Knowledge and Education in Classical Islam

Religious Learning between Continuity and Change

VOLUME 1

Edited by

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"Only Learning That Distances You from Sins Today Saves You from Hellfire Tomorrow": Boundaries and Horizons of Education in al-Ghazālī and Ibn Rushd

Sebastian Günther

Dedicated to Professor Ella Landau-Tasseron on the Occasion of her 70th Birthday

Questions concerning knowledge and education for people, both as individuals and as members of society, are key issues in Islamic religion and culture, and indeed, Muslim scholars have intensively engaged in the advancement of ideas and systems of educational thought since the rise of Islam.¹ During Islam's classical period (second-tenth/eighth-fifteenth centuries) in particular, a considerable body of scholarly writings in Arabic (and Persian) emerged in which Muslim thinkers devoted much thought to advancing and exploring concepts, forms, goals, and techniques of teaching and learning.

This article revisits certain epistemological concepts related to education and the intellect that were advocated by two celebrated Muslim thinkers, the fifth/eleventh-century philosophical theologian, mystic, and religious reformer Abū Ḥāmid al-Ghazālī, and the sixth/twelfth-century philosopher, legal scholar, and physician Abū l-Walīd Ibn Rushd. A towering figure of Islamic orthodoxy, al-Ghazālī is particularly renowned for his "spiritual" approach to learning and is considered one of the great architects of religious education in Islam. Ibn Rushd, by contrast, an exponent of Aristotle, has attracted much attention in both medieval and contemporary times for his "rationalist" views on learning and his criticism of al-Ghazālī's refutation of the philosophers.

However, rather than focusing on the undisputed positive contributions these two scholars have made to the advancement of educational theory, in the following we will explore issues that the two scholars identified—deliberately or inadvertently—as boundaries, restrictions, or obstacles to learning and human growth in the context of religiously defined societies.

¹ The quote in the title refers to al-Ghazālī's statement, al-'ilm alladhī lā yub'iduka l-yawm min al-ma'āşī... lan yub'idaka ghadan 'an nār jahannam; cf. his Letter to a disciple: Ayyuhā l-walad 16–17.

In order to make this comparative analysis a fruitful endeavor, two particularly influential works that closely link the two scholars with one another have been chosen as the basis of our research, *al-Munqidh min al-dalāl (The deliverance from error*), al-Ghazālī's spiritual "autobiography" (composed between 499 and 502/1106 and 1109),² and Ibn Rushd's *Faṣl al-maqāl fī mā bayna l-sharī'a wa-l-ḥikma min ittiṣāl (The decisive treatise determining [the nature of] the connection between the divinely revealed law and philosophy*, also rendered as *On the harmony of religion and philosophy*, written between 560 and 565/1165 and 1170).³

The decision to explore these two works for issues in Islamic learning rests on several considerations. First, the two texts exhibit a specific approach that is shared by their respective authors, an academic outlook perhaps best described as encompassing the courage to know, the courage to doubt, and the courage to critique.⁴ This distinctive attitude to learned culture is apparent in the explicit and thought-provoking titles of these books: The deliverance from error and The decisive treatise. Moreover, a striking maturity of analytical insight is evident throughout the exposition of the respective texts. Second, the two works share an overall thematic concern with the question of the relationships between scripture and philosophy, faith and reason, and spirituality and rationality, which represent key themes in classical Islamic thought. Third, although the conclusions the two scholars come to ultimately contrast in regard to the aforementioned concerns, their special dedication to issues of learning and education, along with their attention to matters of human growth, predominate in these portrayals. The latter point is of particular note since the individual views of these two thinkers include frequent, explicit discussions of the confines and even risks of knowledge acquisition in religiously defined contexts. Al-Ghazālī makes this point overtly at the beginning of The deliverance: "You have asked me, my brother in religion, to communicate to you the aim and secrets of the sciences and the dangerous and intricate depths of the different doctrines and views (ghā'ilat al-madhāhib wa-aghwāruhā)."5 The principal objective of the present study, therefore, is to identify and examine some of these communications, as well as specific statements in al-Ghazālī

² Heath, Reading 198.

³ Cf. Belo, Averroes 50.

⁴ The first part of this expression I owe to Saeed Sheikh, al-Ghazālī 587.

⁵ Al-Ghazālī, *Munqidh* 60; al-Ghazālī, *Deliverance* 2 (§2). The English quotations from al-Ghazālī's *al-Munqidh* in this article follow MacCarthy's translation where not otherwise indicated.

and Ibn Rushd, which reveal, and thus help us to better understand, the complex and, in part, tense relation between education and religion in classical Islam.⁶

1 Al-Ghazālī

A native of the Iranian city of Ṭūs near Mashhad, at the pinnacle of his career al-Ghazālī lived in Baghdad (484–488/1091–1095), the vibrant political, administrative, and economic center of the 'Abbasid dynasty (132–656/750–1258) and the veritable cultural cosmopolis of the medieval Muslim world. It was in Baghdad that al-Ghazālī witnessed exceptional educational activities in both religious and secular branches of knowledge, particularly advances in the humanities, natural sciences, medicine, architecture, and technical sciences.⁷ Indeed, al-Ghazālī actively took part in the academic life of his day as an eminent scholar and author, already highly respected during his lifetime and, for a time, he was also the main law professor (or "rector") of the newly founded Niẓāmiyya College, the most famous institution of higher learning in Baghdad and perhaps the entire Islamic world in the fifth/eleventh century.

Al-Ghazālī believed that reason and the senses allow humans, to some degree, to acquire knowledge of the visible, material world,⁸ while revelation and inspiration permit them to discover the invisible, immaterial world. Through perpetual learning and spiritual exercises humans attain "true" knowledge and become capable of comprehending (to various degrees and depending on the learner's stage in gnosis) aspects of the realm of divine sovereignty (*ʿālam al-malakūt*). This fundamental view of al-Ghazālī's concept of learning is reflected in the curriculum he indicates in the very first pages of his magnum

⁶ For the principal benefit of exploring authoritative medieval Muslims thinkers' concepts of education, and the fact that certain problems encountered in medieval times continue to concern us today, see my articles, "Your educational achievements," esp. 72–73; Education, general (up to 1500); and the editor's introduction to this volume. These publications also identify key studies on issues in classical Islamic education.

⁷ Günther, "Auf der Suche" 118–121; Günther, "Nothing like Baghdad." See also al-Ghazālī, *Deliverance* (trans. Abū Laylah) 1–28 (Abū Laylah's introduction). For the role and meaning of "knowledge," see Leaman, *Islamic philosophy* 51–70 ("Knowledge").

⁸ Al-Ghazālī also makes the point that the senses are not a perfect instrument for doing this one's eyes cannot detect the movement of a shadow, for example, even though after an hour one can see that it has indeed moved; cf. al-Ghazālī, *Munqidh* 66; al-Ghazālī, *Deliverance* 4 (§10).

opus, *Iḥyā' ʿulūm al-dīn (The revival of the studies of religion)*, a work in which al-Ghazālī strove to reconcile traditional Islamic beliefs with Sufi teachings.⁹

Guidance on the virtuous path of learning, as al-Ghazālī views it, is a pledge, on the part of the learned, to safeguard the learner's way to salvation and happiness in the hereafter. Therefore, students seeking salvation must purify themselves by renouncing bad habits and character flaws in order to become worthy vessels for knowledge. Moreover, the students need to remove themselves from worldly (and family) affairs and fully concentrate on learning. They must respect and honor their teacher, inwardly and outwardly, and always embrace his advice. They must know that the true goal of learning is the attainment of inner virtue and spiritual perfection, not authority over or recognition by others. Therefore, students also must have a clear idea of the relationship the different sciences have to the objectives of learning, and not overestimate (or underestimate) any discipline. In turn, teachers working in a religious context should make their students aware that the foremost objective of learning is to draw closer to God, not to accumulate worldly gains. Hence, teachers are advised that their behavior and actions must conform to their words and teaching. They are the noblest among the erudite; as al-Ghazālī points out, they philanthropically share their knowledge with others.¹⁰

Al-Ghazālī also believed that it was on account of the natural confines of the human mind that the prophets spoke to their communities figuratively and through signs and symbols. Humans can compensate for these natural limitations through individual learning efforts and by fulfilling their responsibilities as members of the community.¹¹ However, corruption, selfishness, and arrogance are serious obstacles to learning, even though they are of human provenance. Such failings complicate matters on the individual and communal levels because of their far-reaching religious, social, political, and ethical consequences.

Deep concerns of this kind seem to have moved al-Ghazālī to write, toward the end of his life, *The deliverance from error*, a work that offers a great deal of

9 Montgomery Watt, al-Ghazālī 1038–1041; al-Ghazālī, *Incoherence* xviii–xix (Marmura's introduction).

¹⁰ Günther, Be masters 380–385.

In the first chapter of the *Ihyā*', *Kitāb al-'Ilm* (The book of knowledge), al-Ghazālī relies on Q 4:83, which reads, "If [the people] had referred [the matter] to the Messenger and to those in authority, those [rationally] seeking meaning (*yastanbiţuna*) would have found it out from them." Cf. al-Ghazālī, *Ihyā*'ıı; see also Abdel Haleem, *Qur'an* 58. For al-Ghazālī's concept that religious observance, while compulsory for all, may be complemented by gnostic knowledge for those who seek a deeper understanding of the meaning of Quranic tenets, see also Montada, Ibn Rushd esp. 118–1120.

insight into religious learning in general and into al-Ghazālī's own intellectual development and spiritual growth in particular. After his lifelong study of major branches of knowledge, such as theology, philosophy, and law, in this work al-Ghazālī concedes that he found religious certainty and fulfilment in Islamic mysticism alone.

On the basis of this highly personal testimony, al-Ghazālī detects and discusses several perils encountered by seekers of knowledge, which they should be warned of when following more advanced curricula, particularly in theology, philosophy, logic, mathematics, physics, metaphysics, the political sciences, and ethics. Moreover, he offers some suggestions on how to avoid or correct potential errors on the path of spiritual learning. We shall therefore take a closer look at al-Ghazālī's views of learning in the disciplines that he explicitly mentions in *The deliverance* before undertaking a similar inquiry into Ibn Rushd's ideas.

1.1 Theology

Predestination, the fear of God connected with knowledge of God in this life, as well as the fulfilment of human destiny and happiness in the hereafter, are the thematic cornerstones of al-Ghazālī's considerations concerning speculative theology (*kalām*). These and other fundamental elements of al-Ghazālī's theology can be traced in his various writings despite the fact that al-Ghazālī did not write a coherent exposition of his own theological views. Moreover, he occasionally appears to be ambivalent or even inconsistent in his theological views, as he is "dealing with intertwined and at times conflicting epistemologies and systems of thought," as Ahmad Dallal has pointed out.¹² Yet, while al-Ghazālī was critical of certain traditional methods of acquiring knowledge (including those of various religious sciences), he did make use of traditional religious idioms to introduce his own ideas.

In *The deliverance* the author alerts his reader to several impediments to learning. Al-Ghazālī observes here that certain research activities do not correspond to the research objectives of a given discipline. For example, while the main aim and purport of theology is to "conserve the creed of the orthodox for the orthodox and to guard it from the confusion introduced by the innova-

¹² Dallal, Perils of interpretation esp. 774, 778, and 786, assesses and expounds on the various readings of al-Ghazālī's thought, by both medieval scholars, such as Ibn Taymiyya (d. 728/1328) in his collection of legal statements *Majmū fatāwā Shaykh al-Islām Aḥmad Ibn Taymiyya*, and modern researchers, such as R. Frank in his *al-Ghazālī and the Ashʿārite school*, while aptly pointing to the fact that these readings deal "with a whole cultural legacy with numerous trends and schools."

tors," the theologians busy themselves with investigating "the true natures of things" and "the study of substances and accidents and their principle."¹³ Certain theologians sincerely carry out the critical task of protecting orthodoxy by defending the tradition of the Prophet, repulsing attacks on the Muslim faith, and fighting heretical innovations; yet, tendencies to get sidetracked and make concessions have a negative effect on their work. Al-Ghazālī specifies three points that he sees as obstructing learning and scholarly debate:

- reliance on premises taken over from adversaries in a scholarly debate through uncritical acceptance of (a) their arguments, (b) their references to matters agreed upon by community consensus, or (c) their use of quotations from the Quran and the prophetic tradition;¹⁴
- focusing too much on exposing inconsistencies in the arguments of adversaries; and,
- criticizing adversaries for the irrational consequences of what they claim rather than dealing with the claims as such.

This kind of conduct was often evident in theological discussions, as debates often were overly concerned with discovering contradictions inherent in conflicting views and refuting conclusions drawn from the premises of the opponent.¹⁵

Such approaches only weaken one's own arguments, and they do not allow for content beyond basic insights and self-evident truths. Moreover, unsystematic discussion in academic matters generally obstructs academic work. True academic learning ought to be self-determined, self-paced, and purposeoriented if one desires to reach a higher level of understanding.

Consequently, the mystical path of seclusion and spiritual exercise is the only alternative to busying the mind with too many unnecessary, not to mention, worldly, things. As al-Ghazālī explicitly makes clear in reference to his own educational development, the genuine way to salvation consists of: (a) spiritual exercise, (b) devotion that purifies the soul and cleanses the heart for the contemplation of God Most High, and (c) the cultivation of virtues.¹⁶ Nevertheless, those seeking contentment in theology should be pardoned since "healing remedies differ as sicknesses differ, and many a remedy may help one sick person and harm another."¹⁷

¹³ Al-Ghazālī, Munqidh 72–73; al-Ghazālī, Deliverance 6 (§§ 21, 24).

¹⁴ On this issue, see Montada, Ibn Rushd 117.

¹⁵ Al-Ghazālī, Munqidh 72; al-Ghazālī, Deliverance 6 (§ 23).

¹⁶ Al-Ghazālī, *Munqidh* 105–107; al-Ghazālī, *Deliverance* 20–21 (§§ 92–95).

¹⁷ Al-Ghazālī, *Munqidh* 72–73; al-Ghazālī, *Deliverance* 6 (§ 24, slightly adjusted).

1.2 Philosophy

Al-Ghazālī counts six subdivisions (*aqsām*) among the philosophical sciences: the mathematical (*riyāḍiyya*), logical (*manṭiqiyya*), natural/physical (*ṭabī'iyya*), metaphysical (*ilāhiyya*), political (*siyāsiyya*), and ethical (*khuluqiyya*).¹⁸

He begins his deliberations on philosophy and the philosophers by stating that a merely superficial understanding of a scholarly discipline generally makes it impossible to detect distortions within that discipline, while cognizance of its "intricate profundities," by contrast, helps to overcome such problems and eventually to refute a given doctrine. This also applies in regard to a sound understanding of "the subtleties of the philosophical sciences."¹⁹

Interestingly, in this context al-Ghazālī appears to approve of an advanced student's exploration of the essential ideas (and risks) of a scholarly discipline—philosophy, in this particular case—without a master or teacher. Indeed, he sees individual examination of the challenging aspects of a branch of scholarship as something that helps one better understand its characteristics and increases individual cognition. In reference to his own studies and experience, he says of the philosophers:

I knew, of course, that undertaking to refute their doctrine before comprehending it and knowing it in depth would be a shot in the dark. So I girded myself for the task of learning that science by the mere perusal of their writings without seeking the help of a master and teacher. I devoted myself to that in the moments I had free from writing and lecturing on the legal sciences ... As it turned out, through mere reading in those embezzled moments, God Most High granted me insight into the farthest reaches of the philosophers' sciences in less than two years.²⁰

Al-Ghazālī finds that analytical comparison between two disciplines assists with stepping beyond the general boundaries of knowledge acquisition. For him, it is something that helps generate new knowledge. However, when elab-

¹⁸ Al-Ghazālī, *Munqidh* 79; al-Ghazālī, *Deliverance* 8 (§ 36). In his early work, *Maqāşid al-falāsifa* (*The intentions of the philosophers*), al-Ghazālī listed only four sciences among the philosophical (rational) disciplines: mathematics (*riyādiyyāt*), logic (*manțiqiyyāt*), physics (*tabī'iyyāt*), and metaphysics (*ilāhiyyāt*). It is interesting that al-Ghazālī appears to have no less than seven different classifications in his authentic works, a fact that "reflects his deep engagement with the philosophical tradition (*falsafa*), in which this theme originated and developed," as Treiger states in his comprehensive study, al-Ghazālī's classification 2–3.

¹⁹ Al-Ghazālī, Munqidh 74; al-Ghazālī, Deliverance 7 (§ 26).

²⁰ Al-Ghazālī, *Munqidh* 74–75; al-Ghazālī, *Deliverance* 7 (§ 27).

orating on this point he also remarks, "Not a single Muslim divine had directed his attention and endeavor to that end"—that is, to such an in-depth comparative approach to major scholarly disciplines.²¹

In general, given al-Ghazālī's overall scholarly achievements, it is unsurprising that he contemplates entire branches of scholarship and systems of thought. For example, he emphasizes that two things are important to refute a discipline: first, comprehensive study and deep understanding of the thought system(s) under consideration (anything less would be equivalent to being blindfolded); and second, the attainment of certainty and "safety from error" through acquiring reliable, definite knowledge of the true meaning of things.²²

Yet, certain attitudes and conditions may prevent the learner from acquiring knowledge of the true meaning of things and reaching new insight. These obstacles arise from "servile conformism," a too-close association with masters, and the "slavish aping of parents and teachers." Instead, a transition from guided learning to self-study is necessary to enable the mind to open up to ideas and remain unaffected by a teacher or parent's opinion and authority. Importantly, however, true insight is impossible without "the effect of a light which God Most High cast into my breast; and that light is the key to most knowledge."²³ Perhaps it is needless to say that al-Ghazālī's main concern here is the only path of learning and human growth that he considers religiously appropriate and valid—the path of the mystic, who is inspired and guided by the divine light.

On other occasions in *The deliverance*, al-Ghazālī provides further insight into his own methods of study. He specifies, for example, the following practices that worked best for him: close reading of study texts, alone and undisturbed, followed by reflecting upon the subject, and revisiting the issue in question to reexamine its complexity and hidden problems. This kind of learning procedure would come full circle by summing up the subject under consideration, attempting to reach certainty in the given matter, and conclusively identifying what constitutes practical insight, and what abstract delusion.²⁴

1.2.1 Logic

Regarding logic, al-Ghazālī makes it clear that he sees this discipline as part of the philosophical sciences. At the same time, he upholds the idea that logic has its own particular methods of reasoning and argumentation. Indeed, for

²¹ Al-Ghazālī, Munqidh 74; al-Ghazālī, Deliverance 7 (§ 26).

²² Al-Ghazālī, Munqidh 63–66; al-Ghazālī, Deliverance 3–4 (§§7–10).

²³ Al-Ghazālī, Munqidh 67–68; al-Ghazālī, Deliverance 5 (§ 15).

²⁴ Al-Ghazālī, *Munqidh* 74–75; al-Ghazālī, *Deliverance* 7 (§ 27).

al-Ghazālī, logic is a neutral instrument of learning, a distinction that separates it epistemologically from philosophy and thus it can be recommended by al-Ghazālī to theologians as a means of learning.²⁵ It is worth quoting a key statement al-Ghazālī makes in this regard in *The deliverance*:

As for [the] logical sciences (*manțiqiyyāt*), none of these relates to religion ($d\bar{n}$) either by way of denial or affirmation. They are no more than the study of the methods of proof and standards for reasoning, the conditions of the premises of demonstration and the manner of their ordering, the conditions of correct definition and the manner of its construction. They simply affirm that knowledge is either conception, arrived at through definition, or assent, arrived at through demonstration. Nothing of this ought to be denied. It is the same kind of thing the theologians (*mutakallimūn*) and religious speculative thinkers (*ahl al-naẓar*) mention in their treatments of proofs. The philosophers differ from them only in their expressions and idioms and their more exhaustive definitions and classifications.²⁶

The term "logic," as al-Ghazālī sees it, signifies studying the methods of demonstration (*burhān*) and syllogism (*qiyās*), along with dealing with the conditions governing the premises of apodeictic demonstration, the manners in which they may be combined, and the requirements for their sound definition and how to draw them up.²⁷ In adopting logic—that is, Aristotelian logic instead of the traditional system of exploring signs and analogies for meaning, al-Ghazālī was "revolutionary," although, as Josef van Ess noted, he was not entirely novel in this line of reasoning.²⁸ In other words, as a Shāfi'i legal scholar and an adherent to rational theology in the "orthodox" (Ash'ari) tradition, al-Ghazālī acknowledges the legitimacy of Aristotelian logic in the quest for truth.²⁹ Indeed, for him, only logic affords the criterion to help conclu-

²⁵ On the general question of al-Ghazālī's position to the secular sciences and logic, see the elucidating study by Marmura, Ghazālī's attitude 100–114.

²⁶ Al-Ghazālī, Munqidh 81–82 (trans. M. Marmura); cf. Marmura, Ghazālī's attitude 103.

²⁷ Al-Ghazālī, Munqidh 81–82; al-Ghazālī, Deliverance 9–10 (§ 44).

van Ess, Logical structure 47.

²⁹ The Ash'arī school of dogmatic theology was founded by the theologian Abū l-Ḥasan al-Ash'arī of Basra (d. 324/935). Initially, al-Ash'arī was an active member of the leading school of *kalām*, the Mu'tazilites and their rationalistic interpretations. However, al-Ash'arī (around the year 300/912–913) "converted" to "orthodoxy." He formulated a theology that reversed basic Mu'tazili tenets while, at the same time, rendering reason and the method of rationalistic dialectical reasoning acceptable to traditional Muslims. Through

sively distinguish between true and false and between certain and non-certain knowledge. Moreover, logic alone provides the methods necessary for constructing new, certain knowledge.

Therefore, al-Ghazālī rhetorically asks, "What has this [logic] to do with the important truths of our religion that it should call for rejection and denial?"³⁰ In response to the question, he defines a number of issues that constrain students and scholars when dealing with logic. First, if someone were to condemn logic without logical proof, that person would gain only a poor reputation among logicians. This would be due primarily to the person's own poor mind, but also to the religion, which—as the critics will claim—was founded upon such denial. Second, the admirer of logic might even come to determine that certain instances of unbelief (*kufr*) attributed to the philosophers are concepts seemingly based on logical proofs, rather than religiously offensive ideas. Such a person would "rush into unbelief" before having studied mainstream Islam. Therefore, for the sake of Islam, it is necessary to warn the faithful student of the potential problems inherent in logic, so that no one employs it unless he has received sufficient preparatory training for properly engaging in this kind of learning.³¹

1.2.2 Metaphysics

Al-Ghazālī views metaphysics as a branch of philosophy, and one expressly relating to logic. Within this general structure, he criticizes those philosophers who deal with primary principles and abstract concepts but who, "when, in metaphysics, they finally come to discuss questions touching on religion, ... cannot satisfy those conditions, but rather are extremely slipshod in applying them." Moreover, the philosophers' preoccupation with demonstration and logic makes them so insouciant in matters perilous to religious belief that they "rush into unbelief even before [actually] teaching the metaphysical sciences."³²

In other words, al-Ghazālī portrays philosophical learning as missing the true essence of religion because of the philosophers' concentration on theoretical considerations and inquiries into concept and categories. Although al-Ghazālī—in full agreement with the Ash'arite tradition to which he adhered does not deny the merits of metaphysics when it comes to theological prob-

his successors, Ash'arism gradually gained momentum to become the dominant school of *kalām*.

³⁰ See also Marmura, Ghazālī's attitude 103; and Sayyid, *al-Ghazālī's views on logic* 34–37.

³¹ Al-Ghazālī, Munqidh 82; al-Ghazālī, Deliverance 9 (§ 44).

³² Al-Ghazālī, *Munqidh* 83; al-Ghazālī, *Deliverance* 10 (§ 45).

lems (at least not in countering respective philosophical arguments), he subtly underlines the usefulness of proof in the matter of religion, the proof of being—that is, the Being of God, as the foundation of all things.

Although al-Ghazālī does not go into detail in this regard in *The deliverance*, for him metaphysics does have its place in advanced religious learning. It does so, however, within the expressly defined framework of the Ash'arite doctrine and its denial of the objective validity of causality in nature: no thing or man has any power; God alone possesses all power—the idea that forms the basis of the Ash'arite belief in miracles, which in turn is the basis for the proof of prophethood, as al-Ghazālī makes very clear in his autobiography.³³

1.2.3 Mathematics and Physics

Like logic and metaphysics, the natural sciences are not religiously dangerous as such. However, some aspects of science go beyond the formal procedures of demonstration and are thus incompatible with orthodox Muslim faith.

As for the mathematical (and philosophical) disciplines, al-Ghazālī warns the student of two major religious perils arising from the study of these scholarly fields. One risk to faith inherent in the study of mathematical disciplines (*al-riyādiyya*)—including arithmetic (*'ilm al-hisāb*), geometry (*'ilm al-handasa*), and astronomy (*'ilm hay'at al-ʿālam*)—is posed by "the fine precision of their details and the clarity of their proofs."³⁴ These qualities, al-Ghazālī observes, are characteristic of mathematics and constitute a real danger in religious education, because the virtually uncontested accuracy attributed to mathematics has the potential to make an excessively strong impression on the student, even perhaps causing the student to extend the prestige held by mathematics to all other mathematical and philosophical disciplines. The student might even begin to question the religious sciences and eventually disavow religion altogether, because the human mind does not necessarily grasp the divine design underlying the events and phenomena that occur in the natural world.

Here al-Ghazālī repeats views already stated in his main work, *The revival of the studies of religion*, where he urged his fellow Muslims to set aside not only philosophy, logic, and discursive theology but also the mathematical sciences,

Al-Ghazālī states, "When one is broad-minded enough to accept such marvels (*badā't'*) and is compelled to admit that they are special properties (*khawāṣṣ*), the knowledge of which is an apologetic miracle (*mu'jiza*) for some prophets, how in the world can he deny that the same is true of what he hears said by a truthful prophet, confirmed by miracles ...?" Al-Ghazālī, *Munqidh* 127–128; al-Ghazālī, *Deliverance* 31 (§149). See also Abdul Hye, Ash'arism 237–243; Leaman, *Islamic philosophy* 34–36 (Miracles and meaning); and Sweeney, Greek essence 45–52.

³⁴ Al-Ghazālī, Munqidh 79–80; al-Ghazālī, Deliverance 8–9 (§ 38).

in favor of a Sufi-oriented program of spiritual purification. Since the mathematical sciences belong to the philosophical branches of knowledge, a student of mathematics would at the same time become "insidiously affected by the sinister mischief of the philosophers," because that student may become enamored with others' perception of his appearance as being particularly clever, and he may persist in his high opinions of the philosophers. This is nothing but "a very serious evil" ($\bar{a}fa \ az\bar{i}ma$).³⁵

There is also a second, more complex, danger inherent in dealing with mathematics, one that concerns the general relation of science to faith. Al-Ghazālī warns that Islam actually would be harmed if someone endeavored to strengthen it by denying obvious natural phenomena and their scientific explanations—such as the solar and lunar eclipses—claiming that these occurrences contradict the Islamic religion. In support of his view, he quotes the Prophet Muhammad, who is credited with saying, "The sun and the moon are two of the signs of God Most High: They are not eclipsed for the death or life of any man. So, when you see an eclipse, fly in fear to the mention of God Most High."³⁶

Yet, al-Ghazālī is somewhat ambivalent here; he also states that these prophetic words do not require a denial of the mathematical sciences by which the course of the sun and the moon can be explained. Therefore, attitudes and actions that encourage denial of natural phenomena, in spite of the reasonable explanations that the natural sciences provide, may succeed with pious and simple-minded people. The learned, however, will not doubt the scientific explanations; rather, they will question the foundations of Islam and even start thinking, "Islam is built on ignorance and the denial of apodeictic demonstration." For this reason, such approaches to the exact sciences are generally unsuited to sustain and defend faith and religion. Instead, they increase the people's love of philosophy, including the mathematical sciences, and cause them to become embittered against Islam. Thus, anyone acting in the belief that unsubstantiated denial of the mathematical and philosophical sciences helps to defend Islam, actually does great harm to this religion because "the revealed Law nowhere undertakes to deny or affirm these sciences, and the latter nowhere address themselves to religious matters."37

Yet another problem relates to the fact that the ancient Greeks grounded mathematics in proofs, while they studied metaphysical questions based on

³⁵ Al-Ghazālī, *Munqidh* 79; al-Ghazālī, *Deliverance* 9 (§ 40).

³⁶ Al-Ghazālī, Munqidh 79; al-Ghazālī, Deliverance 9 (§§ 41–42).

³⁷ Al-Ghazālī, *Munqidh* 79; al-Ghazālī, *Deliverance* 9 (§41). See also Ruddle-Miyanmoto, Regarding doubt 161, 168–169.

speculation. This twofold way of studying was, al-Ghazālī briefly notes, an unsuitable model for the education of faithful Muslims.

Al-Ghazālī concludes these considerations by confirming that the risks inherent in mathematics are considerable, and that it is necessary to "warn off anyone who would embark upon the study of those mathematical sciences." Indeed, anyone studying them risks infection by their vices and is in serious danger with regard to his faith. "Rare, therefore, are those who study mathematics without losing their religion and throwing off the restraint of piety."³⁸

As for the study of the natural sciences or physics, which deal with natural phenomena and the physical world, with both the organic and inorganic matters of God's creation, al-Ghazālī's viewpoints underwent an interesting development during his lifetime. In his early work, *Maqāṣid al-falāsifa* (*The intentions of the philosophers*), he is rather critical of physics, as he makes clear here:

In physics, the sound is mixed with the false, and right is dubiously like error; ... in the book *Tahāfut al-falāsifa* (*The incoherence of the philosophers*) will be explained the falsity of what must be held false.³⁹

In *The deliverance*, al-Ghazālī takes a more nuanced approach to physics and its subcategories. Here, he confirms that the study of physics, like that of medicine, does not require repudiation for religious reasons, as these sciences per se pose no serious threat to faith. This was, with the exception of certain aspects of the said sciences, all to do with the creed, which confirms, "Nature is totally subject to God Most High."

At this point, al-Ghazālī directs the reader of *The deliverance* to his earlier work, *The incoherence of the philosophers*, where he outlined four problematic questions (*masā'il*) concerning the natural sciences, all of which relate, directly or indirectly, to learning:

1. The first point that al-Ghazālī critiques has two aspects. One relates to the natural scientists' insistence that the course of nature is necessary and unchangeable, and the other to their idea that miracles are impossible. Against the philosophers, but in agreement with the Ash'arite occasionalist doctrine that confines all causal action to God, al-Ghazālī argues that certain types of miracles are indeed possible.

³⁸ Al-Ghazālī, Munqidh 80; al-Ghazālī, Deliverance 9 (§ 40).

³⁹ Al-Ghazālī, Maqāșid 10–11.

- 2. The second point also deals with two aspects: (a) the natural scientists' claim that the human souls are self-subsisting substances (*jawāhir qāʿima bi-anfusihā*); and, (b) these scholars' inability to rationally demonstrate (*bi-l-burhān al-ʿaqlī*) that the soul is not imprinted on the body.
- 3. Third is the natural scientists' claim that the soul is eternal and perpetual (*abadiyya wa-sarmadiyya*) and that it cannot be annihilated.
- 4. The fourth and final point is again twofold. It relates to (a) the natural scientists' denial of bodily resurrection and the souls' return to their bodies, and (b) their negation of the existence of a physical paradise and hell.⁴⁰

While points one and four are straightforward, points two and three—concerning the relation of the soul to the body and the nature of its existence, eternal or non-eternal—are more complex. Al-Ghazālī mentions two key actions of the soul relevant to learning: (a) soul actions requiring the body (including imagination, sensation, and emotion); and (b) soul actions *not* requiring the body (such as cognition of the intelligibles divested of matter). After presenting the views of the scientists and philosophers, al-Ghazālī summarizes his position on these issues as follows:

We do not deny anything they have mentioned and [agree] that this belongs to prophets. We only deny their confining themselves to it and their denying ... the revivification of the dead, and other [miracles of this kind]. For this reason, it becomes necessary to affirm miracles and ... to support what all Muslims agree on, to the effect that God has power over all things.⁴¹

Al-Ghazālī returns to this issue at the end of his book, in the conclusion to his refutation of the philosophers' denial of bodily resurrection, the physical existence of paradise and hell, and the corporeal pleasures and punishments in the hereafter. Here, he even more explicitly challenges the philosophical study of problems concerning the belief in the hereafter, as stipulated in scripture and the Law that it contains, again highlighting the superiority of divine teachings:

[W]e do not deny that there are, in the hereafter, kinds of pleasures superior to the sensory. Nor do we deny the survival of the soul after separation from the body. But we know these through the religious law (*shar*^{\circ}), since it has conveyed [that] resurrection [will take place].⁴²

⁴⁰ Al-Ghazālī, *Incoherence* 163 (§§ 19–20); see also Marmura's introduction, ibid., xxiv.

⁴¹ Ibid., 165 (§§19–20).

⁴² Ibid., 213–214 (§19).

Al-Ghazālī thus affirms that, for the faithful student, it is obligatory to take the language of the Quran literally, not metaphorically. However, a deeper metaphorical and symbolic sense of scriptural statements beyond the literal may present itself and gain in significance when pursuing the mystical path. Still, for al-Ghazālī, the exploration of this deeper sense must first be based on the literal acceptance of the respective statements in scripture, as Michael Marmura has commented on this issue.⁴³

1.2.4 Political Sciences and Ethics

Al-Ghazālī's remarks in *The deliverance* on the political sciences are rather brief. He blames the philosophers for reducing these disciplines to "administrative maxims concerned with secular affairs and the government of rulers." Moreover, the philosophers merely duplicated the concerns of the political sciences from only two sources, (a) the proclamations found in the scriptures revealed to the prophets (*kutub Allāh al-munzala ʿalā l-anbiyāʾ*) and (b) the maxims handed down from the earlier prophets (*salaf al-anbiyāʾ*).⁴⁴ In spite of the succinctness of these statements, al-Ghazālī's line of thought is clear: The *sharīʿa* is the sole source of all authority (including political authority). Furthermore, the *sharīʿa* existed already, prior to the advent of Islam (as he speaks of scriptures and revelations to prophets in the plural), and humans cannot change these laws; they may only learn of them (as the philosophers simply duplicated these perpetual laws in order to apply them to worldly matters).

In learning about the *sharī*'a, two main prerequisites, and the parameters they set, must be observed. These are: (a) acknowledging the established divine source of the *sharī*'a on the one hand; and (b) belief in and obedience to God alone on the other.⁴⁵

Thus, additional sources for learning and practicing the political sciences are:

the will of the Prophet (as expressed in the prophetic tradition, the *hadīth*, the initial source of communal consensus);

⁴³ Ibid., xxi. Al-Ghazālī conveyed the same message, although in a more nuanced way, in his earlier *Fayşal al-tafriqa bayna l-Islām wa-l-zandaqa* (*On the boundaries of theological tolerance in Islam*), a work that attempts to provide a legally sanctioned definition of what is—in due consideration of historical developments and determinations—to be considered unbelief (*kufr*) in mainstream Sunni ("orthodox") Islam and what is not. Particularly relevant in our context is al-Ghazālī's discussion of the five levels of and the rules for figurative interpretation; cf. al-Ghazālī, *On the boundaries* 104–107, 117.

⁴⁴ Al-Ghazālī, *Munqidh* 79, 85; al-Ghazālī, *Deliverance* 8, 11 (§§ 36, 50).

⁴⁵ Binder, al-Ghazālī's theory 220.

- the consensus of the community (including contemporary Muslim as well as preceding Muslim and non-Muslim generations through the "maxims handed down from the earlier prophets"); and,
- religious observance, as al-Ghazālī recaps the issue in *The deliverance* (after having dealt with it extensively in various chapters of *The revival*).⁴⁶

Now, concerning ethics, both the study and acceptance, as well as the outright rejection, of the ethical teachings set forth by the Muslim philosophers bear serious risks for true (orthodox) believers. Al-Ghazālī argues that studying philosophical books, such as those of the Brethren of Purity, may lead the unprepared learner to approve of these writings and their "wrong" ideas. Hence, the faithful student must be prevented "on account of the deceit and danger they contain," just as children must be prevented from handling poisonous snakes.⁴⁷ Also, philosophical ethics are constituted of, on the one hand, a mix of false and religiously precarious philosophical ideas, and of maxims from the prophetic tradition and Islamic mysticism on the other. Simpleminded people, who are unable to distinguish right from wrong, may thus reject not only philosophically defined ethics that need to be rejected for religious reasons, but also good orthodox teachings, just because the philosophers uttered them.⁴⁸

Furthermore, al-Ghazālī argues that ethics is a discipline the philosophers use as an umbrella for all the principal human virtues and moral conduct that the Sufis commit to following. The philosophers simply "took over these ideas and mixed them with their own doctrines, using the lustre afforded by them to promote the circulation of their own false teaching."⁴⁹

Therefore, the evil and mischief arising from the study of philosophical ethics, in which principles of asceticism are combined with both philosophical teachings and quotations from the prophetic tradition, is twofold: If one accepts this kind of ethics, one accepts philosophical teachings that contradict orthodox Islamic faith. But, in rejecting them, one also risks rejecting the true prophetic wisdom often integrated into these ethics on the basis that these maxims were articulated by philosophers; this is the more serious danger.

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⁴⁶ Especially in volume one of *The revival*, which is devoted to the general themes of worship and divine service.

⁴⁷ For al-Ghazālī's use of images in his "apologetic autobiography," *al-Munqidh min al-dalāl,* to characterize his attitudes toward the Graeco-Arabic philosophical tradition, see also Treiger, *Inspired knowledge* 102–104.

⁴⁸ Al-Ghazālī, *Munqidh* 86–87; al-Ghazālī, *Deliverance* 11–12 (§ 52).

⁴⁹ Al-Ghazālī, Munqidh 86; al-Ghazālī, Deliverance 11 (§ 50).

Consequently, al-Ghazālī advises the student to seek truth by the truth alone, and not by men and the errors they impart in their philosophical books, expressly identifying the latter as the writings of the Brethren of Purity and writers like them. Therefore, "the thoroughly grounded scholar (*ʿālim rāsikh*)" is obliged to not deprive anyone in need of guidance, but to teach students properly (in the orthodox tradition) so that they benefit from these instructions.⁵⁰

While al-Ghazālī offers this advice concerning the risks in dealing with philosophical ethics, he is obviously also contemplating the responsibilities of a mystical scholar and reformer, which he saw himself as toward the end of his life—a mission that the title and content of his late work *The deliverance from error* makes very clear.

2 Ibn Rushd

Ibn Rushd (Averroes) is probably best known to the historian of Western philosophy for his commentaries on Aristotle, which, in their Latin versions, significantly influenced the development of Aristotelianism in both medieval Europe and Renaissance Italy. In the Muslim world, it is Ibn Rushd's writings in defense of rationalist philosophy that left their mark.

Ibn Rushd lived most of his life in al-Andalus, the Iberian Peninsula under Muslim rule, and a stronghold of genuine Islamic learning and creative intellectual exchange during his lifetime, the sixth/twelfth century. The Almohads, the ruling dynasty in North Africa and al-Andalus between 524 and 668 (1130 and 1269), paradoxically promoted a reformist-puritan doctrine as their state policy, while their reputedly enlightened rulers were very much interested in (Aristotelian) philosophy and the sciences, hence their support of illustrious scholars, philosophers, and physicians, such as Ibn Zuhr (Lat., Avenzoar; ca. 484–557/1091–1161), Ibn Bājja (Avempace; ca. 487–533/1095–1139), Ibn Tufayl (Aben Tofail; ca. 493–581/1105–1185), and not least of all, Ibn Rushd. Nonetheless, the restrictive state policy of the Almohads led some of the most conservative religious scholars in their realm to publicly discredit philosophy and the philosophers and to incite the people against any form of rationalist thought. It was in this complex political-religious and intellectual climate that Ibn Rushd formed his ideas.⁵¹

⁵⁰ Al-Ghazālī, *Munqidh* 89–90; al-Ghazālī, *Deliverance* 12–13 (§§ 58–60).

⁵¹ Günther, "Auf der Suche" 121–124; Günther, Ibn Rushd 252–256.

For Ibn Rushd, two principal approaches to Islamic learning exist. One approach, as he saw it, is text-oriented in terms of its sources and traditional in its methodology. It rests on the Quran and is supplemented by prophetic traditions and the commonly accepted interpretations of the Quran. In other words, it relies on the authority of scripture and the sayings of the Prophet Muhammad, along with the consensus of religious scholars and the analytical methods of interpretation that had already been generally established. In Ibn Rushd's view, this (traditional) kind of learning is the most appropriate way of educating ordinary citizens. The other approach is fully intellectualized and creative. It is based on (a) *burhān* (demonstrative reasoning), (b) *taṣdīq* ([rational] assent), and (c) takhayyul ([attentive] imagination). This exclusive approach to education is recommended to those intellectually capable of advanced learning. Given such a focused, imaginative, and creative kind of knowledge acquisition, Ibn Rushd famously also argued that philosophy is not only a natural component of religion and its study but also truly instrumental in directing and correcting the traditional beliefs of faith.⁵²

In this spirit, Ibn Rushd's *The decisive treatise* appears as a rigorous appeal for the harmony of religion and philosophy. It is a forceful attempt to demonstrate that the Quranic revelation and the Law (*shar*^c, *shari*^ca) it contains not only do not contradict but, indeed, safeguard and support the pursuit of truth, which is the aim of philosophy—the latter, for Ibn Rushd, is identical to Aristotle's thought.⁵³

Interestingly, many of Ibn Rushd's arguments in this treatise are formulated as direct or indirect refutations of charges that al-Ghazālī put forward against the philosophers. Moreover, Ibn Rushd's whole "discourse" (*maqāl*) gives the impression of representing a defense of the philosophers against al-Ghazālī's criticism of them, because the latter had attracted so much public attention that a systematic response in published form was appropriate and needed.⁵⁴ This was all the more necessary, since al-Ghazālī's teachings flourished during the reign of the Almohads.⁵⁵

⁵² Günther, Ibn Rushd 256–258.

⁵³ Belo, Averroes 3.

⁵⁴ Ibn Rushd, Decisive treatise xl-xli (Butterworth's introduction).

Notably, al-Ghazālī's teachings were considered as unbelief under the dynastic predecessors of the Almohads, the Almoravids (r. 431–542/1040–1147), who promoted conservative theological stances based on Ash'arism; cf. Griffel, *Philosophical theology* 81. Indeed, the reception of al-Ghazālī's thought in the West during the Almoravid reign was not without tension. While, on the one hand, "his thought resonated with the profound aspirations of the Islamic societies of the day," as Fierro describes it, on the other, it represented

Like al-Ghazālī in *The deliverance*, Ibn Rushd discusses a number of specifics concerning knowledge acquisition and education in *The decisive treatise*, including significant limitations and restrictions on learning. However, in contrast to al-Ghazālī, from the outset Ibn Rushd stresses his principle idea that "intellectual reasoning or a combination of intellectual and legal reasoning" is a suitable, helpful, and divinely sanctioned method of study. He supports this view scripturally by repeatedly referring to relevant Quranic verses, including the saying of the Exalted, "So, reflect, you who have eyes [to see and understand]" (Q 59:2).

Against this epistemological background, Ibn Rushd explores several causes that prompted the emergence of contending intellectual groups and factions in Islam, including the theologians, philosophers, logicians, and natural scientists. However, he does not stop at analyzing the merits and shortcomings of these groups. He also offers advice on how to prevent or overcome these divides. Remarkably, much of his reasoning in this regard is framed within the context of education.

2.1 Theology

Ibn Rushd states that the Quran contains three ways of generating truth: (1) dialectical (*jadalī*), studied by the theologians; (2) demonstrative (*burhānī*), studied by the philosophers and natural scientists; and (3) rhetorical (*khiṭābī*), used by the majority of common people (*jumhūr ghālib*).⁵⁶ Problems with the dialectical pursuit of truth arise when differences among the theologians, concerning the interpretation of scripture, spill over to the common people, where they cause—as a consequence of the limited intellectual capability of the latter—confusion and turmoil. First, Ibn Rushd argues, there is the apparent meaning of scripture and the Law it contains, which generally needs to be respected. Second, there is interpretation of scripture, which should be conducted exclusively by those skilled in demonstration. Third, the results of such scriptural analysis must not be made available to the masses. Rather, they should be accessible only to those intellectually capable of understanding them. Therefore, the sophisticated methods used by the rationalist theolo-

a challenge to the traditional religious scholars. This seems to have led to "the dark and hotly debated episode of the burning of al-Ghazālī's work, ordered by the Almoravid *amīr* and instigated by certain Andalusī *'ulamā'*," as later Muslim historical sources indicate; cf. Fierro, Between the Maghreb 3.

⁵⁶ Cf. also von Kügelgen, *Averroes* $_{31-32}$. An alternative reading of the third term would be "discursive" (*khitābī*).

gians of the Ash'arite school in particular must be rejected, because they target not only the elite but also the masses with their interpretations of the Quran. Ibn Rushd states:

Those among them who reflected have wronged the Muslims in the sense that a group of Ash'arites has charged with unbelief anyone who is *not cognizant* of the existence of the Creator (glorious is He) by the methods *they have set down for cognizance* of Him in their books. But, in truth, they are the ones who are the unbelievers and those who are misguided. From here on they disagree, with one group saying "The first obligation is reflection," and another group saying, "Faith is" ...

If it were said, "If these methods followed by the Ash'arites and others adept in reflection are not the shared methods by which the Lawgiver intended to teach the multitude and by which alone is possible to teach them, then which ones are these methods in the Law of ours?" We would say, "They are the methods that are established in the precious Book alone ... And these are the shared methods for (a) teaching the majority of the people and (b) [the method for teaching] the select".⁵⁷

Here, Ibn Rushd sets clear limits to the scholarly tasks and duties of rationalist theology, whereas he includes both the Ash'arites and, as his arguments proceeds, the Mu'tazilites (who the Ash'arites oppose) as well.

At first glance, Ibn Rushd appears to draw conclusions here quite similar to those expressed by al-Ghazālī in *The deliverance*, where al-Ghazālī emphatically called upon the theologians to protect Islam from confusion and heresy by preserving the orthodox creeds, instead of long-windedly exploring "the true natures of things" and other themes irreverent to theologians (and the faithful).

Still, Ibn Rushd expressly names al-Ghazālī in *The decisive treatise* as a champion of the Ash'arite school of theology. In other words, Ibn Rushd is rather indifferent to al-Ghazālī's venture of voicing criticism of the dialectical theologians on the one hand and recommending logic as tool of theological learning on the other. Instead, Ibn Rushd points out the risks of dealing with theological matters discursively, since such activities do nothing in defense of the Quran and the Law. He also states that the discursive theologians would "end up at

⁵⁷ Ibn Rushd, *Decisive treatise* 30–31 (§§ 54, 55, italics by S.G.); see also ibid., xxxvi (Butterworth's introduction; italics by S.G.). See also Fakhry, *Averroes* 12–35 ("The critique of Ash'arite theology").

the point where no one grasps an interpretation of them" anymore. Also, the doctrinal quarrels of the theologians had achieved nothing but an increase of heretical innovations (*wa-li-dhālika kathurat al-bida*^c).

Ibn Rushd's advice on the matter is that dialectical theologians should admit that the Quran is "completely persuasive and able to bring about assent for everyone."⁵⁸ With this argument, Ibn Rushd essentially readjusts the collective intellectual focus onto the inclusiveness of the Quranic scripture and the divinely revealed Law. At the same time, he undermines and ultimately rejects al-Ghazālī's ideal of learning—that is, one that centers on the acquisition of intuitive knowledge (*ma'rifa ḥadsiyya*) as the proper method to arrive at certainty (*yaqīn*), as *The deliverance* and other works al-Ghazālī wrote at a mature age display so clearly.⁵⁹

2.2 Philosophy

Ibn Rushd views philosophy and logic as closely linked and interrelated disciplines. This has led some modern scholars to speak of Ibn Rushd's philosophical logic.⁶⁰ In *The decisive treatise*, Ibn Rushd famously determines that "the Law makes it obligatory to reflect (*naẓar*) upon existing things (*mawjūdāt*) by means of the intellect, and to consider (*i'tibār*) them" by syllogistic reasoning (*qiyās*), which means "deducing (*istinbāt*) and inferring (*istikhrāj*) the unknown from the known." Furthermore, he says that the most complete kind of reflection on the Law not only calls for but also urges and warrants performing "demonstration" (*burhān*).⁶¹

In the course of establishing these key instructions for rationalist learning within the tradition of the Aristotelian proof, Ibn Rushd identifies some critical issues that arise when certain groups of scholars make use of philosophical

⁵⁸ Ibn Rushd, *Decisive treatise* 29-30 (§§ 52, 54).

Although not made explicit, Ibn Rushd appears to contest one of al-Ghazālī's key statement that reads, "My soul regained its health and equilibrium and once again I accepted the self-evident data of reason and relied on them with safety and certainty. But that was not achieved by constructing a proof or putting together an argument. On the contrary, it was the effect of a light, which God Most High cast into my breast [in reference to Q 6:125]. And that light is the key to most knowledge. Therefore, whoever thinks that the unveiling of truth depends on precisely formulated proofs has indeed straitened the broad mercy of God ... From that light, then, the unveiling of truth must be sought." Cf. al-Ghazālī, *Deliverance* 4 (§15).

⁶⁰ Ibn Rushd, *Decisive treatise* 1 (§1). See also Leaman, Ibn Rushd 645; and Griffel, *Philosophical theology* 81.

⁶¹ Ibn Rushd, *Decisive treatise* 2-3 (§ 3).

logic and demonstration in matters concerning the interpretation of scripture. For this argument, he takes the belief in the hereafter and its conditions as a model.

Ibn Rushd here refers first to the Ash'arites. He criticizes them as those who "pretend to demonstration, saying that it is obligatory to take these descriptions [of the hereafter] in their apparent sense since *there is no demonstration* rendering that apparent sense preposterous."⁶² Other scholars, especially the mystics, must be objected to as well, since many of them apply the philosophical method of demonstration in the same manner when interpreting the Quranic descriptions of the hereafter. Still, although making use of one and the same method, they reach considerably different conclusions. Al-Ghazālī in particular was criticized in this regard, because he inadequately combined these two ways of learning for religious instruction in his books when (a) referring to the lack of demonstrative proof in rendering an assumption positive, and (b) using demonstrative proof for individual spiritual interpretations.⁶³

Ibn Rushd sums up this point by maintaining that the common people need to take the Quranic verses on the hereafter in their apparent literal $(z\bar{a}hir)$ sense; any figurative interpretation of them $(ta'w\bar{a}l)$ represents, leads them to, unbelief (kufr). Thus, interpretations of verses concerning the hereafter should be mentioned only in books of demonstration $(kutub \ al-bar\bar{a}h\bar{n}n)$, and they should only be made available to those who are adept in demonstration, in the Aristotelian tradition of philosophy and logic. "Whereas, if they are established in other demonstrative books with poetical and rhetorical or dialectical methods used in them, as does Abū Ḥāmid [al-Ghazālī], that is an error against the Law and against philosophy," Ibn Rushd concludes.⁶⁴

2.2.1 Logic

Within this rather composite reasoning on literal and figurative understandings and interpretation of scripture, the importance of philosophical logic in knowledge acquisition and learning plays a central role for Ibn Rushd. This is notable since, through his plea for a demonstrative approach to scripture and its Law, which should be made available only to qualified intellectuals, the author apparently intends to cast aside the doubts of those among his fellow Muslims who are engaged in both jurisprudence and syllogistic reasoning.

⁶² Ibid., 20–21 (§ 32).

⁶³ Ibid., 21 (§ 32).

⁶⁴ Ibid., 21 (§ 33–35). See also Horten, *Texte* 23–27.

In order to strengthen his appeal for studying philosophical logic, Ibn Rushd appears to offer three key points, which can be summarized as follows:

- In general, the Quran and the Law it contains urge humankind "to reflect upon existing things by means of the intellect, and to consider them." Here, Ibn Rushd reaffirms his central view that he already prominently voiced at the beginning of his treatise and several more times throughout the book.
- 2) *More specifically*, the purposes of study for the jurist and for the philosopher do not essentially differ; in fact, they are similar. Ibn Rushd again refers to the divine command "Consider, you who have sight" (Q 59:2) and maintains, "This is the [divinely revealed] text for the obligation of using both intellectual and Law-based syllogistic reasoning."
- 3) *Finally*, syllogistic reasoning conforms to the Law; it is no heretical innovation. In other words, Ibn Rushd argues, "the Law calls for the most complete kind of reflection by means of the most complete kind of syllogistic reasoning, and this is the one called demonstration." Anyone who desires to be cognizant of God and of all the existing things by means of demonstration needs to know, first, the different kinds of demonstration and, second, in what way demonstrative syllogistic reasoning (*qiyās burhānī*) differs from dialectical (*jadalī*), rhetorical (*khiţābī*), and sophist syllogistic (*mughālaţī*) reasoning. Importantly, if grounded in these kinds of study activities, the learner does not cross the borders of faith. Quite the reverse, cognizance of God is achieved by, and conforms to, cognizance of intellectual syllogistic reasoning.⁶⁵

In spite of his open critique of al-Ghazālī, Ibn Rushd does not demand limiting access to al-Ghazālī's books. Instead, as Charles Butterworth noted in his introduction to *The decisive treatise*, Ibn Rushd calls for "greater attention to the intention of the Law and the methods by which it calls to human beings."⁶⁶ Individuals who are intellectually qualified to read books on philosophy, logic, and the natural sciences could and should study these sciences. Likewise, they may also read and benefit from al-Ghazālī's books. But the common people, with their limited intellectual abilities, must be prevented from such unrestricted readings. In fact, those responsible for the believers need to monitor and enforce these educational restrictions, on the premise that while the Quran does speak to all the people, it does so in different ways. Ibn Rushd clarifies this further, stating:

⁶⁵ Ibn Rushd, *Decisive treatise* 1–3, 3–6 (§ 2–3, 3–10). See ibid., xxiii (Butterworth's introduction), and Fakhry, *Averroes* 36–42 ("Logic and theory of knowledge").

⁶⁶ Ibn Rushd, *Decisive treatise* xxx (Introduction).

What is obligatory for the Imams of the Muslims is that they ban those of [al-Ghazālī's] books that contain science from all but those who are adept in science (*ahl al-'ilm*), just as it is obligatory upon them to ban demonstrative books from those not adept in them (*man laysa ahlan minhu*).⁶⁷

In view of the wide spectrum of human intellectual capabilities, Ibn Rushd further specified these rules of learning. He recommended that:

- Those of limited intellectual capabilities must not study demonstrative books under any circumstances. The harm and confusion that might occur to their faith, caused by ideas they do not understand, would be too significant. This group of people should be banned from reading books on scientific and demonstrative issues altogether.
- Those of superior innate dispositions may study demonstrative books. Still, attention needs to be paid, since a lack of practical virtue, inexperience in structured reading, and the absence of a teacher may mislead them.
- Those belonging to the intellectual elite are advised to engage in reading books on philosophical logic and demonstration and to become cognizant of their ideas to the utmost possible degree. Forbidding them to deal with these concepts is equivalent to keeping them ignorant, which is tantamount to inflicting an injustice upon them.⁶⁸

By and large, Ibn Rushd advocates that the contents and methods of teaching and learning must correspond to the capabilities of the individual human mind. However, more specifically, in focusing on the intellectual elite, he expresses views on education that have far-reaching consequences, and not just for related basic educational and ethical values (such as the freedom of all individuals—or the lack thereof—to pursue their interests as they see them). Indeed, the learning restrictions to be enforced on the masses also clearly limit their participation in communal and societal matters. Any decision-making in public affairs, for example, is thus reserved for the elite.

2.2.2 Metaphysics

While Ibn Rushd deals with metaphysics extensively in his other writings,⁶⁹ he makes it clear in *The decisive treatise* that his primary purpose here is to prove that "reflection upon philosophy and logic" is an obligation for Muslim students. Furthermore, Ibn Rushd clarifies that, for him, philosophy is an inquiry

⁶⁷ Ibid., 22 (§ 36).

⁶⁸ Ibid., 1 (§1).

⁶⁹ See esp. Genequand, *Ibn Rushd's metaphysics* and El-Ehwany, Ibn Rushd.

into existent things (*al-mawjūdāt*) rather than into being (*al-mawjūd*). In other words, metaphysics, as a science that is traditionally understood to study the fundamental nature of all reality or being (i.e., first causes or unchanging things), is not of primary concern to Ibn Rushd in this work, where he attempts to reconcile scripture and philosophy (or science) and thus to harmonize the faith-versus-reason dichotomy. Still, our author is explicit about his own position on learning: (a) he follows Aristotle in metaphysical problems and (b) he defines metaphysics as a theoretical science, which explores the causes and principles of being. This also means that it is a science concerned with the knowledge of being as such.⁷⁰

Within this general framework, Ibn Rushd stresses that demonstrative truth (and, along these lines, philosophy, since it searches for the truth) cannot conflict with scripture. If philosophy and scripture disagree on the existence of any particular being, scripture is to be understood figuratively and thus to be in need of interpretation. Since the existence of literal and figurative speech, as well as apparent and inner meaning in matters of scripture, has been known to previous generations, both Muslim and non-Muslim, and since it has been accepted by all groups of Muslim scholars—theologians, philosophers, and jurists alike—the question of interpretation (and its limits) gains much significance.⁷¹

Why this is the case, what interpretation as a tool of learning means, and why the philosophers alone are equipped with the unique methods of demonstrative knowledge will be addressed in greater detail below in the context of Ibn Rushd's views on the political sciences.

2.2.3 Mathematics and Physics

Ibn Rushd obtained a systematic knowledge of the mathematical sciences at a young age, but he did not practice them in his later years. In Seville, for example, he had studied with the court physician-philosopher and natural scientist Abū Jaʿfar b. Hārūn al-Tarjālī (d. 575/1180), who was employed by the Almo-

Arabic-Islamic scholarship came to know and make use of two distinct types of metaphysics, a metaphysics of Being and a metaphysics of the One. While the first is that of Aristotle, the second is that of Plotinus (since Plotinus's *Enneads* was mistakenly ascribed to Aristotle). Cf. El-Ehwany, Ibn Rushd. Here, Ibn Rushd's statement from his short treatise on metaphysics, *Talkhīş Kitāb al-nafs* (*Summary of [Aristotle's] book on the soul*), is reproduced, which introduces his review of the composition of beings and their source of behavior and knowledge. It reads, "Our aim is to pick from the *Metaphysics* of Aristotle his theoretical doctrines." Ibid., 560. See also Sweeney, Greek essence 52–57.

⁷¹ Ibn Rushd, *Decisive treatise* $6 (\S 9)$, $9 (\S 13)$, and $20-21 (\S \S 32-34)$.

had ruler Abū Yaʻqūb Yūsuf (r. 558–580/1163–1184), and in Marrakesh with the astronomer Abū Ishāq Ibn Wādiʻ, an otherwise unknown scholar.⁷²

In The decisive treatise. Ibn Rushd embeds his views on the art of mathematics (*sinā'at al-ta'ālīm*) within the wider discussion of whether Muslims could or should rely on and make use of achievements put forward by those "not sharing [in our religion]." He makes it explicit that, by this reference, he means "those ancients who reflected upon these things before the religion of Islam." If the ancients had already investigated a matter completely, Muslims should, he recommends, seize their books and analytically study (nazara)73 the subject matters they contain, so as to get a firm grasp on these subjects. If the respective information proves to be correct, it should be accepted and become part of the body of knowledge in Islam, whereas it is necessary to alert people to anything incorrect in this regard and to set things right. This brings Ibn Rushd to the conclusion that true understanding of a matter can only be achieved through the accumulation of knowledge from "one person after another" (*wāhid baʿda wāhid*), meaning that, in so doing, "the one who comes after [...] rel[ies] upon the one who preceded him" (yastaʿīna fī dhālika al-muta'akhkhir bi-l-mutaqaddim).74

This insight of the sixth/twelfth-century Muslim thinker is remarkable in more than one respect. Primarily, it brings to mind Isaac Newton's (1642–1727) modest but nonetheless famous saying, "If I have seen a little farther than others, it is because I have stood on the shoulders of giants." At the same time, Ibn Rushd here reveals an awareness of a universal idea that today is sometimes understood in connection to the concept of cultural heritage. According to this idea, processing information is a way that enables people to usefully bring past experiences to bear on their present situation. In other words, "the concepts of the past, painstakingly abstracted and slowly accumulated by suc-

⁷² Ibn Rushd himself mentions this in his most important work on astronomy, *Mukhtaşar al-Majisţī* (*Summary of the Almagest*, written between 1159 and 1162). This book, however, is "more an attempt to understand the scope of theoretical astronomy in his time rather than an attempt at an authoritative work" on the topic. Cf. Forcada, Ibn Rushd 565. In addition, Ibn Rushd was familiar with the works of several important Muslim natural science scholars, such as the astronomer and mathematician Abū Muḥammad Jābir Ibn Aflāḥ (Lat., Geber; died toward the middle of the sixth/twelfth century; not to be confused with the alchemist Geber), and the writer on practical and theoretical astronomy Abū Isḥāq Ibrāhīm b. Yaḥyā al-Zarqālī (Lat., Arzachel; 419–479/1029–1087), both from al-Andalus; as well as the Egyptian mathematician, astronomer, and physicist Ibn al-Haytham (Lat., Alhazen, ca. 354–430/965–1039).

⁷³ Butterworth translates *nazara* throughout his book as "to reflect."

⁷⁴ Ibn Rushd, *Decisive treatise* 4-6 (§§ 5-7, 9).

cessive generation[s], become available to help each new individual form his own conceptual system," to use the words of the British pioneer in mathematics education, Richard R. Skemp (1919–1995).⁷⁵

Intriguingly, Ibn Rushd continues his observations by saying that the special need for successive knowledge accumulation and learning goes "along the lines of what occurs in the mathematical sciences (*'ulūm al-taʿālīm*)."⁷⁶ Clarification of this viewpoint follows swiftly. Taking the arts of geometry (*sināʿat al-handasa*) and astronomy (*sināʿat 'ilm al-hay'a*) as examples, Ibn Rushd alerts his reader that, if these disciplines had not already come into existence, people would not know the use of them and be unable, for instance, to find the distance between celestial objects. (It is of note that Ibn Rushd is known for having studied these specific problems in geometric astronomy with his astronomy teachers in Seville and Marrakesh, and that he later theorized about them in his *Mukhtaṣar al-Majisṭī—Summary of the Almagest*—written between 554– 557/1159–1162).

Although not mentioning al-Ghazālī by name, Ibn Rushd seems, at this point in *The decisive treatise*, to reiterate—and refute—a statement made by al-Ghazālī in *The Deliverance*. Al-Ghazālī, in his autobiography, had used the solar and lunar eclipses as examples to support his argument that dealing with the mathematical sciences and syllogistic demonstration can be harmful to one's faith and to the Islamic religion in general. For Ibn Rushd, by contrast, learning about the sizes of the heavenly bodies, their shapes, and their distances from each other is safeguarded and called for by the Law because demonstration—the method used to obtain this kind of mathematical knowledge—entails an action (or a thought process) that all those capable in the mathematical sciences trust. But, without making use of knowledge and experience established by the previous generations, it is impossible "in this time of ours" (*fī waqtinā hādhā*) to learn of these phenomena. It is impossible even for the most intelligent person, unless "by means of revelation (*waḥy*) or something resembling revelation."

2.2.4 Political Sciences and Ethics

Ibn Rushd was keenly interested in the political sciences (as he was in public affairs), while the term "political sciences" in his case may best be rendered as political philosophy. Indeed, he argued expressly in favor of a practical political philosophy, one that "probes the foundations and guiding principles of

⁷⁵ Skemp, *Psychology* 15–16.

⁷⁶ Ibn Rushd, Decisive treatise 5 (§8).

the law," as Daniel Frank noted.⁷⁷ Ibn Rushd conceived of "a society grounded in obedience to a divine law," while manifesting "a coherent and theoretically defensible structure."⁷⁸ Within this wider political-philosophical context, education and its practical implications for Muslim society played an important role in Ibn Rushd's thought. This is evident, for example, in his own biography, for in 547/1153 Ibn Rushd accepted the invitation of 'Abd al-Mun'im (r. 527–558/1147–1163), the enlightened and philosophically interested Almohad ruler at that time, to come to Marrakesh and act as adviser on the ambitious project of building educational and literary institutions throughout the Almohad empire.⁷⁹ Interestingly, one of the schools which 'Abd al-Mun'im seems to have consulted Ibn Rushd on was a college that specialized in preparing clerks (*muwazzafūn*) for work in the Almohad administration.⁸⁰

Along these lines, several of Ibn Rushd's writings speak of his keen interest in political and ethical issues related to the state and society at large. This is exemplified in Ibn Rushd's commentaries on Plato's *Politeia* (the only Arabic commentary on this work) and on Aristotle's *Nicomachean ethics*. In his commentary on Plato's *Politeia*, for instance, Ibn Rushd makes the distinction significant in the Islamic context—between Muhammad the founder of an (as Ibn Rushd saw it) "ideal state" and Muhammad the Prophet. Here, Ibn Rushd also expresses the idea that an ideal state can exist and flourish only under the

⁷⁷ Frank, Political philosophy 520.

⁷⁸ Ibid.

Renan, Averroës 15, was the first who drew attention to these activities of Ibn Rushd. He wrote, "L'an 548 de l'hégire (1153), nous trouvons Ibn-Roschd à Maroc, occupé peut-être à seconder les vues d'Abd-el-Moumen, dans l'érection des collèges qu'il fondait en ce moment, et ne négligent pas pour cela ses observations astronomiques." One notes, of course, that Renan used *peut-être*, "perhaps," in his remarks. Furthermore, see Arnaldez, Ibn Rushd 909–920; Ibn Rushd, *Decisive treatise* xiv (Butterworth's introduction); and Günther, Ibn Rushd 252–253, with more primary source material in support of the above statement.

⁸⁰ The curriculum of this college required students to memorize Mālik's al-Muwațța' (*The smoothed path* [on learning Islamic law]) as well as Ibn Tūmart's A'azz mā yuțlab (*The most cherished of what is required* [to live the life of a faithful Muslim]). In addition to training in legal issues and the religious-ideological foundations of the ruling Almohads, the students also received physical, and even military, training in preparation for their roles as future administrators, while the caliph guaranteed all living expenses, including the costs of the horses and weapons. Later, the school's graduates replaced senior administrators from the previous Almoravid dynasty, who were then appointed as councilors (*fī l-mashūra*) to the junior administrators. Cf. the anonymous book, *Kitāb al-Ḥulal al-mawshiyya fī dhikr al-akhbār al-Marrākishiyya (The book of embroidered cloaks: On the history of Marrakesh*) 150–151; this text has been dated to the eighth/fourteenth century. See also al-Manūnī, *Hadārat* 17; and Urvoy, *Ibn Rushd* (*Averroes*) 33.

guidance of a philosopher-king. Indeed, the Platonic idea of a philosopher-king appears as a model for Ibn Rushd to conceptualize a just and perfect polity a concept that he seems to have viewed as potentially being realized in Islam within his own lifetime.⁸¹

In *The Decisive treatise*, Ibn Rushd expresses much of his political-ethical thought during his deliberations on Quranic passages on the hereafter and the impact these verses and their interpretations have on different groups of people in society. The Quranic statements on the hereafter hold such special significance for Ibn Rushd because they compel citizens—in different ways and according to their intellectual capabilities—to ethical behavior, so that people adequately contribute to their communities and societies. Ibn Rushd instructs his readers:

You ought to know that what is intended by the Law (*shar*^c) is only to teach true science (*al-'ilm al-haqq*) and true practice (*al-'amal al-haqq*). True science is cognizance (*ma'rifa*) of God (may He be blessed and exalted) and of all the existing things as they are, especially the venerable ones among them; and cognizance of happiness in the hereafter (*al-sa'āda al-ukhrawiyya*) and of misery in the hereafter (*al-shaqā' al-ukhrawī*).

True practice is to follow the actions that promote happiness and to avoid the actions that promote misery; and cognizance of these actions is what is called practical science (*al-'ilm al-'amalī*).⁸²

Ibn Rushd also notes that the Muslims had turned away from observing the soul-related, ethical principles stipulated in the Quran in general and in the verses on the hereafter in particular. Therefore, al-Ghazālī (whose viewpoints on these verses and their refutation play a central role in this part of Ibn Rushd's argument) had, in his main work, *The revival of the studies of religion*, called upon his fellow Muslims to return to piety, to an ascetic-mystical lifestyle, and to what brings about true happiness.⁸³ But, in spite of his commendable intentions, al-Ghazālī had failed. Although not explicitly mentioning al-Ghazālī in the subsequent passage, Ibn Rushd points out that the failure lay in not understanding the "instructive" nature of the scriptures. Therefore, even religious

⁸¹ For Ibn Rushd's critical views of contemporary polities, see Rosenthal, Place 249–250; see now also Tamer, *Islamische Philosophie* 152.

⁸² Ibn Rushd, *Decisive treatise* 23 (§ 38). For a differentiation between the Law and religion on the one hand, and faith on the other, see Manser, Verhältnis xxv, 20–28.

⁸³ Ibn Rushd, *Decisive treatise* 23 (§ 38).

learning is in need of demonstration and rational thought. Ibn Rushd makes this idea clear, stating:

[w]hat is intended by the Law is teaching "true science" and "true practice." *Teaching* is of two sorts: A) *forming a concept* and B) *bringing about assent*, as those that dialectical theology have explained; and there are three methods of bringing about assent for people: 1) demonstrative, 2) dialectical, and 3) rhetorical; and two methods of forming concepts: either a) by means of the thing itself or b) by means of a likeness of it;

[but] not all people have natures such as to accept demonstration or dialectical arguments, let alone *demonstrative arguments*, given the difficulty in teaching demonstrative arguments and the lengthy time needed [for this] by someone adept at learning them ...⁸⁴

Given these explicit theoretical premises of several ways to use scripture for the purpose of instruction, Ibn Rushd also suggests a number of implicit, practical effects of this process. The latter become evident, for example, in his suggestions to educate through developing in the student the ability to respond to common features of categories ("concept formation") or by prompting the student to agree with something after thoughtful consideration ("bringing about assent"). As this endeavor of interpreting the scriptures has direct bearings on politics and ethics in Muslim societies, those intellectually capable of deducing meaning from difficult-to-understand passages in the Quran are obliged to do so. What exactly he means by the term interpretation, Ibn Rushd specifies as follows:

The meaning of interpretation is: drawing out the figurative significance of an utterance from its true significance without violating the custom of the Arabic language with respect to figurative speech in doing so.⁸⁵

Here, the science of interpretation (*`ilm al-ta'wīl*) is expressly identified as the practical side of applying demonstration in instruction, although both activities—demonstration and interpretation—lead to the truth, if carried out by the learned and conducted properly.⁸⁶ However, for anyone not skilled in

⁸⁴ Ibid., 24 (§ 39); slightly modified.

⁸⁵ Ibid., 9 (§13); see also 17 (§23–24).

⁸⁶ Ibid., 13 (§16).

this discipline, "it is obligatory to take them [the verses with descriptions of the next life] in their apparent sense: for him it is unbelief (*kufr*) to interpret them because it leads to unbelief."⁸⁷

3 Conclusion

To conclude our exploration of al-Ghazālī's and Ibn Rushd's views on the boundaries and horizons of learning expressed in two of their most influential treatises, we highlight the following points.

First, al-Ghazālī and Ibn Rushd were well aware of the fact that, within a religiously framed education, issues may occur that delay learning, hinder it, or make it entirely impossible. Some of these difficulties relate to the human individual and their personal responsibilities, and arise from a lack of personal effort and insufficient commitment to learning (al-Ghazālī), character flaws such as untruthfulness, selfishness, and arrogance on the part of the learner and/or the teacher (al-Ghazālī), insufficient practical virtue and inexperience in structured reading (Ibn Rushd), and studying without a teacher (Ibn Rushd). Other problems relate more generally to a given educational environment, including specifics of the intellectual culture championed by the scholars of an academic discipline (al-Ghazālī), and different methods of instruction that teachers apply, dissimilar sorts of guidance that they offer, and varying relationships that they build with their students (Ibn Rushd).

Second, further constraints on learning are determined by the natural mental abilities of humans, which are "God-given." This basic view represents an understanding that al-Ghazālī and Ibn Rushd share. Yet, while al-Ghazālī suggests that humans might compensate for natural intellectual limitations through individual learning efforts, so that they fulfill their responsibilities as members of the community, Ibn Rushd, by contrast, opines that the majority of the common people, with their limited abilities of understanding, need to be restricted to learning through sensory perception, believing in the literal meaning of scripture, and acquiring practical skills.

Indeed, according to Ibn Rushd ordinary citizens must not engage in higher learning nor have direct access to its fruits. The intellectual elite, by contrast, must fully engage in creative learning, which dwells on demonstrative reasoning, rational assent and attentive imagination. Building on this thought, Ibn Rushd advocates that philosophical sophistication (in the Aristotelian

⁸⁷ Ibid., 21 (§ 34); see also 18–19 (§§ 25–27).

tradition) is not only a natural component of the elite's education but also a highly instrumental means of directing and correcting traditional Islamic beliefs.

Third, al-Ghazālī promotes an educational concept that credits basically every human with the right to and the potential for learning and understanding. According to this model, the act and experience of acquiring knowledge or skill is accessible to—and attainable by—every human being. With this key idea, al-Ghazālī stimulated Islamic learning in significant ways. Ibn Rushd, in turn, distinguishes between two different, though complementary, concepts of learning:

- 1. a traditional concept for the common people, which rests on the authority of the scriptures and the maxims of prophetic tradition (in their literal understanding), along with the consensus of religious scholars; and
- 2. an imaginative concept for the intellectual elite, which dwells on philosophical sophistication and reason, along with an exclusive mandate for the figurative interpretation of Scripture.

Hence, the common people must concentrate on the practical aspects of life. The more practical the knowledge is, the more suitable it is for the common people. Deeper insight into the world and the divine essence, however, is a privilege of the select few. Ibn Rushd justifies this position by pointing to the serious problems that arise when rationalist or figurative interpretations of scripture spill over to the common people, causing nothing but confusion and turmoil and, indeed, harming the common people's faith. Therefore, only those with superior innate dispositions and intellectual capabilities are mandated to apply reason in learning, and they should do so without restriction. Restraining the elite from higher learning would be equivalent to keeping them ignorant and treating them unjustly, which is against the Law.

Fourth, al-Ghazālī and Ibn Rushd offer distinctly different views about the ends and endeavors of knowledge acquisition. Al-Ghazālī, for example, stresses that:

- attainment of inner virtue and spiritual perfection, so as to draw closer to God, are the true goals of learning, not the acquisition of authority over or recognition from others, nor the accumulation of worldly treasures;
- acquisition of reliable, definite, and comprehensive information helps attain certainty of knowledge and the "deliverance from error";
- understanding the relation of the different sciences to the objectives of learning is an important precondition for success in learning;
- contrasting assessments of ideas help generate new knowledge;
- prioritizing one's own, self-determined targets in knowledge acquisition facilitates learning, as does avoidance of excessive involvement with the

arguments of the adversary or the many different opinions prevalent in the community of scholars; and, finally,

 gradual transition from guided learning to self-study is necessary, since mere imitation of the teacher (or the parent) prevents new insights.

Al-Ghazālī makes many of these points with explicit reference to his own process of lifelong learning and his teaching activities. After contemplating several major branches of scholarship that he studied during his life, he singles out mysticism from all other branches of knowledge, be it theology, philosophy, physics, metaphysics, or the political sciences. For him, the effect of the "light, which God casts into the human breast," is the key to true knowledge. Mystical insight and spiritual growth thus constitute the only trusted path of selfactualization leading to the final goal of human existence—that is, eternal life and happiness in the hereafter. Interestingly, in this regard, al-Ghazālī also concludes that the mathematical sciences pose a particular risk to the unprepared religious student, because their fine precision and the clarity of their proofs may diminish a student's faith and make him disavow religion altogether.

Ibn Rushd, in turn, emphasizes that:

- contents and methods of teaching and learning must correspond to the capabilities of the individual human mind;
- true understanding is accomplished only successively—that is, new insights are based on the achievements of other individuals and former generations; and
- reliance on accomplishments of those belonging to cultures and religions other than one's own is essential for cultural progress.

Within this general context, Ibn Rushd makes two more specific points which are significant for education. First, philosophical logic and demonstration are religiously lawful and highly effective means of interpreting scripture and are superior to intuitive knowledge acquisition. And second, a polity needs to be guided and ruled by the most erudite, a philosopher-king, in order to succeed and flourish.

Fifth, in *The decisive treaties*, Ibn Rushd criticizes al-Ghazālī directly on more than one occasion, as al-Ghazālī—although adhering to the Ash'arite school of theology himself—had disapproved of the speculative theologians for their dialectical approach to scripture on the one hand, while recommending logic as a tool of theological learning on the other. Al-Ghazālī was to be contested regarding this, Ibn Rushd argues, because he confused people by inadequately applying two methods that must not be applied in the context of religious learning. Ibn Rushd states that al-Ghazālī was mistaken in (a) using the lack of demonstrative proof to render an assumption positive, and (b) using demonstrative proof for individual spiritual interpretations. Ibn Rushd objects to this

practice, for he believed that al-Ghazālī caused people to detach themselves from both philosophy *and* religion. Alternatively, Ibn Rushd highlights the central role of philosophical logic in knowledge acquisition and learning generally, as well as the demonstrative approach to scripture and its Law more specifically.

Last but not least, in spite of the differences in the educational approaches taken by the two Muslim thinkers, both al-Ghazālī and Ibn Rushd had an immense influence on Islamic learning. While al-Ghazālī's powerful intellect, and his combination of rationalism, mysticism, and orthodox belief, shaped Islamic thought in a way that is still evident today, by contrast, Ibn Rushd did not have any direct followers among medieval Muslim scholars-whereas the Latin and Hebrew translations of his incisive philosophical works found an attentive audience among European Christian and Jewish scholars. In view of such markedly dissimilar appreciation and judgment which the intellectual heritages of the two thinkers received in the Muslim pre-modern world, one wonders if al-Ghazālī's more inclusive approach to learning (which bears the majority of the Muslim community in mind and indeed addresses them) must not be seen as a significant factor in the wide acceptance of his scholarly views and intellectual legacy. By contrast, Ibn Rushd's exclusive approach to learning (privileging the intellectual elite, while limiting the educational goals and opportunities of the majority of the population) seems to have deprived him of any major impact in the Muslim pre-modern world. While al-Ghazālī's thought continued to have a significant impact on later Muslim scholars, both premodern and modern,⁸⁸ it was only in the nineteenth and twentieth centuries that Ibn Rushd's rationalism started to be "rediscovered" by certain (liberal) Arab Christian and Muslim intellectuals⁸⁹—and introduced into the intellectual discourse of the contemporary Arab world.

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⁸⁸ On this question see Griffel and Tamer (eds.), Islam and rationality.

⁸⁹ These include the Syrian Farah Anţūn (1874–1922), the Egyptian Muhammad 'Immāra (b. 1931), the Moroccan Muhammad 'Ābid al-Jābirī (1935–2010), the Egyptian Hasan Hanafī (b. 1935), and the Syrian Țayyib Tizīnī (b. 1934), to mention only a few particularly prominent thinkers. Cf. von Kügelgen, Averroes; and Hoigilt, Islamist rhetoric 106–140.

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