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Dante's *Commedia*, Islamic Rationalism, and the Enumeration of the Sciences

The study of Dante in relation to the medieval Arabo-Islamic tradition is most notably associated with two influential twentieth-century scholars, Miguel Asín Palacios and Bruno Nardi. The former's 1919 book *La escatología musulmana en la Divina Comedia* caused a sensation with its claim that the primary inspiration for Dante's depiction of his journey through the realms of the afterlife was Islamic rather than Christian¹. Around the same time, Nardi was beginning an illustrious more than half-century long scholarly career, much of which centered around showing that Dante's positions were frequently closer to those of the major Islamic rationalist philosophers than to those of Thomas Aquinas². There are, of course, differences between the approaches taken by the two scholars. Asín Palacios's book is mostly concerned with historical philology – an effort to trace possible sources for the genesis of *Commedia*'s literal representations of Hell, Purgatory, and Heaven –. The author locates these sources in various *hadīth* (*traditions* or reports of the sayings and actions of the Prophet) recounting the Angel Gabriel's guiding Muhammad on a journey through the afterworld loci of the wicked and the blessed, culminating in Muhammad's *mi'rāj* (Ascension) through the seven heavens and his face-to-face encounter with God. Asín Palacios finds that elaborate adaptations of these *hadīth* composed by the great Sufi master from al-Andalus, Ibn 'Arabī, offer the closest and most extensive analogues to Dante's journey. Nardi, on the other hand, is more concerned with the sources of Dante's ideas than with the sources of his imagery. He focuses not on Islamic religious traditions and mysticism but on the great Islamic rationalist philosophers – including Averroes, Avicenna, and al-Fârâbî – and on the reception of their ideas in the Latin West by scholastic authorities such as Albertus Magnus, by Latin Averroists

such as Dante's contemporary Jean of Jandun, and by Dante's mentor and one-time *primo amico*, the brilliant lyric poet Guido Cavalcanti.

But despite these differences, when it comes to the question concerning the fundamental structure and meaning of *Commedia*, both Asín Palacios and Nardi hold the same view: that the poem aims to show natural human reason falling short of religious revelation, to show philosophy as lesser than and subordinate to theology. Thus Asín Palacios maintains that for Dante, as for Ibn Arabi, the intellectual and moral virtues acquired by natural reason are surpassed by the theological virtues, which can only be acquired through illuminating grace:

Per Dante, come per Ibn 'Arabî, il viaggio è un simbolo della vita morale degli uomini, posti da Dio sulla terra affinché si guadagnino il loro fine ultimo, la felicità somma che consiste nella visione beatifica, meta che non possono raggiungere senza la guida della teologia, posto che la ragione naturale li può soltanto condurre nelle prime tappe del viaggio, simbolo delle virtù intellettuali e morali, e non fino alle sublimi dimore del paradiso, simbolo delle virtù teologali, inaccessibili senza la grazia illuminativa.³

Philosophy in this view is valued insofar as it may set one on the right path and guide one partially toward the attainment of the highest possible felicity, but it is in itself insufficient for the attainment of that felicity. For Nardi, who frequently shows that Dante, in works such as *Convivio* and *De monarchia*, was attracted toward a rather thoroughgoing Arabic rationalism that might even be termed *secular*, Dante eventually entered a mature phase in which his impulse toward radically Aristotelian philosophy was much attenuated⁴. Denying that *Commedia* can be characterized as *razionalistica*, Nardi endorses the classic and prevailing interpretation of the distinction between Virgil (reason, philosophy) and Beatrice (faith, theology):

Il concetto su cui poggia l'edificio filosofico della Divina Commedia, è quello medievale della distinzione tra ragione e fede, tra filosofia e teologia, e della subordinazione del primo termine del binomio al secondo ... Virgilio e Beatrice

*nascevano nello spirito di Dante per raffigurare la Filosofia e la Teologia.*⁵

Nardi's Dante is one who, after the youthful and relatively un-philosophical *Vita nuova*, then started down the philosophical path of radical Averroism, following his mentor Cavalcanti; finally, in his mature phase, he drew back, moderated his thinking, and made amends in *Commedia* by returning to the sorts of theological positions associated with Aquinas:

*Chè, certo, la Commedia non disconosce i diritti della Filosofia, ed è, anzi, pervasa dallo stesso spirito dialettico che, nelle scuole di Teologia tendeva a risolvere i dommi cristiani in concetti razionali; ma è vero altresì che alla Filosofia e alla ragione, nella Commedia come nelle Somme teologiche, sono segnati dei limiti, in nome della verità rivelata, oltre i quali alla mente umana è fatto divieto di spingersi; la ragione, insomma, è costretta a subire la norma eteronoma che le impone la fede, la Filosofia è ritornata ancilla Theologiae.*⁶

Somewhat ironically, it was Nardi, the scholar who more than anyone else opened up the possibility of Arabic rationalism's impact on Dante, who also did as much as anyone to close off that possibility when it comes to our understanding the fundamental allegorical architecture and overall significance of *Commedia*.

Massimo Campanini, in the opening paragraph of his introduction to his edition of one of the major works of al-Fârâbî (870-950 AD), the first of the great Islamic philosophers, remarks that *è difficile sottovalutare l'influenza di al-Fârâbî sulla filosofia islamica*; moreover, Campanini asserts that al-Fârâbî inaugurated *quelle linee argomentative che ... direttamente contribuirono a erigere il castello metafisico e cosmologico del Medio Evo occidentale come disegnato, ad esempio, da Dante nel Convivio e nella Commedia*⁷. Campanini's remark is intriguing because it suggests that Dante remains committed to the project of Islamic rationalism even in *Commedia*. This raises a set of interesting questions. Is the notion, fostered especially by Nardi, that Dante turned back to theology following a period of engagement

with philosophy (a turning back exemplified by Dante's dropping work on *Convivio* in order to embark on the composition of *Commedia*) a myth? Does the common understanding, now taken for granted and rarely challenged, of *Commedia*'s basic allegory (Virgil = philosophy / natural human reason; Beatrice = theology / revealed religious faith) actually fit the poem's fundamental architectural structure? Is it possible that *Commedia* is a multi-layered discourse, offering a religious level of meaning intended for some (a large portion) of its audience and a philosophical level aimed for an intellectual elite? In this case one could no longer say that theology replaces philosophy as Dante's prime orientation at some turning point in his career or in some episode in the narrative itinerary of *Commedia*; one would say, rather, that a fully rationalist reading remains available, for some readers, all the way through to the very end of *Paradiso*⁸.

These and similar questions involving the extent to which *Commedia* is in harmony with certain key elements of the tradition of Arabo-Islamic rationalist philosophy obviously cannot be adequately addressed in a single brief essay such as the present one⁹. The aim of this essay is much more limited: to show, briefly and in a necessarily schematic fashion, that the structural design of *Commedia* is based on a philosophical enumeration or classification of the sciences that was commonplace among the Arabic rationalists and that was subsequently embraced by the Latin scholastics. This classification accounts for more of *Commedia*'s content (and many of its celebrated enigmas and curiosities) than does the usual scheme (i.e., the simple twofold division between philosophy [reason = Virgil], on the one hand, and theology [revelation or faith = Beatrice], on the other hand). Moreover, this Arabo-Islamic classification has no place for a notion of theology that would be outside and above (in a surpassing and transcendent fashion), rather than *contained within* (as one of the parts of), philosophy¹⁰. We will come to see that, surprisingly, Dante associates the religious primarily with Virgil in Purgatory rather than with Beatrice in Heaven.

Islamic Rationalism and the Relation of Philosophy and Religion

Since our general aim is to show that *Commedia's* formulation of the relation between philosophy and religion is consonant with Islamic rationalism's view of that relation, we must begin with a presentation of the Islamic rationalist view. Following al-Fârâbî, the Islamic *falâsifa* or philosophers (e.g., Avicenna, Avempace, Averroes) maintain that the truths conveyed by virtuous religions agree entirely with the truths demonstrated by Aristotelian philosophy. When religion and philosophy do not appear to agree, it is one's interpretation of the former that needs to be revised, since the truths demonstrated by the philosophers are incontrovertible. As al-Fârâbî declares:

*Philosophy as a whole precedes religion, just as the user of tools precedes the tools ... Religion comes after philosophy, in general, since it aims simply to instruct the multitude in theoretical and practical matters that have been inferred in philosophy, in such a way as to enable the multitude to understand them by persuasion or imaginative representation, or both.*¹¹

Clearly, philosophy's precedence is both chronological and a matter of superiority: just as a human is to be ranked higher than some tool that he might use, so is philosophy to be ranked higher than religion¹². For al-Fârâbî, the religious prophet is first of all a philosopher (as Joshua Parens remarks, al-Fârâbî *insinuate[s] that the Prophet himself must have been a philosopher*¹³); the philosopher becomes a prophet (and a genuine philosopher) when he translates his philosophical knowledge into imaginative similitudes and persuasive rhetoric meant for the benefit of the multitudes. The *falâsifa* deny that there is a higher human knowledge unattainable through philosophical demonstration but accessible through revealed religious discourse.

Again following al-Fârâbî, the *falâsifa* regard the religious Laws given to the various peoples by their prophets as imaginative, particularizing, and rhetorical representations of the universal truths

known by the philosopher. This theme, which obviously supports religious pluralism and is consonant with the Quran's repeated insistence on the multiplicity of virtuous prophets and the diversity of legitimate religions, was a special point of emphasis for al-Fârâbî. Once the philosopher comes to a comprehensive knowledge of demonstrable truth, it is his task, as lawmaker or prophet, to present this truth, along with the ethical teachings that it entails, in a way that will guide the community toward political happiness – i.e. as religion:

*The images and persuasive arguments are intended for others, whereas, so far as [the philosopher] is concerned, these things are certain. They are a religion for others, whereas, so far as he is concerned, they are philosophy.*¹⁴

Because the set of images appropriate for a particular community in a particular time and place may differ from the set of images appropriate for another community, it follows, in al-Fârâbî's view, that there is a multiplicity of virtuous religions:

*Therefore it is possible that excellent nations and excellent cities exist whose religions differ, although they all have as their goal one and the same felicity and the very same aims.*¹⁵

Al-Fârâbî's understanding of the relation between philosophy and religion was adopted relatively intact by his successors in the Islamic rationalist tradition – the greatest of whom were Avicenna and Averroes –. Avicenna does not recognize any difference in actual intelligible content between the knowledge that is given to the religious prophet as *sacred intellect* (that is, as immediately and divinely revealed truth) and the knowledge that is attained by the philosopher through years of hard work and study¹⁶. As James Morris says:

Avicenna does not attempt to separate the sacred intellect in nature from the intuition and conjunction with the Active Intellect that characterizes all human understanding and intellectual discovery: the highest prophetic power is also the highest human one ... Avicenna does not mention here – or

*elsewhere – the existence of a higher class of objects of intellection that differ from or transcend the rational principles of observable natural orders discussed by philosophers, natural scientists, and mathematicians. Even in the shorter discussions of this natural preparedness and intuition in his more popular works, he is always careful to stress that it merely consists in a more rapid and apt functioning of the common human intellect.*¹⁷

Avicenna's theory of the fundamental rationality of prophetic discourse (i.e., revelation) is exemplified by his exposition of the meaning of Muhammad's *mi'râj*, a brief text, titled *Mi'râj Nâma* (*The Book of the Prophet Muhammad's Ascent to Heaven*), in which Avicenna explains that the various episodes of Muhammad's Ascension are allegories for the human soul's development and progression toward philosophical intellection¹⁸. Avicenna opens by expressing his intention to interpret the story of the Ascension philosophically: *A friend of ours has continually inquired about the meaning of the Ascension [mi'râj], desiring it explained in a rational way*¹⁹. Avicenna prefaces his glossed version of the famous *hadîth* with a general introduction, insisting that the true meaning conveyed by Muhammad's account of his *mi'râj* is fully intelligible to the prophet as well as to the philosopher, because revealed scriptures and traditions are allegories composed by prophets based upon their knowledge of intelligibles:

That which prophets thus perceive from the Holy Spirit is pure intelligible, and that which they say is sensible, with the adornment of the imagination ... Hence, (Muhammad) said, We, the band of prophets, He commanded us to speak to people according to the capacity of their intellects ... It is thus the condition of the prophets that they arrange every intelligible that they perceive as a sensible and put it into speech so that the community can follow that sensible. They perceive it as an intelligible, but make it sensed and concrete for the community ... When it reaches intellectuals, they perceive it with their intellect. They know that the prophet's words are all symbols, filled with intelligibles. When it reaches

*ignoramuses, however, they look at the external speech; their hearts are satisfied with nonintelligible concrete forms and sensibles ... They ask, unknowing, and listen, uncomprehending. And praise be to God, for indeed most of them do not know.*²⁰

Prophets (religious lawgivers such as Moses, Christ, and Muhammad) and philosophers know the same set of intelligibles. The difference between prophecy and philosophy pertains not to the rational content but to the speed and manner of acquisition: *This person [i.e., the prophet] does not need time or delay (to understand matters)*²¹. Moreover, the prophet takes this rational content and arranges it in an imaginative, symbolic, and non-philosophical form for the masses, who nonetheless will only dimly perceive its truth. Avicenna concludes his rationalist interpretation of the Prophet's Ascension: *The journey was intellectual. He went by thought. His intellect perceived the order of existents until the Necessary Existent (i.e., God). Then, when cognition was complete, he returned to himself. No time had passed*²². But philosophers should not divulge their knowledge: *It is not permissible to show the inner meanings of these words (i.e., of the hadîth) to one of the ignorant masses. Only a rationalist is permitted to enjoy the inner meaning of these words*²³.

Generally speaking, one will search in vain among the *falâsifa* for any notion that there is some truth or knowledge that would exceed the comprehension of the perfected philosopher²⁴. Thus the first Islamic philosopher, al-Kindî, characterizes the Quran and the *hadîth* as thoroughly rational:

*The sayings of Muhammad (i.e. the hadîth) ... as well as the word that was dictated to him by God (i.e., the Quran), all of which can be grasped through reasoning that is only refuted by those men who are deprived of rationality, those who are hand and glove together with ignorance.*²⁵

Instead one finds in *falsafa* the endorsement of what Mohammed 'Abd al-Jabrî calls, with specific reference to al-Fârâbî,

unity of thought ... according to which religion and philosophy differ from one another only in their medium of expression ... The former resorts to dialectical and rhetorical processes (i.e., expression suitable for the theologians and the multitudes), the latter to the demonstrative method (i.e., expression suitable for the philosophers).²⁶

This *unity of thought* is summed up in Averroes' statement that *truth (i.e., Aristotelian philosophy) does not oppose truth (i.e., Islam) but accords with it and bears witness to it²⁷.*

The Primary Distinction: Theory and Practice

In the Arabo-Islamic rationalist enumeration of the sciences, the whole of philosophy is divided into two parts: practical and theoretical. This is the most basic and primary classification. This distinction is grounded in the nature of the *object* studied, not in the method employed by the subject who studies. Practical objects are human and historical (they are matters of human volition); theoretical objects are non- or extra-human and ahistorical (they cannot be altered or affected by human volition). As al-Fârâbî succinctly puts it: *The theoretical part is what a human being is not able to do when he knows it, whereas the practical part is what a human being is able to do when he knows it.²⁸*

The distinction between theoretical and practical philosophy is also a distinction between those things about which we can attain knowledge, science, and truth in the authentic sense of these terms and those things pertaining to which these terms only apply loosely or in an equivocal sense:

The name knowledge applies to many things. However, the knowledge that is a virtue of the theoretical part is for the soul to attain certainty about the existence of the beings whose existence and constitution owe nothing at all to human artifice, as well as about what each one is and how it is, from demonstrations composed of accurate, necessary, universal

*and primary premises of which the intellect becomes certain and attains knowledge by nature ... Knowledge in truth is what is accurate and certain for all time, not for some particular time but not some other, nor existing at one moment and possibly becoming nonexistent afterwards.*²⁹

Non- or extra-human realities (things not subject to changing human volition; things that are what they are regardless of human existence) can be known through *demonstrations* – i.e., demonstrative science –; such knowledge is certainty and truth in the real sense of those terms. Practical philosophy, on the other hand, never attains the certainty and truth of demonstrative science; the best that it can provide are *premises*:

*Practical intellect is the faculty by which a human being – through much experience in matters and long observation of sense-perceptible things – attains premises by which he is able to seize upon what he ought to prefer or avoid with respect to each one of the matters that we ought to do.*³⁰

Premises are the starting-points for demonstrations (logical proofs, completed syllogisms), but in themselves they can never be said to be truths. Since practical matters – those things that humans *ought to prefer or avoid* or *ought to do* – may well change depending upon varying historical and geographical situations, practical philosophy can never provide assertions of truth. Rather, it can provide opinions or counsel based not upon knowledge of the way things are but upon premises that are more or less sound. Al-Fârâbî's notion that theoretical philosophy involves assertions (*truth* or *falsity*) while practical philosophy involves valuations (*good* or *bad*) is developed and emphasized especially by Averroes and Maimonides. Practical philosophy deals with virtues and vices; theoretical philosophy deals with the acquisition of knowledge and truth.

For al-Fârâbî, the highest object of practical philosophy is *the perfect political state* (or, to use Campanini's translation of the title of al-Fârâbî's major work, *la città virtuosa*). The justly guided *polis* is the best of those things that are made or done by humans, of those

things produced by human volition – the best of those things that we *ought to prefer or avoid* –. The highest object of theoretical philosophy is *God* – the highest non- or extra-human reality –, an entity that is what it is regardless of human volition, a thing that *we are not able to do when we know it*. The best attainments in practical philosophy are political. The best attainments in theoretical philosophy are theological.

Avicenna and the rest of the *falasifa* follow al-Fârâbî in emphasizing that philosophy's primary and most basic distinction is between *theoria* and *praxis*:

*Existing realities either possess being independently of us and of our action, or else they receive it from us and from our activity. One calls knowledge of realities of the first sort speculative (i.e., theoretical) philosophy and knowledge of things of the second sort practical philosophy.*³¹

Avicenna emphasizes human action as the deciding factor in making this distinction: things that involve human action belong to practical philosophy, while things that do not involve human action belong to theoretical philosophy. More precisely: *praxis* involves things that humans make, while *theoria* involves things that humans cannot make. It is possible for humans to make a just political regime (and thus political science belongs to practical philosophy)³². It is not possible for humans to make God, and thus demonstrative science concerning God belongs to theoretical philosophy³³. Again, this is a distinction between the part of philosophy that deals with what is good (or bad) for humans and the part that deals with what is true (or false) in itself. As Avicenna says: *The aim of the speculative (i.e., theoretical) is the true, and the aim of the practical is the good*³⁴.

Albertus Magnus frequently cites Avicenna on the *theoria* / *praxis* distinction, adopting the notion that this is a distinction between things that we do and things that we do not do. For example: *Avicenna says concerning the sciences that some concern the things of nature, while others concern the things that we ourselves do*³⁵. By *things of nature* here Albertus means not merely the objects of physics or natural science but rather all things not made or done by human volition. This

sense of *things of nature* is no doubt influenced by al-Fârâbî's *De scientiis* (the 12th-century Latin translation of his *Book of the Enumeration of the Sciences*), where *naturalia* refers to *those things whose existence is due neither to human craft nor to human will*³⁶. Albertus further spells out that practical philosophy treats matters of ethics, human volition, will, and choice: *Real things exist either through nature or through our soul. In the latter case they concern ethics, insofar as they are produced by human will*³⁷. While practical philosophy contains numerous subdivisions, it is above all concerned with morality, ethics, and politics.

In *De monarchia* (a work whose objective is the same as al-Fârâbî's in *La città virtuosa* — namely, to point humankind toward the establishment of the justly and properly guided political regime), Dante invokes the basic Islamic rationalist distinction between objects of theory and objects of practice:

*For it must be noted that there are certain things ... which are outside human control, and about which we can only theorize, but which we cannot affect by our actions; and then there are certain things which are within our control ... [I]n these the objective is to take action.*³⁸

For Dante, as for al-Fârâbî and Avicenna, the ultimate aim of practical philosophy (that part of philosophy involving human action) is political:

*Since our present subject is political, indeed is the source and starting-point of just forms of government, and everything in the political sphere comes under human control, it is clear that the present subject is not directed primarily towards theoretical understanding but towards action.*³⁹

Dante suggests in *De monarchia* that the highest goal of practical philosophy — the formation of the just human society — may be attained without theoretical knowledge: politics is not grounded in the truth concerning the way things really are⁴⁰.

Reading *Commedia* philosophically rather than theologically, one sees that Virgil and Beatrice are not allegories for a distinction between philosophy (reason) and religion (revelation/faith); instead, they symbolize a distinction (the primary and basic distinction) *within philosophy itself*: the distinction between practice and theory. Virgil is assigned the task of practical philosophy, teaching Dante things that are, in Dante's words, *within our control*. Beatrice is assigned the task of theoretical philosophy, teaching Dante some of those things that are, in Dante's words, *outside human control*.

The instances of Dante's insistence on Virgil's association with *praxis* are far too numerous to inventory here. This association is most evident in *Purgatorio*, the canticle of Virgil's highest attainments. It is Virgil, insofar as he signifies the practical philosophy mentioned in *De monarchia*, who in *Commedia* guides Dante to the Earthly Paradise (Dante's figure for the perfect political state, the justly governed regime, the ideal global Monarchy) at the summit of Mount Purgatory. It is Virgil who navigates Dante's journey up the mountain's seven terraces, enabling Dante's exposure to the images of moral virtues and vices which organize and highlight the ascent toward the Earthly Paradise. It is Virgil who, in the manner of al-Fârâbî's practical philosopher (and in the very heart of *Commedia* – the 17th and 18th cantos of *Purgatorio* –), is able to explain the practical intelligibles underlying those particular and concrete images and similitudes of virtues and vices, such that we realize that the Seven Deadly Sins are grounded in abstract rational premises. It is Virgil who, again in the center of *Commedia*, celebrates those philosophers who, *ragionando*, formulated the premises of *moralità* (*Purg.* 18.67-69) – that is of practical philosophy –. It is Virgil whose philosophical discourse in Canto 17 of *Purgatorio* is symmetrically and precisely framed by the phrase *libero arbitrio*, signifying free will, choice, human volition – i.e., the very essence of *praxis*⁴¹ –. It is Virgil who, near the very beginning of *Inferno*, associates himself with the *good* but not with the *true*⁴².

The instances of Dante's insistence on Beatrice's association with *theoria* are far too numerous to inventory here. Among the most notable is Beatrice's identification, in Dante's third dream (*Purg.*

28.100-108), as one whose task is *speculatio* (i.e., theoretical philosophy) and whose felicity is *to see* (*vedere*) – the Greek *theoria* of course being derived from the verb *theorein* (*to look at*) –. The very first event recounted in *Paradiso* is Beatrice’s looking at the sun (*riguardar nel sole*; *Par.* 1.47); *looking at the sun* was the *falâsifa*’s most common metaphor for theoretical intellection⁴³. The opening words of Beatrice’s first speech in *Paradiso* indicate that she will correct Dante’s *falso imaginar* (*false imagining*; *Par.* 1.89) – in other words, that her task is to teach the *true* and to elevate Dante from *imagination* (which is associated with *praxis*⁴⁴) to intellection –. *Paradiso*, like the rest of the poem, never strays too far from Dante’s political project (Beatrice, while adding something new, still remains the accumulation of all those sciences that precede her, including practical philosophy). Yet *Paradiso* is nonetheless the canticle of the theoretical and of Beatrice. The canticle opens with Beatrice’s long scientific demonstration on the moon’s spots and on the variations in brightness of the stars; the moon and stars are of course prime examples of theoretical objects, since they are not things that humans can *make* or that humans *ought to do*. Much of *Paradiso*’s philosophical discourse deals with matters involving the immaterial Intelligences, movers of the celestial spheres. *Paradiso* ends with Dante’s cognition – even if he cannot recall it or relate it to us – of the ultimate object of theory: God. All of these things – the moon and stars, the immaterial Intelligences, God – are explicitly indicated by al-Fârâbî and Avicenna as exemplary objects of theoretical philosophy.

Purgatorio (the canticle of Virgil’s highest attainments) is the canticle of practical philosophy or action, especially action pertaining to the highest object of practical philosophy – namely, politics –. *Paradiso* (the canticle of Beatrice’s highest attainments), while never straying far from politics, is the canticle of theoretical philosophy or science, especially science pertaining to the highest object of theoretical philosophy – namely, God –. Virgil teaches the *good* (*the matters that we ought to do* (al-Fârâbî, cited above)); Beatrice teaches the *true* (*certainty about ... the beings whose existence and constitution owe nothing at all to human artifice* (al-Fârâbî, cited

above)). Both kinds of teaching are *philosophical*, and neither kind is necessarily religious. However, religion remains as a useful instrument, especially, as we shall see below, for Virgil: religious imagery and rhetoric move the multitudes to act in accordance with the counsel provided by practical philosophy.

In the Arabo-Islamic philosophical tradition, *reason* and *intellect* are both equivocal terms: there are two kinds of *reason* (that is, two kinds of *intellect* – practical and theoretical –). Strictly speaking, the theoretical faculty is *intellect* and the practical faculty is *reason*. But these terms were often used loosely and interchangeably. This is illustrated in the following passage, where Avicenna distinguishes between two kinds of rationality or *reasoning*:

*And the reasoning (speaking) (i.e., rational) soul, if it engages itself upon the sciences, its activity is called mind or intellect, and it is accordingly called speculative or theoretical mind ... And if it engages itself upon overcoming blameworthy powers, that entice unto wrongdoing through their excess, unto folly through their abandonment, unto impetuosity through their agitation, unto cowardice through their indifference or lukewarmness, or unto wickedness through their excitement, or unto degeneracy through their smoldering, and leads them into the paths of wisdom, endurance, chastity – in short unto righteousness, then its activity is called ruling or governing, and it is according called practical mind or reason –.*⁴⁵

Intellect and reason are two different aspects of rationality, the former dealing with *theoria* and the latter with *praxis*. Beatrice is rationality as *intellect*, *engaging itself upon the sciences*. (See, for example, the scientific experiment involving mirrors and a lamp for which she provides the instructions in the second canto of *Purgatorio*.) Virgil is rationality as *reason*, *engaging itself upon overcoming blameworthy powers* and providing the morality, ethics, and politics – in short, the *righteousness* – necessary for *ruling or governing*.

Reading *Commedia* philosophically, one can no longer describe the distinction between Virgil and Beatrice as a distinction between rationality and some kind of supra-rational knowledge or truth (e.g.,

faith, religion, revelation). Instead, the distinction is *between two different kinds of rationality* – the one dealing with matters involving what is good or bad, right or wrong, for humans; the other dealing with what is, in itself, true or false –. *Commedia* does not tell the story of Dante's turning away from or surpassing philosophy; rather, it tells the story of his continued and even more intense devotion to the highest branch of philosophy.

***Commedia* and the Four Main Divisions of the Sciences**

The approach that we have taken so far is only preliminary and too general; it does not capture the extent to which *Commedia* is firmly grounded in the Islamic rationalists' classification of the sciences. Due to lack of space, our presentation of the congruence between the structure of Dante's poem and this classification must be even more schematic than it has been to this point.

In the *Book of the Enumeration of the Sciences*, al-Fârâbî laid the groundwork for what would become a widely accepted classification of the whole of philosophy into four main sciences. For al-Fârâbî, these four sciences are mathematics, natural philosophy (or physics), political philosophy, and metaphysics⁴⁶. This scheme still maintains the primary division between practical and theoretical philosophy: practical philosophy is essentially identical to political philosophy, while theoretical philosophy is divided into three kinds – mathematics, physics, and metaphysics –.

Avicenna adopted al-Fârâbî's fourfold scheme, although he presented the four main sciences in a different order, clarifying the division into practical and theoretical philosophy and conceiving of a different criterion for the presentation of the three theoretical sciences⁴⁷. Avicenna's become the standard classification and the one most often employed in the Latin West.

Avicenna opens his monumental *Metaphysics* by offering a concise enumeration of the divisions of philosophy: *The philosophical sciences ... are divided into the practical and the theoretical ... It was*

stated that theoretical knowledge is confined to three divisions – namely, the natural (i.e., physics), the mathematical, and the divine (i.e., metaphysics) –⁴⁸. Elsewhere Avicenna adds that the three theoretical sciences are ranked in a hierarchy, from the *inferior* (physics), to the *intermediate* (mathematics) to the *superior* (divine science)⁴⁹. Simplifying somewhat, this hierarchy is based upon the relative materiality (corporeality) of theoretical objects. Natural science (physics) studies things, such as a sea sponge, that are, as Michael E. Marmura puts it, *always mixed with a specific kind of matter*. Mathematics studies things, such as circles, lines and numbers, which in reality are always mixed with matter but which are considered by the mathematician as *dissociated from any specific kind of material*; mathematical objects *have no autonomous extramental nonmaterial existence*. Metaphysics (divine science) studies things, such as the immaterial cosmic Intelligences or God, that are *not mixed with matter*⁵⁰.

Thus we have a fourfold classification of the whole of philosophy: first, practical philosophy; secondly, physics (also known as natural philosophy); thirdly, mathematics; fourthly, metaphysics (also known as divine science or theology). Note that the science of the divine, theology, is *contained within philosophy*, as one of its parts.

This fourfold classification was adopted and institutionalized by Albertus Magnus, who repeatedly cites Avicenna as the foremost authority on the question⁵¹. Dante (an avid reader of Albertus, as Nardi demonstrated) would likely have come across one of Albertus's frequent presentations of this scheme. There is no doubt that Dante found something similar in his Florentine predecessor Brunetto Latini's *Livres dou Tresor* (recall that in *Inferno* 15 Dante praises Brunetto as his authorial father and especially recommends Brunetto's *Tresor* as a source of knowledge). There Brunetto, following a section titled *De philosophie et de ses parties* (*On Philosophy and its Parts*), classifies the three kinds of *teorique* (theoretical philosophy): they are *teologie, physique & matematicque* (theology, physics, and mathematics). The first-mentioned and highest of these sciences is *teologie*, which demonstrates *la nature des choses qui n'ont point de cors* (*the nature of things that have no bodies at all*); secondly comes

physique, by which we come to know *la nature des choses qui cors ont* (the nature of things which have bodies); thirdly comes *matematique*, which gives knowledge of *les natures des choses qui n'ont point de cors & sont entor les corporaus choses* (the natures of things that have no bodies at all and are bound up with bodily things)⁵². Note again that here *theology* is one of the subject matters contained within *philosophy*, not some sort of truth that would surpass and transcend philosophy.

The key to understanding the structural foundation of *Commedia* is to recognize that Beatrice is not simply theoretical philosophy *in toto*; rather, she is *one* of the three kinds of theoretical philosophy.

It is easy to see that, of the three branches of *theoria* (physics, mathematics, metaphysics), Beatrice must be metaphysics. From the beginning of *Paradiso*, her scientific teachings involve *the nature of things that have no bodies*. The best example of this is her instruction concerning the diversity and hierarchy of the immaterial Intelligences or Angels in *Paradiso* 28. Avicenna explicitly mentions that knowledge concerning the Cherubims, Thrones, etc., including *their multiplicity and the diversity of their ranks and of their categories*, is one of the main subdivisions of metaphysics⁵³. The whole point of the explicitly scientific demonstration by which Beatrice inaugurates *Paradiso*, her discourse on the moon, stars, and other celestial bodies in Canto 2, is to correct Dante's *physical* understanding of stellar diversity with a *metaphysical* understanding according to which that diversity is grounded in an immaterial principle (al-Fârâbî's First Intellect) rather than in a material one⁵⁴.

More importantly but less obviously, Beatrice's status as metaphysics is affirmed by the fact that it is she, and *she alone*, who *saves* Dante's intellect⁵⁵. This is clear in the first canto of *Paradiso*, where we learn that Dante's *trasumanar* (line 70), his becoming trans-human, immortal and divine, like Glaucus (line 68), depends upon his coming to see those (metaphysical) things that Beatrice can see. I am referring here to what is arguably the most important theme of the *falasifa*, a constellation of notions that I call the Salvation of Intellect⁵⁶. According to the consensus of the Arabo-Islamic rationalists, by nature all humans are born with potential not actual

intellect. It is only in actually knowing things, in the strict and very strong sense of knowing (knowledge of causes through scientific demonstration and knowledge as intellection of the abstract universal forms of entities, stripped and denuded of all accidents, materiality, and particularities) that the potential intellect becomes actual. Thus for the *falāsifa* humans are not born immortal (since only actual intellect is immortal) but rather with an inborn potential to attain immortality. This immortality can only be attained through the study of philosophy and the eventual acquisition of scientific (i.e. demonstrative) truth.

As Maimonides says, a human's *ultimate perfection* is to have an *intellect in actu*, and this is the only cause of permanent preservation (i.e. of immortality)⁵⁷. And, as Averroes says concerning human perfections such as actual intellect, *nothing [of them] exists by nature save the dispositions alone or the beginnings leading to their attainment. There is no sure sufficiency in nature that these completions will reach us in their perfection; rather, they reach [us] only through will and skillfulness*⁵⁸. In other words, it is up to humans to make their intellects actual, and thus to make themselves immortal, through the willful decision to develop an aptitude for and to dedicate themselves to the study of philosophy. But not just any philosophy will do the trick: neither ethics (practical philosophy), nor physics (natural philosophy), nor mathematics will suffice. Only *metaphysical* theory, speculative intellection of supernatural, superlunary, immortal, *separate* (i.e. immaterial) substances (Brunetto's *coses qui n'ont point de cors*), such as Intelligences (i.e. Angels), will make actual the human intellect's potential immortality. Grounded in the Aristotelian notion of the identity of the knower and the known, the idea here is that only in knowing an immortal and metaphysical entity can the mortal human intellect transform itself into an immortal intellect. Such an event of intellection, which became known as the Conjunction with the Active Intellect (and which Averroes calls *the final felicity for man and eternal life subject to neither alteration nor corruption*⁵⁹), is the only real possibility that humans have for *salvation* or an immortal afterlife. If Beatrice saves Dante, it is only insofar as she is a philosopher whose potential intellection of

metaphysical entities has become actual – and only insofar as she teaches Dante to become such a philosopher –.

We have now accounted for two of four main divisions of philosophy: Virgil is practical philosophy, while Beatrice is metaphysics. But what about the other two branches of theoretical philosophy – physics and mathematics –?

The answer becomes clear when we take into account the often overlooked fact that Dante has several guides / teachers in *Commedia*, others besides Virgil and Beatrice. The two most important of these other guides are Statius and Matelda. Statius accompanies Dante from Canto 21 of *Purgatorio* all the way through the end of that canticle, eventually taking Virgil's place as Dante's closest companion. Matelda accompanies Dante and Statius from Canto 28 of *Purgatorio* to the end of the canticle. Together, Statius and Matelda are allegories for the two lower branches of theoretical philosophy.⁶⁰

Statius is physics. This is clear from the lengthy science lesson that he delivers in *Purgatorio* 25. This lesson treats the formation and development of the human soul from prior to its conception during sexual intercourse, through phases in which the soul is plant-like (line 53) and then like a sea sponge (*spungo marino*; line 56), to the moment in which God gives it a potentially divine intellect. No doubt many of Dante's readers have wondered why he would interrupt his poem to allow Statius to give a lecture on apparently irrelevant matters such as the formation of sperm from the male's coagulated blood and that sperm's being deposited in that female place *ov'è più bello / tacer che dire* (*Purg.* 25.43-44), then dropping from there into the uterus (*natural vasello*; line 45). The science of birth, reproduction, *natura*, is of course a decidedly *natural* science.

One is tempted to mention the great Islamic encyclopedists, the Ikhwân al-Safâ', whose 25th Epistle, *On the Place Where Drops of Sperm Fall*, belongs to the second of their four divisions of knowledge, the section that treats *The Corporeal and Natural Sciences*⁶¹. The point is that this kind of discourse clearly belongs to physics (natural science). Indeed al-Fârâbî treats these very same matters, speaking at length about sperm and the uterus, in that part of *La città virtuosa* dedicated to natural science; moreover, Statius's

discourse is remarkably similar to al-Fârâbî's⁶². The primary topic of Statius's teaching in *Purgatorio* 25, psychology, is classified by Avicenna as the preeminent subdivision of natural philosophy (physics)⁶³. According to Avicenna's definition, psychology is *the science which gives knowledge concerning the soul and the cognitive powers which are found in animals and especially in humans; it demonstrates that the human soul does not die with the body and that it is a divine spiritual substance*⁶⁴. Statius covers precisely these topics in his lesson.

Matelda, as her name tells us, is *matematica*⁶⁵. There are other indications as well, as Dante associates Matelda with at least three of the four main subdivisions of mathematics. These four subdivisions are: arithmetic; geometry; astronomy; music⁶⁶. Matelda's association with music is most apparent: when Dante first sees her, and on at least two other occasions, she is said to be *cantando* (*Purg.* 27.99; 28.41; 29.1). Avicenna mentions knowledge of melodies and of the manner in which songs are composed as topics belonging to the science of music and, thus, to mathematics⁶⁷. Matelda's explanation of Mount Purgatory's meteorology – specifically, her teaching that Eden's constant gentle breeze is caused by the constant circling of the heavenly spheres – is an explanation belonging to the science of astronomy (and, thus, mathematics): astronomy includes, says Brunetto, *coment se muent li tens a chaut ou a froidure ou a pluie ou a sechie ou a vent, por raison qui est estable en estoilles (how the weather is moved from warm to cold or to rain or sunshine or to wind, for reasons which are rooted in the stars)*⁶⁸. Matelda's enigmatic explanation of her own meaning, her reference to the psalm *Delectasti* (*Purg.* 28.80), also links her to astronomy, since that song celebrates *the works of Thy [i.e., God's] hands* – that is, the heavenly bodies –. Matelda also seems to be the Earthly Paradise's resident expert on God's hydraulics: not only does she explain God's river system (which is not haphazard but the product of God's will [*voler di Dio*; *Purg.* 28.125]) to Dante in *Purgatorio* 28, but later Beatrice refuses to answer questions concerning this river system, referring such questions to Matelda, the expert: *Priega / Matelda che 'l ti dica* (*Purg.* 33.119). Avicenna lists hydraulics (the systematic and willed

movement of water) as one of the subcategories of geometry (and, thus, of mathematics). Finally, references to Matelda's measured, equivalent, and paired footsteps (*Purg.* 28.52-54; *Purg.* 29.7-12) seem to be vaguely suggestive of arithmetic.

Commedia is arranged so that Dante is assigned an ordered progression of guides, following very precisely Avicenna's hierarchical enumeration of the sciences: Virgil (practical philosophy); Statius (physics); Matelda (mathematics); Beatrice (metaphysics)⁶⁹.

There is no need to offer further evidence regarding Statius and Matelda's serving as allegories for physics and mathematics. Although Dante has given us sufficient indications (and we could certainly mention more), he was not especially concerned with developing these allegories as fully as he develops the distinction between Virgil and Beatrice. This is because the real point of using Statius and Matelda to signify physics and mathematics is to make it evident and indisputable that Beatrice signifies metaphysics.

We can say of Dante's journey in *Commedia* what Avicenna says of Muhammad's *mi'râj*: *The journey was intellectual. He went by thought. His intellect perceived the order of existents until the Necessary Existent (i.e., God]* (see above the discussion of Avicenna's *Mi'râj Nâma*). The story told by Dante's pilgrimage is the story of an intellectual development, an education in philosophy culminating in philosophy's highest branch – metaphysics –⁷⁰. Only Beatrice can save Dante, because the philosopher's salvation resides only in the intellection of immaterial (metaphysical) entities. Dante provides for his philosophical readers a fully philosophical (and even a fully Averroist) *Commedia*, one that does not take refuge in religious faith or theological tenets – and one of which his friend Cavalcanti would have perhaps approved⁷¹ –.

Prophecy and the Place of Religion

As we have seen, for al-Fârâbî religion is not the same as theology. The latter, also called *divine science*, is synonymous with

metaphysical intellection: it involves cognition of the intelligibles of immaterial metaphysical entities. Religion, on the other hand, involves the philosopher-prophet's representing those true intelligibles, as well as practical intelligibles not strictly speaking grounded in truth, through imaginative similitudes which amount to a people's revealed texts and traditions. Theology is a very rare attainment open only to philosophers of the highest order. Religion is for the masses of ordinary humans.

If in *Commedia* Beatrice is theology (metaphysics), then where is the place of religion? In this very brief closing section, I will simply offer a few suggestions for further study of this issue.

The answer is surprising. Dante situates religious revelation in Purgatory and with Virgil. Here I cannot go into the details – which I have partially treated elsewhere⁷² –. Together, Virgil and Dante constitute the philosopher-prophet, right at the very center of *Purgatorio* (Canto 17) – and thus at the very center of *Commedia* –. Virgil understands and explains the rational intelligibles (which in this case involve *praxis* rather than *theoria*, given that the function of religion is practical) that are the premises of morality and ethics (practical philosophy); Dante receives these intelligibles imaginatively, in the manner of a prophet. Suffice it to say that in *Purgatorio* 17 and surrounding cantos all of the elements of the Arabo-Islamic view of prophecy (revelation) are present: the emphasis on imagination (*O imaginativa*; *Purg.* 17.13); the role played by the angels as catalysts for the prophet's imaginative discourse; the prophet's hearing speech of unusual and unidentifiable provenance, etc. Al-Fârâbî's discussion, in *La città virtuosa*, of the role played by *la potenza immaginativa* in prophetic revelation reads virtually as a philosophical blueprint for the center of *Purgatorio*⁷³.

In situating religion as part of practical philosophy (and hence as part of the set of tasks assigned to Virgil), Dante is following the Islamic rationalists' enumeration of the sciences. For Avicenna, prophetic lawgiving belongs to political science, one of the three branches of practical philosophy (the other two being moral philosophy [ethics] and economics)⁷⁴. The aim of prophetic revelation

is practical and political⁷⁵: it is the means by which the philosopher-lawgiver-prophet establishes the norms for a just society on earth:

According to [the philosophers], the nomos is the law and the norm that is established and made permanent through the coming-down of revelation. The Arabs, too, call the angel that brings down the revelation, a nomos (nâmûs). Through this part of practical wisdom, one knows the necessity of prophecy and the human species' need of the Law for its existence, preservation, and future life.⁷⁶

Reading *Commedia* philosophically, one no longer can say that Virgil is somehow alienated from or lacking religious revelation. Quite to the contrary, such revelation is part-and-parcel of Virgil's task as a practical philosopher charged with guiding humankind in matters concerning ethics and politics. The distinction between Virgil and Beatrice cannot be a distinction between philosophy and religion or between reason and revelation – if only because religion and revelation belong to practical philosophy as one of its parts –.

Note:

- 1 M. Asín Palacios' classic study has recently been published in Italian as *Dante e l'Islam: L'escatologia islamica nella Divina Commedia*, translated by R. Rossi Testa and Y. Tawfik, Il Saggiatore, Milano 2005.
- 2 In addition to *Saggi di filosofia dantesca*, cited below, see also especially B. Nardi, *Dal Convivio alla Commedia: Sei saggi danteschi*, Istituto Storico Italiano per il Medio Evo, Roma 1960.
- 3 M. Asín Palacios, *op. cit.*, pp. 123-124.
- 4 For the secular implications of Islamic philosophy, see my *Philosophy and the City of Man: The Islamic Roots of Western Secularism*, in A. Nichols Law (ed.), *Mapping the Medieval Mediterranean, ca. 300-1500: An Encyclopedia of Perspectives in Research*, E. J. Brill, Leiden forthcoming.

- 5 B. Nardi, *Saggi di filosofia dantesca*, Società anonima editrice Dante Alighieri, Milano 1930, p. 339; pp. 343-44.
- 6 Ivi, pp. 344-45.
- 7 Al-Fârâbî, *La città virtuosa*, translated by M. Campanini, Rizzoli, Milano 1996, p. 5.
- 8 For a philosophical reading of the closing verses of *Paradiso*, see my *Dante as Celestial Soul: The Final Verses of Paradiso in the Light of Avicenna's Metaphysics*, in "Modern Language Notes" 127/5 Supplement (2012), pp. 99-109.
- 9 For an extensive treatment of some aspects of these questions see my *Dante's Pluralism and the Islamic Philosophy of Religion*, Palgrave Macmillan, New York 2006.
- 10 Throughout this essay, I am referring strictly to the classifications of the sciences as formulated by the *falâsifa* – that is, the Islamic rationalist philosophers (al-Fârâbî, Avicenna, Avempace, and Averroes being the most important figures in this tradition) –. Among Muslims, it was the *falâsifa* alone who classified religion and prophetic revelation *within* philosophy rather than apart from and superior to it. Far more commonly, Muslim thinkers employed an enumeration whose basic division was between the philosophical (or, intellectual) sciences and the religious sciences, with the former being regarded as inferior to the latter. On this point as well as on other important aspects of the classification of the sciences in both Muslim and Christian medieval thinkers, see Godefroid de Callataÿ, *The Classification of Knowledge in the Rasâ'il*, in N. El-Bizri (ed.), *The Ikhwân al-Safâ' and their "Rasâ'il": An Introduction*, Oxford University Press, Oxford 2008, pp. 58-82. See also O. Bakar, *Classification of Knowledge in Islam*, The Islamic Texts Society, Cambridge UK 1998; in addition to providing a detailed treatment of al-Fârâbî's enumeration, Bakar also treats the great Sunni and Sufi religious authority al-Ghazâlî, who subordinates philosophy to religious revelation and to mysticism in ways that are somewhat analogous to both Aquinas and Ibn 'Arabî.
- 11 Al-Fârâbî, *The Book of Letters*, translated by M. Khalidi, in M. Khalidi (ed.), *Medieval Islamic Philosophical Writings*, Cambridge University Press, Cambridge UK 2005, pp. 1-2.

- 12 See al-Fârâbî, *The Book of Letters ... cit.*, p. 3, where al-Fârâbî clearly asserts that philosophers are superior (in his terms, absolutely *select* rather than merely relatively *select*) to theologians.
- 13 J. Parens, *An Islamic Philosophy of Virtuous Religions: Introducing Alfarabi*, State University of New York Press, Albany 2006, p. 10.
- 14 Al-Fârâbî, *The Attainment of Happiness*, translated by M. Mahdi, in R. Lerner and M. Mahdi (eds.), *Medieval Political Philosophy*, Cornell University Press, Ithaca 1972, pp. 79-80. See also al-Fârâbî, *Book of Religion*, in C. Butterworth (ed.), *Alfarabi, the Political Writings*, Cornell University Press, Ithaca (NY) 2001, pp. 87-113.
- 15 Al-Fârâbî, *Al-Fârâbî on the Perfect State*, translated by R. Walzer, Clarendon Press, Oxford 1985, p. 281.
- 16 I should mention that there is some controversy over whether Avicenna also ascribed to a so-called *Oriental Wisdom*, a kind of mystical teaching that would transcend rational philosophy. Here I am following the position formulated by both D. Gutas and A.-M. Goichon (a position which many scholars now consider to be authoritative) – namely, that Avicenna’s esoteric and apparently mystical allegories are entirely explainable and absolutely consistent with his explicit and fully rationalist teachings as expressed in the vast majority of his writings –. On this issue, see P. Heath, *Allegory and Philosophy in Avicenna (Ibn Sînâ)*, University of Pennsylvania Press, Philadelphia 1992, pp. 153-54. For a well-argued opposing view – namely, that Avicenna really did have *both* a *Western* (rationalist) and an *Eastern* (mystical) side – see M. al-Jabrî, *Arab-Islamic Philosophy: A Contemporary Critique*, translated by A. Abbassi, University of Texas Press 1999, pp. 57-62; interestingly, al-Jabrî, in the name of a modern-day Averroism, wishes for the defeat of Avicenna’s *Eastern* side (which he refers to as *gloom-thinking*) through the promotion of Avicenna’s *Western* side.
- 17 J. Morris, *The Philosopher-Prophet in Avicenna’s Political Philosophy*, in C. Butterworth (ed.), *The Political Aspects of Islamic Philosophy*, Harvard University Press, Cambridge, Mass. 1992, pp. 183-84; emphasis added.
- 18 P. Heath, *op cit.*, who provides an English translation of this text, notes that the text’s authenticity is disputed. Although Heath does gather evidence in

favor of Avicenna's authorship (pp. 201-207), he regards the question as ultimately irrelevant to his purposes, since the doctrine of this text and its formulation of the relation between philosophy and religious allegory are perfectly consistent with Avicenna's unquestionably authentic writings (p. 110).

- 19 Avicenna, *Mi'râj Nâma*, translated by P. Heath, in P. Heath, *op cit.*, p. 111.
- 20 Ivi, pp. 121-22.
- 21 Ivi, p. 118.
- 22 Ivi, p. 138.
- 23 *Ibidem.*
- 24 While it is true that Avicenna maintains that the philosopher's ultimate perfection is dependent upon illumination provided by the cosmic Intelligence known as the Active Intellect, he nonetheless still conceives of this as a philosophical, not a mystical, perfection: this event of illumination is the natural product of philosophical study and reasoning.
- 25 Cited in M. al-Jabrî, *op cit.*, pp. 55-56; emphasis added.
- 26 Ivi, p. 56.
- 27 Averroes, *The Decisive Treatise, Determining What the Connection is Between Religion and Philosophy*, in Lerner and Mahdi (eds.), *op cit.*, p. 169. For discussion of Averroes' view of the relation of philosophy and religion, see my *Dante's Pluralism ... cit.*, pp. 191-98.
- 28 Al-Fârâbî, *Book of Religion* 5, in *Alfarabi, The Political Writings ... cit.*, p. 97.
- 29 Al-Fârâbî, *Selected Aphorisms* 35 and 36, in *Alfarabi, the Political Writings ... cit.*, p. 29; emphasis added.
- 30 Ivi, 38, p. 31; emphasis added.
- 31 Avicenna, *Logica ch. 1*, cited in E. Wéber, *La classification des sciences selon*

Avicenne à Paris vers 1250, in J. Jolivet and R. Rashed (eds.), *Études sur Avicenne*, Les Belles Lettres, Paris 1984, p. 78; translation mine; emphasis added.

- 32 See Avicenna, *Les divisions des sciences intellectuelles*, translated by G. C. Anawati, in "Mélanges de l'Institut Dominicain d'Études Orientales" 13 (1977), p. 326.
- 33 Ivi, p. 331.
- 34 Ivi, p. 325; emphasis added.
- 35 Albertus Magnus, *Commentary on the Sentences*, cited in E. Wéber, *op cit.*, p. 79.
- 36 Cited in E. Wéber, *op cit.*, p. 94.
- 37 Ivi, p. 79.
- 38 Dante Alighieri, *Monarchy* 1.2.4-6, translated by Prue Shaw, Cambridge University Press, Cambridge UK 1996, p. 5; emphasis added.
- 39 *Ibidem*; emphasis added.
- 40 See *Paradiso* 13.94-108, where Dante praises Solomon, the perfect political leader, not only as the most exemplary master of *praxis* but also as a ruler who has no interest whatsoever in attaining theoretical knowledge. On this aspect of Dante's Solomon, see my *Dante's Pluralism ... cit.*, pp. 160-166.
- 41 The fact that the phrase *libero arbitrio* occurs precisely 25 *terzine* before the first verse of *Purgatorio* 17 and precisely 25 *terzine* after the last verse of *Purgatorio* 17 was first noted in Charles Singleton, *The Poet's Number at the Center*, in "Modern Language Notes" 80 (1965), pp. 1-10.
- 42 *Nacqui sub Iulio, ancor che fosse tardi, / e vissi a Roma sotto 'l buono Augusto / nel tempo de li dèi falsi e bugiardi* (*Inferno* 1.70-72). Augustus (and, by implication, Virgil) is associated with the *buono* but not with the *vero*.
- 43 See, for example, Averroes, *La béatitude de l'âme*, translated by M. Geoffroy and C. Steel, J. Vrin, Paris 2001, pp. 218-219; see also Avempace's version of

Plato's Allegory of the Cave in his *Regime of the Solitary*: in Ibn Bâjja (Avempace), *La conduite de l'isolé et deux autres épîtres*, translated by C. Genequand, J. Vrin, Paris 2010, pp. 197-200. See also A. Gagliardi, *Scrittura e storia: averroismo e cristianesimo*, Rubbettino, Soveria Mannelli 1998, pp. 15- 24.

- 44 As Roger Arnaldez says (*Averroès, un rationaliste en Islam*, Editions Balland, Paris 1998, p. 86), for Averroes, the practical faculty is always bound up with imagination: *In humans, images are the moving force of the practical rational faculty. Practical intelligibles are thus always linked with images.*
- 45 Avicenna, *A Compendium on the Soul*, translated by E. Van Dyck, Verona 1906, pp. 75-76; emphasis added.
- 46 O. Bakar, *op cit.*, pp. 61-62.
- 47 As O. Bakar (*Ibidem*) explains, al-Fârâbî lists the three theoretical sciences (mathematics, physics, metaphysics) in order based on the ease with which humans can grasp the principles of those sciences: mathematics is easiest to grasp, and metaphysics is the most difficult.
- 48 Avicenna, *The Metaphysics of The Healing*, translated by M. Marmura, Brigham Young University Press, Provo 2005, p. 2.
- 49 Avicenna, *Les divisions des sciences ... cit.*, p. 325.
- 50 M. Marmura, *Introduction to Avicenna, The Metaphysics of The Healing ...*, *cit.*, p. xix.
- 51 While it is true that one might point to Aristotle (*Metaphysics* 11.7 [1064a34–1064b4]) as the source of this classification, it is nonetheless the case that scholastics such as Albertus preferred Avicenna's account, which was more coherent and provided deeper and more suggestive analysis than Aristotle's; on this point, see E. Wéber, *op cit.*, pp. 81-82.
- 52 Brunetto Latini, *Li Livres dou Tresor*, trans. S. Baldwin and P. Barrette, Arizona Center for Medieval and Renaissance Studies, Tempe 2003, pp. 2-3.
- 53 Avicenna, *Les divisions des sciences ... cit.*, p. 331.

- 54 On Beatrice's lesson in *Purgatorio* 2 as fundamentally metaphysical rather than physical, see R. Hollander's commentary to *Par.* 2.142-144 in his edition of *Paradiso*, Doubleday, New York 2007.
- 55 This is the significance of Virgil's addressing Beatrice as *donna di virtù, sola per cui / l'umana spezie eccede ogne contento / di quel ciel c'ha minor li cerchi sui* (*Inferno* 2.76-78): the only power (*virtù*) that can transform a human from being a sublunary (the sphere of the moon is *quel ciel c'ha minor li cerchi sui*), mortal, physical entity into being a trans-human, superlunary, immortal, metaphysical entity is the power of metaphysical intellection.
- 56 I am currently completing a book manuscript in which I study Cavalcanti's poetry, including especially *Donna me prega*, in the context of this Arabo-Islamic *Salvation of Intellect*.
- 57 Moses Maimonides, *The Guide of the Perplexed* 3.27, trans. S. Pines, Vol. 2, University of Chicago Press, Chicago 1963, p. 511.
- 58 Averroes, *Averroes on Plato's Republic*, translated by R. Lerner, Cornell University Press, Ithaca (NY) 1974, p. 83.
- 59 Averroes, *The Epistle on the Possibility of Conjunction with the Active Intellect*, trans. K. Bland, Jewish Theological Seminary of America, New York 1982, p. 111.
- 60 This does not mean that Statius and Matelda are *only* allegories for two theoretical sciences. Like all of *Commedia's* important figures, both serve multiple purposes and signify a variety of things, while at the same time functioning on the poem's narrative or literal level.
- 61 See Callataÿ, *op cit.*, p. 73.
- 62 Here I will cite just a small excerpt of al-Fârâbî's discussion; the interested reader will find many more parallels: *Quando lo sperma penetra nell'utero e vi incontra il sangue che l'utero ha apprestato per ricevere la forma umana, trasmette a questo sangue una potenza motrice cosicché da esso risultino gli organi dell'uomo, ognuno secondo la loro forma: in una parola, la forma dell'uomo. Il sangue apprestato nell'utero è la materia dell'uomo; lo sperma è ciò che mette in moto questa materia a che la forma vi si produca*, Al-Fârâbî,

La città virtuosa ... cit., p. 169.

- 63 See Avicenna, *Les divisions des sciences* ... cit., p. 328. As O. Bakar, *op cit.*, says: *In al-Fârâbî, psychology is a branch of natural science* (p. 100).
- 64 Avicenna, *Les divisions des sciences* ... cit., p. 328.
- 65 V. Kirkham (in *Canto XXVIII: Watching Matelda*, in A. Mandelbaum, A. Oldcorn, and C. Ross (eds.), *Lectura Dantis: Purgatorio*, University of California Press, Berkeley 2008) notes that Matelda's name may be related to mathematics, but Kirkham erroneously (in my view) concludes that Matelda symbolizes *Wisdom*: *Etymologically, Mat(h)elda seems to be cognate with the Greek root math (learning) and so could mean Love of Wisdom ... In view of her gender, her placement at the peak, her mathematical name, and her lecture, she must symbolize Wisdom* (p. 321). I should also mention that, in *Dante's Pluralism and the Islamic Philosophy of Religion*, I interpret Matelda as a symbol for *praxis*. I still regard that interpretation as valid. More often than not, Dante's allegories have at least two meanings. *Purgatorio's* Griffin, for example, signifies both the Roman Empire and the Active Intellect; the former signification involves *praxis* while the latter signification involves *theoria*. Similarly, Matelda has both a practical and a theoretical meaning.
- 66 See Avicenna, *Les divisions des sciences* ... cit., pp. 329-30.
- 67 Ivi, p. 330.
- 68 Brunetto Latini, *op cit.*, p. 4. Meteorology, normally regarded as one of the subcategories of physics, is treated as a part of astronomy (and thus of mathematics) by those, such as Brunetto, who emphasize the causal role played by planetary motion. The Persian philosopher and scientist Qutb al-Dîn (d. 1311 AD), in his major work of astronomy, *The Limit of Understanding of the Knowledge of the Heavens*, includes meteorology as one of astronomy's subject matters (on this point see O. Bakar, *op cit.*, p. 237). Matelda's explanation for Mount Purgatory's perpetually pleasant weather emphasizes the causal role of the constant circular motion of the celestial spheres and is highly reminiscent of a passage in Aristotle's *Meteorology* that mentions winds, high mountains, and the continual circular revolution of the heavens (*Meteorology* 340b32-341a-2).

- 69 A more complete account would have to take into consideration the fact that Dante has two other guides near the end of *Paradiso*: Bernard of Clairvaux and then, finally, himself. One might be tempted to regard this as evidence that Dante's highest attainments are mystical or supra-rational. However, such apparently mystical stages were in fact the rationally attained culmination of the philosophical itinerary for *falāsifa* such as Avicenna, Avempace, and Averroes.
- 70 Just a few years after Dante's death, the great medieval Jewish philosopher from Provence, Gersonides, a master of the Islamic rationalist tradition, wrote a Commentary on the Song of Songs, interpreting that text precisely as an allegory for an intellectual itinerary through the sciences, in order from lowest to highest. To cite just one example from this commentary, which, despite superficial differences (Gersonides follows al-Fârâbî's rather than Avicenna's ordering of the three branches of theoretical science), displays many parallels with *Commedia*: *She adjured the daughters of Jerusalem (3:5) that they not break through by attempting to study physics and metaphysics, but, rather, that their entry into the scientific investigation of existent beings be in the proper order, and it was thus necessitated that they commence the investigation with the mathematical sciences.* Levi ben Gershom (Gersonides), *Commentary on Song of Songs*, translated by M. Kellner, Yale University Press, New Haven 1995, p. 51.
- 71 I say *perhaps*, because Cavalcanti's Averroism is radically negative: Guido does not believe that metaphysical intellection is ever possible for humans. This is the meaning of Dante's saying that Guido had *disdegno* for Beatrice (*Inferno* 10.63).
- 72 See my *Dante and the Falāsifa: Religion as Imagination*, in "Dante Studies" 125 (2007), pp. 133-156.
- 73 See al-Fârâbî, *La città virtuosa ... cit.*, pp. 183-203.
- 74 Avicenna, *Les divisions des sciences ... cit.*, p. 326.
- 75 Interestingly, Giordano Bruno, seeking a precedent for his view that the essential teachings of religious scriptures are practical and political rather than theoretical or scientific, turns to Islamic *falsafa* on this point, citing al-Ghazâlî: *For this reason Al-Gazali, a philosopher, high priest, and Mohammedan theologian, said that the purpose of the laws [i.e., religions] is*

not so much to seek the truth of things and speculations as to achieve benign usages, the advantage of civilization, the concord of peoples and practices for the convenience of human intercourse, the maintenance of peace, and the growth of commonwealths (*The Ash Wednesday Supper* [Fourth Dialogue], translated by E. Gosselin and L. Lerner, University of Toronto Press, Toronto 1995, p. 178). Bruno does not realize that al-Ghazâlî did not himself ascribe to this pragmatic view of religion but was simply giving an account of the view of the Islamic rationalists, whom he would vehemently attack in his *Incoherence of the Philosophers*. The view that Bruno erroneously attributes to al-Ghazâlî does, however, more or less match the views of *falâsifa* such as al-Fârâbî, Ibn Tufayl, and Averroes.

- 76 Avicenna, *On the Divisions of the Rational Sciences*, translated by M. Mahdi, in J. Pansik and J. Macfarland (eds.), *Medieval Political Philosophy*, 2nd ed., Cornell University Press, Ithaca, NY 2011, p. 76.