II, 215, 219
Al-Mas’udi, 197, 198
Al-Ma’sumi, 11–12, 13
Matta, Abu Bishr, 36, 151
Al-Maybudi, Mir Husayn, 209
Al-Mazarri, 34
medical works, Avicenna, 94–5
memory, 103, 104, 105, 106, 116, 118, 128–9
minima naturalia, 79, 81–5, 89–90
Miri Dammad, 209
Miskawayh, 15
mixture, 84–90, 94, 113
motion, 71–5, 80–5, 166, 216
Mulla Sadra, 207, 209
Mutakallimun, 77, 79, 90, 120, 147, 205
Post-Avicennan, 179, 194, 195, 203, 211–13
Mu’tazilites, 151, 153, 203
Narboni, Moses, 217, 225, 226, 229, 238
Natan, Judah ben Solomon, 225–6, 231–2
Al-Narisi, Abu ‘Abdullah, 8–9
Al-Nazzam, 160
Nemesius of Emesa, 103
Neoplatonism, 30, 32, 35, 37, 111, 116, 186, 200, 202
Nifo, Agostino, 267
Non-being, 159, 186
number, 127, 160–4, 171
Ockham, William of, 150, 251
Al-Pazdawi, 203
perfection (kamal), 72, 186–7
Philoponus, 8, 13, 20, 82
Plato, 30, 116
Plotinus, 200. See also Theology of Aristotle
Pomponazzi, Pietro, 267
Porphyry, 8, 44, 93, 162, 231
Posidonius, 102, 105
Proclus. See Liber de causis
propositions, 52–8, 121–36
Prolemy, 8, 12, 93
The Pure Good. See Liber de causis
quiddity, 153–69, 206, 255
Al-Qushji, ‘Ali, 208, 213
Al-Razi, Fakhr al-Din, 175, 189, 198–9, 203, 206, 208, 211, 225, 228
“Rule of the Weaker”, 59–60
Al-Samarqandi, Nizami ‘Arudi, 96–7, 203
Al-Samarqandi, Shams al-Din, 205, 211
Al-Sanusi, 191, 210, 213
Al-Sawi, 195, 197, 198
Scoi, Michael, 260
Scotus, Duns, 170, 249, 251, 256
self-awareness, 137–9, 216
self-reflection (qadaya ‘i tibariyya), 39
Al-Shahrastani, 189, 195–96, 198
Al-Shirazi, Qutb al-Din, 197
Al-Sijistani, 15
soul 10, 40–1, 200, 202. See also self-awareness
and concepts, 152–5
and intellection, 110–19
and knowledge, 158–68
eternity of, 220
faculties of, 102–7
<table>
<thead>
<tr>
<th><strong>Index</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stoics, 104, 200</td>
</tr>
<tr>
<td>Al-Suhrawardi, 197, 206–7, 210</td>
</tr>
<tr>
<td>syllogism, 21, 36–7, 48–66, 123–33, 231</td>
</tr>
<tr>
<td>Al-Taftazani, 205, 213</td>
</tr>
<tr>
<td>Al-Tawhid, 15</td>
</tr>
<tr>
<td>Themistius, 8, 54</td>
</tr>
<tr>
<td>Theology of Aristotle, 30, 110–11, 187</td>
</tr>
<tr>
<td>thing (shay’i), 149, 151, 163, 250, 255</td>
</tr>
<tr>
<td>Todrosi, 224, 228, 231–2</td>
</tr>
<tr>
<td>translation movement (Arabic-Hebrew), 224–5, 228, 231, 236–9</td>
</tr>
<tr>
<td>translation movement (Arabic-Latin), 242–67</td>
</tr>
<tr>
<td>translation movement (Graeco-Arabic), 28, 29–30, 46, 71</td>
</tr>
<tr>
<td>Al-Tusi, ‘Ala’ al-Din, 206</td>
</tr>
<tr>
<td>Al-Tusi, Nasir al-Din, 48, 56, 61, 64, 189, 198, 204, 208, 210, 212, 213</td>
</tr>
<tr>
<td>unity, 145–50, 160–5</td>
</tr>
<tr>
<td>universals, 113, 117, 155–7, 201, 250</td>
</tr>
<tr>
<td>unseen, the (al-ghayb), 42</td>
</tr>
<tr>
<td>Al-Urmawi, 205</td>
</tr>
<tr>
<td>verifiability, 35–7</td>
</tr>
<tr>
<td>vision, 113–15</td>
</tr>
<tr>
<td>William of Auvergne, 249, 250, 261</td>
</tr>
<tr>
<td>Zabarella, Jacopo, 267</td>
</tr>
<tr>
<td>Al-Zahid, Isma’il, 8</td>
</tr>
</tbody>
</table>