

The Configuration of Philosophy in the Islamic Milieu

The Translation Movement

The importance of the Islamic intellectual tradition in the reception, development, and transmission of Greek science and philosophy to medieval Europe is a fact abundantly confirmed by historians of philosophy and ideas. The role of Islamic thinkers during the 'Abbāsid period did not consist in a mere paraphrasing and preservation of ancient treatises; rather, they conceived original ideas and new insights to discuss problems within their own Islamic context. Without their intellectual work, the preservation and development of Greek philosophical thought would have been interrupted. European science and philosophy are unimaginable without their Greco-Islamic sources. Christian theologians like Albert the Great and Thomas Aquinas, two exemplary but, in this regard, not unique Christian figures, inherited the philosophical vocabulary and arguments of thinkers like al-Fārābī, Ibn Sīnā, and Ibn Rushd through Latin translations produced in the 12th century in the School of Toledo. Beyond the doctrinal agreements and disagreements between Christians and Muslims, the way in which the concepts and arguments of the Islamic philosophers were analyzed and assimilated within the Christian context is proof of a rich intellectual debt owed to Muslim thought, even if it also involved a great deal of debate, disagreement, and criticism.

There is nearly endless textual evidence and a vast amount of specialized literature that compels us to recognize how medieval Europe inherited Islamic (and also Jewish) science and philosophy. Yet in 2008, the French historian Sylvain Gouguenheim published a controversial book, *Aristote au Mont Saint-Michel: Les racines grecques de l'Europe chrétienne* (*Aristotle at Mont-Saint-Michel: The Greek Roots of Christian Europe*), in which he denied that Islamic civilization was able to assimilate Greek philosophy and science. He maintained that Christians like James of Venice (11th century) and the Christian monks of Mont Saint-Michel translated and cultivated philosophy actively, as compared to Islam, which was, according to Gouguenheim, too stagnant and reluctant to cultivate scientific and philosophical disciplines. Gouguenheim tried to show that Christian Europe never lost sight of its Greek roots. He insisted that the translation of philosophical texts from

Greek into Latin remained constant. He thus reduced the importance of the Latin translations of Arabic translations produced in Baghdad from the 9th to the 10th centuries and which made their way to Europe in the 12th and 13th centuries (Gutas 1998b; Bruns (ed.) 2003; D’Ancona 2010).

Indeed, Baghdad was the cradle of Islamic philosophy and science. As mentioned, during the ‘Abbāsīd period, several scholars translated and studied not only philosophical treatises but works from other disciplines—religious sciences, alchemy, astronomy, mathematics, medicine, history, geography, etc. Study of Aristotelian logic in Baghdad proved essential for the cultivation of medicine and astronomy. And philosophy (*falsafa*) was adapted to the Islamic context. It was in this environment that al-Kindī, the first philosopher of the Arabs, and his circle emerged, as well as notable translators, namely, Ḥunayn ibn Ishāq (d. 873 CE) and his son Ishāq ibn Ḥunayn (d. 910 CE). In Chapter 1, I mentioned that during al-Ma’mūn’s time as caliph, the ‘Arabs’—among whom there were Christians and Muslims—managed to assimilate philosophy, especially Plato, Aristotle, and Neoplatonism.

1. The Translation Movement: From Greek Into Syriac Into Arabic

During al-Ma’mūn’s time as caliph, Baghdad became an interreligious center in which Muslims, Muslim converts, and Eastern Christians converged. In this center, there was apparently a royal library, a group of copyists, bookbinders, and, of course, translators. The environment was not only interreligious but also multilingual: Greek, Syriac, and Persian scientific and philosophical materials circulating in Baghdad were translated into Arabic. Since Syriac was a derivation of the Aramaic language, used, along with Greek, by a considerable number of Eastern Christians, it became a useful intermediary. And in the processes of translation from Syriac into Arabic—two relatively similar languages—some Greek-Christian concepts were also transmitted into the Islamic intellectual tradition (Brock 1977; Hugonnard-Roche 1990; Penn 2015).

Translating a text is partly an act of linguistic and cultural appropriation; texts end up acquiring new meanings and new ways of being understood and interpreted. The appropriation of Greek, Syriac, and even Persian terminology into scientific, philosophical, and theological literature was particularly challenging for the translators in Baghdad. Each text required thorough revisions during its translation into Arabic, including decisions that determined the specific peculiarities and meanings of technical vocabulary, glossing over old ambiguities and raising new difficulties. In some cases, several translations of the same text are preserved, and there are differences between them. Careful recent scholarship has revealed the mediating value of Syriac and, in some cases, of Persian translations through comparisons between these manuscripts. Several scholars have been able to verify that, in some

cases, Eastern Christians, mainly Syriac speakers, played an important role in the process of transmission and diffusion of Greek scientific and philosophical texts into the Islamic civilization (Bergstrasser 1925, 1932; Brock 1977, 1979, 1993, 2007; Griffith 2008; Hugonnard-Roche 1990, 1991, 1993, 1994; King 2010; Takahashi 2015; Treiger 2016b; Vagelpohl 2008, 2010).

In the second chapter of his book, Gouguenheim acknowledged the important role Eastern Christian translators played. He argued that, between the 7th and 10th centuries, the Arab-Islamic culture was marginally influential and that those who truly translated and worked with the Greek scientific and philosophical texts were Eastern Christians. Indeed, Eastern Christians (Jacobites, Melkites, Nestorians, Maronites) translated several works from Greek into Syriac (Brock 1979–80) and later, after the Muslim conquests, from Syriac into Arabic (even in some cases directly from Greek into Arabic). Gouguenheim highlights the work of three important scholars in the 9th century, Ḥunayn ibn Ishāq (Nestorian), Theodor Abū Qurra (Melkite), and Yuhanna ibn Māsawayh (Nestorian). These translators and their work were certainly of great relevance. However, with these examples in mind, Gouguenheim infers too hastily that Islamic civilization owes practically everything to Eastern Christians. According to Gouguenheim, scholars often overlook this overwhelming debt, given that the commonly accepted view is that Europe is indebted to Islam. In other words, for many years, historians have argued that Europe owes Islam its civilizing development, whereas Gouguenheim claims Europe is ultimately indebted to Eastern Christianity.

Gouguenheim reasons from a premise that might not be so outlandish, if it were understood in a more nuanced way: it is true that Eastern Syriac Christian translators played an important role in the process of the transmission of Greek philosophy to the Islamic world. However, it is necessary to specifically define the role of Syriac language as an intermediary between Greek and Arabic. Eastern Christians played a crucial role in the transmission, construction, and evolution of certain philosophical concepts, especially logical and metaphysical concepts, for example, Aristotle's *Categories*. However, while some Christian translations played a mediating role in this transmission, the Islamic intellectual tradition was not sterile.

The translation movement during the 'Abbāsid period consisted in a process of assimilation and adaptation of Greek philosophical vocabulary into Syriac, Persian, and Arabic. The process of translation to and from different languages is a cultural phenomenon in constant development and in which terms become increasingly refined and precise. Understanding the manner in which words are used in texts and in language more broadly requires meticulous labor, analysis, and textual interpretation. Although in this case the translations were based on the Greek text, the unique translations into each language manifested new identities that introduced their own complexities. Thus, the Greek Aristotle, the Syriac Aristotle, and the Arabic Aristotle each have their own terminological complexities. The Syriac,

Persian, and Arabic versions of Aristotle are based on the Greek text but, at the same time, are new versions in different languages, acquiring a certain conceptual autonomy and distance from the original. Translating a text requires interpreting it, and a good translation can even clarify the original. But it is never identical to the original. The translation of scientific and philosophical treatises in Baghdad from Syriac and Persian intermediaries crucially occurred in an Arab-Islamic context. Understanding the interpretive choices requires understanding the context. Moreover, these translations were never truly complete; translation and interpretation remained active, and, in many cases, the Arabic versions kept improving.

Amidst this process of translation, Ḥunayn ibn Isḥāq was one of the most important Nestorian Christian translators in the transmission of medical and philosophical Greek texts into Syriac and Arabic. Ḥunayn came from a Christian community that remained faithful to Nestorian Christianity amid Muslim rule. He was bilingual from his youth; though Arabic was his mother tongue, his religious education was in Syriac, which was the liturgical language of the Nestorians. He moved to Baghdad to study medicine. Fed up with Ḥunayn's uncomfortable and complex questions, his teacher Ibn Māsawayh (d. 857 CE) expelled him from class. Ḥunayn was absent for more than two years. It is unknown exactly where he went, although some sources mention that he traveled to Alexandria. On his return, his knowledge of the Greek language was remarkable, and some biographies claim that he was able to recite Homer. When he reappeared in Baghdad, he was reconciled with his teacher and began to produce translations of Hippocrates and Galen for him. He translated more than 100 medical works, several philosophical texts, and even translated the Old Testament into Syriac.

In the *Epistle Addressed to 'Alī ibn Yahya on Books not Listed by Galen in the Catalogue of his Works* (*Fī Dhikr al-Kutub allatī lam yadhkurhā Jālīnūs fī Fihrist Kutubihī*), we can find a few remarks regarding Ḥunayn's philological methodology, which is quite close to our contemporary methodology of collating manuscripts and searching for variants (Strohmaier 2012; Bergstrasser (ed.) 1925; Bergstrasser 1932). In that epistle, Ḥunayn offers a detailed list of the books of medicine and philosophy he had at hand, also including a brief description of the parts that constituted each book as well as its contents. Furthermore, in some cases, he gives an account of the different manuscripts in Greek and Syriac he had managed to obtain and explains how he compared the different versions, combining them to arrive at a sufficiently consistent version before starting to translate (Brock 1979; Griffith 2008). Ḥunayn was thus not only a translator but also an editor.

Among other texts, he translated some of Aristotle's logical treatises, which are essential for the development of the scientific and philosophical method. Later in this chapter, I explain the content of Aristotle's logical treatises. Suffice it to say for now that Ḥunayn translated the following works from Greek into Syriac: Aristotle's *Categories* and *On the Interpretation*

(al-Nadīm 1998: 598–599), parts of *Prior Analytics*, *Posterior Analytics* (1998: 599–600), *Physics* (1998: 602), and complete versions of *On Generation and Corruption* and *On the Soul* (1998: 604). In addition, he translated the *Oath of Hippocrates* with a commentary by Galen and many of Galen's other works (1998: 679–685).

Translators like Ḥunayn and his son Ishāq ibn Ḥunayn are sometimes acknowledged but are seldom recognized as true philosophers. Such translators were responsible for the creation of much of the Arabic philosophical vocabulary. This vocabulary was, at that moment, still under construction, and words and concepts were refined as translations became more specialized. With Ḥunayn and his son, the process became highly sophisticated as compared to his predecessors who had engaged these complex texts for the first time.

2. Translation of Greek Philosophy into Arabic

As mentioned, several translations of Greek scientific and philosophical texts were produced in Baghdad. However, the growing demand for translations was due to the interest that caliphs had in science and philosophy. We should not think, then, that translations caused this interest but, rather, the opposite: given that there was interest, the work of the translators became increasingly valued and remunerated (Gutas 1998b: 137).

In the case of philosophy, perhaps the two most relevant thinkers were Plato and Aristotle, with their respective followers and commentators. Plato's works were not known in detail within the Islamic world. However, it seems that some of his dialogues were known indirectly through Galen's commentaries, through references made by other philosophers, and, in some cases, via fragments. And Aristotle's logical treatises, along with practically useful medical, astronomical, alchemical, and mathematical treatises, were in demand and translated early in the Muslim world and subsequently used for juridical and theological disputations. Further, many philosophical problems posed by Islamic thinkers were influenced by late ancient philosophers and commentators like Alexander of Aphrodisias, Ammonius, Simplicius, Themistius, John Philoponus, and others. Furthermore, parts of the works of Proclus and Plotinus were also translated and credited to Aristotle, resulting in confusion.

Ḥunayn ibn Ishāq, his son Ishāq ibn Ḥunayn, and others produced relevant philosophical and medical translations. At the same time, another group known as the al-Kindī circle also worked on philosophical translations. Al-Kindī, who apparently did not know Greek but led the translators, began to write, for the first time in Arabic, philosophical treatises containing his own ideas. The influence of these groups of translators extended until the end of the 10th century.

Reportedly, some of the first translations were of poor quality and needed improvement. While, in the 9th century, translators tried to refine new vocabulary coming from Greek through Syriac, some translators were not Arabic native speakers. Even those who were proficiently fluent found it difficult to deal with the technical vocabulary of ancient texts in Arabic. Early translators, such as Yaḥyā ibn al-Biṭrīq (d. 806 CE), translated literally, based on Syriac versions. Some of his Arabic translations were poorly written. When Ḥunayn improved the method of translation, he started to translate the sense of the texts and not only the words. Translation *ad sensum* demands that the translator understand the subject upon which he is working. For this reason, perhaps Ḥunayn and his son Iṣḥāq should be considered as philosophers, not mere translators.

Yaḥyā ibn al-Biṭrīq translated, among other works, several medical treatises by Hippocrates and Galen, as well as a famous pseudo-Aristotelian text known as *The Book of Secrets* (Arabic: *Sirr al-Asrār*; Latin: *Secreta Secretorum*). The latter treatise is supposedly a letter from Aristotle to Alexander the Great that deals with different sciences and topics. Several translations by Yaḥyā ibn al-Biṭrīq, for instance, his version of Aristotle's *On the Heavens*, were revised and corrected by Ḥunayn (al-Nadīm 1998: 603). This means that there was interest in improving the quality of the existing translations. Perhaps this is an indication that a small group of translators had begun to professionalize the labor of editing and translating. Without the labor of these scholars working in Baghdad, Islamic philosophers would not have had access to Greek thought.

Al-Kindī was the most prominent scholar of the 9th century, best known for his philosophical works. His circle of translators revised and corrected previous translations and translated important, previously inaccessible works, including Aristotle's *Metaphysics*, a selection of Plotinus's *Enneads* (books IV–VI) known as the *Theology of Aristotle* (incorrectly attributed to Aristotle), sections of Proclus's *Elements of Theology* (some of them attributed to Alexander of Aphrodisias) (Endress 1973; Zimmermann 2008), and another selection of Proclus's *Elements of Theology* under the title *The Book of the Pure Good* (later translated into Latin as the *Liber de causis*, an important treatise in medieval Europe). They also corrected a paraphrase of Plato's *Timaeus*, Aristotle's *On the Heavens*, *Meteorology*, and *The Book of Animals*, all by Yaḥyā ibn al-Biṭrīq, and they translated a compendium of Aristotle's *On the Soul*, which seems to have been a relevant source for al-Kindī's psychology (see Chapter 7). These translations are relevant not only from a philosophical point of view but from a philological one as well. As Endress (1997: 59) suggests, the philological and comparative analysis of these texts leads to what he calls 'guide fossils', summarized by Gutas (1998b: 146) as showing the construction and evolution of philosophical vocabulary, as mentioned earlier. In these translations, Greek, Syriac, and Persian terminology was

sometimes just transliterated, introducing technical foreign vocabulary into Arabic. Scientific and philosophical technical terminology was in the process of being developed, and translators decided how to deal with neologisms (i.e., words and concepts that lacked an equivalent in Arabic). The construction of this vocabulary was strongly influenced by the philosophers of Late Antiquity.

Although there is evidence that translators improved their methodology, the quality of the translations was irregular. While there were cases where the work of the translators faithfully portrayed the source text, there were also cases where the translations were problematic and lower in quality. Now, the concern about the quality of translations is not something of interest exclusively for contemporary scholars. It was also something that concerned the scholars in Baghdad at that time. And it was not a minor problem. A defective translation has repercussions in the way in which scientific and philosophical ideas are understood and assimilated. This concern was already present in the work of the 10th century bibliographer al-Nadīm, who wrote *Kitāb al-Fihrist* (*The Catalog* or *The Index*), which attempted to record the number of texts that circulated in and around Baghdad at the time.

The date of birth of Abū al-Faraj Muḥammad ibn Ishāq al-Nadīm, better known as al-Nadīm, is unknown. He is thought to have died around 995–998 CE, although this too is uncertain. By all accounts, his father was a book dealer in Baghdad, a man who showed interest in acquiring manuscripts and copying them to sell the copies. The copies were practically the same size as a modern book but were copied by hand on thin paper and then bound in leather. If nothing else, this origin story accounts for al-Nadīm's exhaustive knowledge of available manuscripts.

In the opening pages of the *Fihrist*, al-Nadīm summarizes the variety of subjects from which materials were translated: treatises on language and calligraphy; translations of the Torah, the Gospels, and other scriptures; grammars composed by different schools; treatises on history and genealogy; official books from the courts; pre-Islamic poetry and Islamic poetry from the Umayyad and the 'Abbāsid periods; treatises on Muslim sects and factions, juridical literature, philosophy, mathematics, astronomy and medicine; accounts of story tellers, fables, and even exorcisms, jugglers, and magicians; and descriptions of religious minorities and foreign cultures like India, Southeast Asia, and China.

The *Fihrist* gives us an overview of available philosophical translations. This overview gives us a good idea of the best-known translators at the time, which texts they rendered into Arabic, and who commented on those texts. Al-Nadīm first presents a historical account of how philosophy came to Islamic lands. The account refers to tensions between the Persians and the Byzantines and to how this resulted in a concentration of philosophy within Persian lands, where there were Christian communities in conflict with

Byzantium. Once Muslims controlled those territories, they encountered scholarly communities that had been established in those lands (see Chapter 1). After this historical account, al-Nadīm lists the names of the translators: al-Biṭrīq, his son Abū Zakarīyā' al-Biṭrīq, Qusṭā bin Lūqā, Ḥunayn ibn Ishāq and his son, among others. In some cases, al-Nadīm makes evaluative remarks on their work as translators. For example, he says that Qusṭā bin Lūqā (d. 912 CE) had great skills as a translator and good literary style in Greek, Syriac, and Arabic. He also mentions that sometimes Qusṭā bin Lūqā produced his own translations, and, in other cases, he corrected the work of others. Al-Nadīm lists names of translators who translated Persian into Arabic, as well as others who translated Sanskrit texts from India.

Al-Nadīm also provides information regarding different accounts of the origins of Greek philosophy. He quotes Porphyry's *Philosophical History*, according to which the first philosopher was Thales. He mentions that there was an available Syriac version of Porphyry's book and two chapters were translated into Arabic. He mentions that Plutarch disagreed, arguing that the first philosopher was Pythagoras and Socrates was his successor. What is noteworthy in these remarks is that they show that the translators and thinkers of Baghdad had awareness, at least indirectly, of the oldest philosophers, those thinkers whom we now call the Pre-Socratics. Baghdadi scholars also had biographical data on, and anecdotes (oftentimes apocryphal) regarding, Socrates, Plato, and Aristotle.

According to al-Nadīm's account, Baghdadi scholars of his time were aware of the existence of almost all of Plato's dialogues. This does not mean, however, that there were Arabic translations available. In fact, according to Gutas, "no dialogue of Plato is known to be fully translated into Arabic and none survives" (2010a: 811). He thinks Plato's philosophy was known through Galen's paraphrases. It is notable, however, that in his *Philosophy of Plato*, al-Fārābī provides an account of the dialogues in a very original thematic organization. This means he knew the dialogues at least by name and had some idea of the philosophical problems discussed in each of them. In addition, according to al-Nadīm, Ḥunayn ibn Ishāq explained the *Republic* (*Siyāsa*) and translated the *Laws* (*Nawāmīs*). In *The Fihrist*, it is also reported that Yaḥya ibn 'Adī translated the *Laws*. Al-Nadīm reports that he "read what was written in the handwriting of Yaḥya ibn 'Adī" as an Ishāq's translation of the *Sophist* with a commentary by Olympiodorus. He mentions other dialogues that seem to have been known at the time: the *Timaeus* (from which al-Nadīm says that Ḥunayn corrected al-Biṭrīq's translation), Galen's compilation of the *Parmenides*, the *Phaedrus*, the *Meno*, the *Hipparchus*, the *Menexenus*, and the *Statesman*. According to al-Nadīm's information, it seems that several Platonic dialogues were known by the 10th century (1998: 591–594).

Aristotle's works were known in greater detail than those of Plato. As mentioned earlier, however, some Neoplatonic treatises were attributed to

Aristotle, which led several Islamic philosophers to a ‘Neoplatonization’ of Aristotelian philosophy (al-Nadīm 1998: 594–611). By the early 9th century, most of Aristotle’s logical treatises had been translated, with the *Isagogē* of Porphyry (*al-Īsāghūjī*) serving as an introduction to them. Very soon, translations of *Categories* (*al-Maqūlāt*), *On Interpretation* (*al-‘Ibāra*), and *Prior Analytics* (*Kitāb al-Qiyās*) followed. Porphyry’s *Isagoge* and these three Aristotelian works were known as ‘the four books’.

Topics (*Kitāb al-Jadal*), *Sophistical Refutations* (*al-Mughālita* or *al-Aafsata*), and *Rhetoric* (*al-Khitāba*) were also translated. Abū Bishr Mattā worked on the translations of *Posterior Analytics* (*Kitāb al-Burhān*) and *Poetics* (*Kitāb al-Shi’r*) so that by the 10th century, there were already complete translations of the entire *Organon* into Arabic. Note that, following the Alexandrian tradition, *Rhetoric* and *Poetics* were included as logical treatises, as these two disciplines also dealt with syllogisms (see Chapter 4). The case of the *Poetics* is particularly striking because the Arabic translators were completely unaware of what tragedy and comedy were. So, their understanding of the treatise is far from Aristotle’s original aim. As explained in Chapter 4, from the *Poetics*, some Islamic philosophers invented the idea of a poetic or imaginative syllogism. Ancient commentaries on the logical treatises were also translated, notably, those by Porphyry, Stephanus, Ammonius, Themistius, Theophrastus, Simplicius, and Alexander of Aphrodisias.

Aristotle’s *Physics* (*Kitāb al-Samā’ al-ṭabī‘a*) was translated along with the commentary by Alexander of Aphrodisias and with other Aristotelian works on natural science, like *On the Heavens* (Latin: *De Caelo*; Arabic: *Kitāb al-Samā’ wa-al-‘Alam*), *On Generation and Corruption* (*Kitāb al-kawn wa-al-Fasād*), *On Meteorology* (*Kitāb al-Āthār al-‘Ulwīyah*), and *On the Soul* (*Kitāb al-Nafs*). Some commentaries on these works by Themistius, Olympiodorus, Simplicius, Philoponus, and Alexander of Aphrodisias, were also translated, in whole or in part.

In addition to the translation of Aristotle’s *On the Soul*, al-Nadīm includes *On Sense and the Sensible* (*Kitāb al-Ḥiss wa al-Maḥsūs*) and the *Book of Animals* (*Kitāb al-Hayāwān*). The former is a free adaptation of the *Short Treatises on Nature* (*Parva Naturalia*) (Hansberger 2014). The latter is an integration of Aristotle’s writings on animals (*History of Animals*, *Parts of Animals*, and *Generation of Animals*) into a single volume. Aristotle’s *Movement of Animals* seems to have not been translated into Arabic.

As mentioned earlier, Aristotle’s *Metaphysics* (*Kitāb al-Ilahīyāt*) was translated by the circle of al-Kindī. This treatise was also known as the *Book of Letters* (*Kitāb al-Hurūf*) because the books that constitute it were indicated with Greek letters. Commentaries by Alexander of Aphrodisias and Themistius on book *Lambda* were also translated into Arabic. These commentaries influenced iconic philosophers like al-Fārābī, Ibn Sīnā, and Ibn Rushd (see Chapter 6).

Al-Nadīm does not provide much information regarding Aristotle's treatises on ethics (*al-Akhlāq*). He mentions a commentary by Porphyry translated by Ishāq and a Syriac version of a commentary by Themistius. Compared to the other Aristotelian treatises, information regarding the ethical treatises remains sparse, except for the *Nicomachean Ethics*. Islamic philosophers knew about the ethical treatises; references are made by al-Kindī, al-Fārābī, al-ʿĀmirī, Miskawayh, Ibn Bājja, and Ibn Rushd. Al-Fārābī wrote a commentary on the *Nicomachean Ethics* that is no longer extant, although Ibn Bājja, Ibn Tufayl, Maimonides, and Ibn Rushd refer to it. Also, al-Fārābī's extant treatise *Directing Attention to the Way to Happiness* reveals that he knew the *Nicomachean Ethics* in several parts. Miskawayh's *The Refinement of Character* (*Tahdhīb al-akhlāq*) is clearly influenced by Aristotle's work (see Chapter 8). In the 1950s, scholars Arthur J. Arberry and Douglas M. Dunlop discovered an Arabic manuscript of the *Nicomachean Ethics* in Fez. Although it is dated from 1222 CE, it is likely a copy of an earlier version from the 9th or 10th century. This version is now edited (Akasoy and Fidora 2005; Ullman 2011) and proves the existence of this translation. In addition, in 1243, Hermann, the German, translated into Latin an Arabic abridgment of the *Nicomachean Ethics* known as *Summa Alexandrinorum* (*Ikhtiṣār al-Iskandarānīyīn*) (Woerther (ed.) 2020). There is not enough evidence, however, of an Arabic translation of the *Eudemian Ethics* or the *Magna Moralia*.

The translation of Aristotle's *Politics* poses unique questions. It is commonly accepted that this is the only major treatise that was not translated into Arabic. Apparently, the Arabs knew about it but lacked access to it. In fact, in the 12th century, Ibn Rushd wrote a commentary on Plato's *Republic* in al-Andalus, and he affirms in the first pages that Aristotle's *Politics* "has not yet fallen in our hands" (Averroes 1974: 4). However, an earlier political treatise, al-Fārābī's the *Political Regime*, shows parallels with parts of the *Politics*. This suggests that a version of Aristotle's politics or parts of it at least were in circulation around the time of al-Fārābī (Brague 1993: 23–433; Syros 2008: 303–310). Perhaps, for instance, al-Fārābī and others had access to a Persian translation. However, this is still a live question.

In addition to the previous list of treatises, several pseudo-Aristotelian texts circulated among the Arabs: the *Book of Causes* (*Liber de causis*), *On the Causes of the Properties of the Elements* (*De causis proprietatum elementorum*), *Epistles* (*Epistolae*) (one addressed to Plato and another to the mother of Alexander the Great), *On the Stones* (*De lapidibus*), *Mechanics* (*Mechanica*), *On Marvelous Things Heard* (*De mirabilibus auscultationibus*), *On the World* (*De mundo*), *Economics* (*Oeconomica*), *On Physiognomy* (*Physiognomonica*), *On Plants* (*De plantis*), *The Book of the Apple* (*De pomo*), *The Principles of Universality* (*De principiis universitatis*), *Problems* (*Problemata*), *Book of Secrets* or *The Secret of Secrets* (*Secreta secretorum*), *Theology* (*Theologia*), and *On Virtues and Vices* (*De virtutibus et vitiis*) (Peters 1968a: 54–75).

Some of these writings derived from Neoplatonic philosophers—Plotinus, Porphyry, Proclus—and strongly influenced al-Kindī, al-Fārābī, and Ibn Sīnā, for example, the *Theologia* and the *Liber de causis*. Scholars working on the transmission of Greek philosophy into the Islamic context group these Neoplatonic and pseudo-Aristotelian materials under the moniker *Neoplatonica Arabica*. Part of this collection is known as the *Plotiniana Arabica* and includes *The Theology of Aristotle*, the *Sayings of the Greek Sage*, and the *Epistle of Divine Science*. The *Neoplatonica Arabica* also includes the *Book of the Pure Good* (*Liber de causis*), a group of propositions taken, edited, and altered from Proclus's *Elements of Theology*. The circle of al-Kindī translated the *Theology* and *The Pure Good* and likely the rest of the *Neoplatonica Arabica*.

The *Theology of Aristotle* significantly influenced later Arabic philosophy. Although it is a paraphrase of excerpts of Plotinus, it does not adhere to the *Enneads* either in content or ordering. The Neoplatonic idea of God, or the One, and a subsequent intellect that depends upon God for its existence, through which all other beings in the world emanate, were taken from this text by al-Fārābī and Ibn Sīnā and incorporated into their own philosophies (see Chapters 5 and 6). The *Theology* also explained the immortality of the soul, absent in the authentically Aristotelian texts. The *Book of the Pure Good* described an emanative process stemming from a First Cause, which proved essential for these philosophers, and even for those of the Latin Christian tradition.

The pseudo-Aristotelian works shed light on the way Aristotle was seen in the Islamic context. For example, the *De pomo* or *The Book of the Apple* (Margoliouth 1892: 187–252; Acampora-Michel 2004; Gutas 1986), a curious imitation of a Platonic dialogue that takes place between Aristotle and his disciples, loosely adapts Plato's *Phaedo* and tells the story of Aristotle's death. Aristotle's disciples visit him on his deathbed. Given that their teacher will leave them soon, the disciples start asking him about the essence of the soul and its immortality. Aristotle explains that the essence of the soul is knowledge, and only in knowledge does the soul find its highest happiness and pleasure (not in food or drink or in sensual pleasures). Therefore, the philosopher is not afraid of death but awaits it happily. The joy that his limited knowledge in this world gave him is a guarantee of the rapture that he will experience in the afterlife. This is a surprisingly Platonic take on Aristotle.

The *Fihrist* reports the existence of translations of other philosophers and their materials: works by Theophrastus, Aristotle's disciple; treatises by Proclus, including his *Elements of Physics* and a commentary on Plato's argumentation for the immortality of the soul (Chemi 2014); and other texts. Among several commentaries on Aristotle's works by Alexander of Aphrodisias, al-Nadīm mentions two texts that were especially relevant for philosophical discussions, namely, Alexander's *On the Soul* and his treatise *On Providence*. Furthermore, the *Fihrist* provides information on works

by Porphyry, Ammonius, Themistius, Galen, Nicolaus, Plutarch, Olym-piodorus, Hippocrates, and other authors seldom mentioned in the histories of philosophy. The account in the *Fihrist* even refers to the works of Islamic philosophers like al-Kindī and some of his disciples, al-Fārābī, and even a few Eastern Christians (Abū Bishr Mattā, Yaḥya ibn ‘Adī, and Ibn al-Khammār) from the second half of the 10th century.

3. Other Sources for Translators, Translations, and Philosophers: Miskawayh and Ṣā‘id al-Andalusī

The *Fihrist* is not the only treatise that provides valuable insight into the transmission of Greek philosophers and their texts in the Islamic world. At least two other important sources provide a complementary perspective: the collection of works circulating within the philosophical circle of the Persian philosopher Miskawayh and a treatise composed in al-Andalus by Ṣā‘id al-Andalusī.

The former is a compilation from the 11th century named after its editor and translator, *Philosophy Reader from the Circle of Miskawayh* (Wakelnig 2014). Miskawayh (d. 1030 CE) was an eclectic philosopher, a contemporary of Ibn Sīnā, and part of the Persian aristocracy. In fact, he served as a chancellor in the Buyid Dynasty, an Iranian Shī‘ite faction in the region of Shiraz. This region was under the control of the Buyid Dynasty beginning in 934 CE, when they defeated the ‘Abbāsids. Miskawayh wrote *The Refinement of Character*, an influential ethical treatise built upon a theory of virtue rooted in Greek philosophy. He and several of his works are mentioned throughout the *Philosophy Reader*.

These treatises, presumably compiled by someone from the Miskawayh Circle, contain excerpts from Arabic translations of Greek philosophers studied and discussed in the Miskawayh Circle. Within the treatises, we see a convergence of Neoplatonic and Late Ancient philosophy. These sources may have been read by participants in the Circle in the second half of 10th century and the first part of the 11th century. The list of philosophers and treatises mentioned is immense, so I will only refer to those that are crucial for understanding the topics and discussions in later chapters.

Alexander of Aphrodisias’s *On the Intellect* (*Fi al-‘aql*) (Finnegan 1956), a very influential text for philosophical explanations and discussions regarding intellectual knowledge and the way in which human beings grasp intelligibles is mentioned (see Chapter 7), though the compiler of the *Philosophy Reader* might have lacked direct access to Alexander’s treatise. Al-Fārābī, who also wrote a treatise on the intellect, was likely the intermediary if this was the case (Wakelnig 2014: 17–18). An anonymous and interesting paraphrase of Aristotle’s *On the Soul* appears. Philosophers interested in the powers of the soul tended to weave together topics from *On the Soul*, especially those

on perception, with medical treatises (see Chapter 7). Galen, Hippocrates, and even Ḥunayn ibn Ishāq's introduction to Galenic medicine are relevant sources woven together in the treatise.

Other important sources include the *Epistles* (*Rasā'il*) of the *Brethren of Purity* (Ikhwanal-Safā'), a 10th century sect of intellectuals based in Baghdad; a treatise on human nature (Latin: *De natura hominis*; Arabic: *Kitāb al-Abwab fī ṭabī' a al-insān*) written by Nemeseus of Emesa, a 4th–5th century Christian philosopher; references to Plato's *Phaedo*, the *Laws*, and a treatise that includes selected readings of Plato, including Galen's paraphrase of the *Timaeus*; from the *Plotiniana Arabica*, *The Sayings of the Greek Sage*, the *Theology of Aristotle*, and the *Epistle of Divine Science*; Proclus's *Elements of Theology*, under the title *Kitāb al-īdāh fī al-khayr al-maḥḍ* (*Liber de causis*); texts by the pseudo-Pythagoras commented by Iamblichus and Proclus; Themistius's paraphrase of Aristotle's *Metaphysics*, book *Lambda*; and many other sources.

As seen, several thematic interests formed part the bulk of the discussions in the 11th century, and a mature assimilation of philosophical topics had taken place, unlike the second half of the 8th century, which was still finding its philosophical footing. As *The Philosophy Reader* shows, the scope of the philosophical canon in the 11th century included the thought of major philosophers like al-Fārābī and Miskawayh himself, as well as intellectual communities like the Ikhwān al-Safā'. Philosophy had been well-assimilated into Islamic lands, as this 11th-century treatise shows. Miskawayh and his circle were interested in complex philosophical discussions of God, divine providence, the nature of the heavens, the principles of motion and its kinds, substance and its kinds, the notion of First Cause, the creation of the world, the nature and faculties of the soul, the intellect, the relation between body and soul, the immortality of the soul, the physical activities of the body, the role of the brain and the heart, the formation of embryos, sense perception, sensation and imagination, virtues and human action, the essence of the good, and happiness.

Another valuable source for learning about the transmission of philosophical and scientific texts into the Islamic context is a treatise composed later and in a different context, in al-Andalus, Spain, in 1068 by Šā'id al-Andalusī, the *Book of the Categories of Nations* (*Kitāb Tabaqāt al-Umam*). This source gives us insight regarding which scientific and philosophical texts circulated both in Baghdad and later, in al-Andalus. In this treatise, Šā'id mentions eight cultures that were interested in science: Indians, Persians, Chaldeans, Greeks, Rūm (the Romans, that is, the Christians of Byzantium), Egyptians, Arabs, and Hebrews. According to Šā'id, the Arabs knew several moral and educational Indian treatises, among them *Kalīla and Dimna*, a collection of moral fables with animals as protagonists, translated by the Persian Ibn al-Muqaffa' (d. 757 CE). The Arabs also learned arithmetic from the Indians and astrology and astronomy from the Persians and the Chaldeans.

Šā'id explains that the Greek sages were revered due to their interest in all knowledge: mathematics, logic, natural science, metaphysics, and political science. He argues that the five most important philosophers were Empedocles, Pythagoras, Socrates, Plato, and Aristotle. Empedocles deserved fame for his ability to unify the attributes and concepts of God in his philosophy, while Pythagoras earned appreciation for his advancement of arithmetic and music. Socrates is described as one of Pythagoras's students and as a specialist in metaphysics. He was put to death, according to Šā'id, because he publicly disagreed with the idolatrous worship practiced by many Greeks. Plato was described as a disciple of Pythagoras and Socrates, versed in every branch of philosophy, having written books on a variety of subjects and teaching students about nearly every topic.

Šā'id gives us an imprecise description of Plato. First, he says Plato lectured his students while walking, and, for this reason, his students became known as the Peripatetics, or pedestrians. This description seems to confuse Plato with Aristotle, whose students are referred to as the Peripatetics. Furthermore, Šā'id describes Plato as a religious man. Šā'id mentions that, toward the end of his life, Plato entrusted the teaching of his doctrine to his most eminent disciple and isolated himself from the people, consecrating himself to the adoration of his god (al-Andalusī 1996: 22–23). As far as we know, Plato spent his final years teaching and writing in the Academy he had founded. After these brief biographical references, Šā'id mentions some of Plato's works: *Phaedo*, *Republic*, and two versions of the *Timaeus*, namely, the *Timaeus of the Spirit* and the *Timaeus of the Physics*. Everything indicates that the first is the *Timaeus* written by Plato and the second is a commentary by Galen.

According to Šā'id, Aristotle was the most eminent Greek philosopher and represents the culmination of the entire Greek philosophical tradition. Aristotle made logic the most appropriate method for science and made the art of demonstration the most perfect of the logical arts. Šā'id mentions that Aristotle wrote on all the subjects of science and philosophy. He composed books on the different branches of philosophy, on the application of philosophy, and on the instruments used in philosophy and the other sciences. Regarding the different branches of philosophy, he wrote on mathematics (a book on optics, another on lines, and a third on mechanics), on the natural science (*Physics*, *On Heavens*, *On Generation and Corruption*, *Meteorology*, *Book of Animals*, *On Plants*, *On the Soul*, *On Sense and the Sensible*, *On Health and Illness*, and *On Youth and Old Age*), and on metaphysics (Šā'id mentions 13 treatises, instead of 14, constituting the *Metaphysics*). He also wrote books on the application of philosophy, that is, practical philosophy, and Šā'id mentions the three ethics. As mentioned earlier, only the Arabic *Nicomachean Ethics* is extant. However, this reference confirms that the Arabs knew about all three ethical treatises. They also knew the book on politics, which, as Šā'id explains, deals with the

administration of the cities and the families. Finally, Šā'id refers to the writings on the methods used by philosophy and the other sciences, that is, the logical treatises. Again, he insists that we owe to Aristotle the systematization of logic. Indeed, as seen in Chapter 4, the logical and argumentative tools that appear in the logical treatises of Aristotle were crucial for Islamic thinkers.

In addition to the five most important Greek philosophers, Šā'id also alludes to Aristotle's commentators (Themistius, Alexander of Aphrodisias, Porphyry, Simplicius), and to the 'current' followers of the Greeks (Qusṭā bin Lūqā, al-Kindī, and al-Fārābī). Šā'id also refers to other Greek scientists who excelled in other areas, such as medicine (Hippocrates and Galen) and mathematics (Apollonius of Perga, Euclid, Archimedes, Ptolemy).

Regarding the sciences among the Rūm, Šā'id recognizes their work as translators. He mentions the work of Ḥunayn ibn Isḥāq, who, thanks to his knowledge of Greek and Arabic, produced high-quality translations of the works of Hippocrates and Galen, among others.

Regarding the Egyptians, Šā'id mentions treatises on geometry, astronomy, and astrology. Šā'id's chapter on science in Egypt is followed by a long treatment of science among the Arabs. Šā'id offers a brief history of the way in which Islam unified the beliefs of the Arabs by proclaiming the oneness of God and opposing polytheism. He relates that, during the 'Abbāsid Caliphate, al-Ma'mūn came into contact with the Byzantines and asked them for the books of the philosophers. According to Šā'id, this is how the Arabs received works by Plato, Aristotle, Hippocrates, Galen, Euclid, Ptolemy, and others. Al-Ma'mūn requested that the books be translated and studied. That is how, for example, al-Muqaffā' translated and studied the first three treatises of Aristotle's logic, namely, the *Categories*, *On Interpretation*, *Prior Analytics*, as well as Porphyry's *Isagoge*. Shortly thereafter, prominent philosophers began to emerge, like al-Kindī, Muḥammad ibn Zakariyā al-Rāzī, and al-Fārābī. Šā'id also includes several astronomers, astrologers, and mathematicians in his extensive report.

Additionally, Šā'id provides a detailed report about the state of science in al-Andalus, listing a vast number of Andalusian scientists with detailed information. When he refers to philosophy proper, he claims that Ibn Ḥazm of Córdoba studied Aristotelian logic and applied it to Islamic jurisprudence. According to Šā'id, Ibn Ḥazm criticized and polemicized Aristotle's logic but lacked rigor and depth.

The *Book of the Categories of Nations* ends with a chapter on science among the Jews. These are relevant insights since most of the information concerns Jews in al-Andalus who cultivated philosophy in Islamic lands and even wrote in Arabic. This process of adoption and adaptation of different sources by different cultures living under Muslim rule resulted in original philosophy and a distinct intellectual tradition, marked by the Islamic environment in which it was developed.

4. The Transmission of Aristotle's Logical Treatises

Logic is the methodological instrument of philosophy. As mentioned, the Islamic philosophical tradition is built upon Aristotle's logical treatises, which both systemized logic and supplied a theory of argumentation. Since Aristotelian philosophy was the primary scientific method among most Islamic philosophers, it is unsurprising that during the 'Abbāsid period Aristotle influenced theologians and jurists as well. The translation of Aristotle's logical treatises from Greek into Syriac and Syriac into Arabic occurred in several stages, occurring throughout a period from approximately the 6th–7th century to the 10th century. The first translations into Syriac, which served as the basis for later Arabic translations, were thus produced as early as the pre-Islamic period.

Two kinds of treatises within Aristotle's *Organon* can be distinguished: those that present the basic tools of logic and those that offer a theory of argumentation. The first group is comprised of the *Categories* (a treatise on the different kinds of predicates), *On Interpretation* (a treatise on the semantics and grammar of statements), and the *Prior Analytics* (a treatise on the syllogism and its kinds). Together with these three treatises, the Arabs included Porphyry's *Isagogē*, a didactic introduction to the *Categories*, and to all of logic. The second group includes the *Posterior Analytics* (a treatise on demonstrative arguments), the *Topics* (a treatise on how to build good, plausible arguments), the *Sophistical Refutations* (a treatise on sophistical arguments, i.e., those that lead to falsity and error), the *Rhetoric* (a treatise on how to build persuasive arguments and beautiful elocutions), and the *Poetics* (for Aristotle, a treatise on tragedy but among the Arabs, a treatise on persuasive beautiful images).

In the 7th century, Eastern Christians translated Porphyry's *Isagogē* and Aristotle's *Categories*, *On Interpretation*, and *Prior Analytics*, from Greek into Syriac. Between the 8th and 9th centuries, these treatises started being translated from Syriac into Arabic. These translations were mainly done by Christian scholars, among them the Nestorian Patriarch Timothy I (d. 823 CE), who translated the *Topics* for the first time. As mentioned, in the 9th century, the methods of translation were improved, and in some cases, paraphrases and epitomes by Galen, Ammonius, Themistius, Philoponus, and Alexander of Aphrodisias, were included. By then, some texts were translated from Greek into Arabic, while in some cases, the Syriac translation still played a mediating role. Some of the translators mentioned earlier implemented the new methods: Ḥunayn ibn Ishaq, his son Ishaq Ibn Ḥunayn, and Thābit ibn Qurra. These translators were fluent in Greek, Syriac, and Arabic and were focused on making the sense and meaning of the texts clear. In the 9th century, al-Kindī and his circle are also of note. Over the course of the 10th century, new translations were produced, which finally included complete

translations of Aristotle's *Posterior Analytics* and *Poetics*. Arab Christian translators like Abū Bishr Mattā (d. 940 CE) and Yaḥya ibn 'Adī (d. 974 CE) drove this final wave of translations.

As interest in logic increased among Christian Arabs and Islamic thinkers, critical reactions emerged from those who denied the usefulness of logic. Arabic grammarians, for example, designated logic to be mere Greek linguistics. Consequently, they rejected its usefulness in an Arabic context. A debate on the merits of logic and grammar that supposedly took place in 10th-century Baghdad between the Christian logician Abū Bishr Mattā and the Islamic grammarian Abū Ṣā'id al-Sīrāfī is mentioned by several biographers, like Ibn al-Qiftī or Yākūt, though the accuracy of the details is doubtful. However, the story illustrates the tensions between logicians and grammarians at the time.

For Islamic philosophers—as for modern logicians—logic and grammar are connected, as explained, for instance, in the *Enumeration of the Sciences* by al-Fārābī (see Chapter 4). However, in the aforementioned debate, al-Fārābī's teacher, Abū Bishr Mattā, appears to confuse the similarities and differences between logic and grammar. The awkwardness with which Abū Bishr conducts himself in the debate is unlikely. Abū Bishr translated several logical treatises and was undoubtedly able to distinguish between the aims of logic and the aims of grammar, revealing that the account of the debate was biased against the logicians.

Within the debate, al-Sīrāfī defends the superiority of grammar over logic. He denies that logic is an independent discipline that promotes correct reasoning. For al-Sīrāfī, correct reasoning is grounded within the particular grammar of language. For this reason, he thinks Greek logic only teaches the proper use of Greek language. Arabic grammar, or any particular grammar, is the primary instrument used to discern the truth or falsity of propositions in any respective language. Abū Bishr fails to convince his opponent that logic is a sort of 'universal grammar' and that, consequently, all particular grammars are subordinated to logic. This last idea is present in several of al-Fārābī's works, primarily the *Enumeration of the Sciences* and the *Book of Letters*. Although these issues will be revisited in Chapter 4, for now, it is worth mentioning that al-Fārābī understood logic as the instrument of all correct reasoning and, thus, as a discipline whose aim is to save us from erroneous reasoning in any language. Moreover, concerning the relationship between logic and grammar, al-Fārābī understood logic as a universal grammar that provides the universal rules for correct reasoning regardless of the particular language. Grammar, in contrast, provides the particular rules established by convention for the speakers of any language. Particular grammars are, therefore, subordinated to universal logic.

Aristotle's logic became the dominant method for science, not only in Late Antiquity, but also in the Arabic, Jewish, and Latin traditions. It is known, for example, that logic became an essential instrument for medical

diagnoses through inferences since the time of Galen. In the Islamic context, it was not only useful for medicine and other sciences but also for two important disciplines in that tradition: jurisprudence and theology.

5. The Connection Between Logic and Other Disciplines: Jurisprudence and Theology

Islamic jurisprudence (*fiqh*) is essential to the Islamic intellectual tradition. In general terms, Islamic jurisprudence is a discipline whose aim is to understand, interpret, and apply Islamic law (*sharīʿa*). The basic sources of Islamic law are the Qurʾān and the *aḥādīth* (traditions) or sayings of the Prophet (a collection of teachings and reports from the life of the Prophet). The analogical reasoning (*qiyās*) of the jurists and consensus (*ijmāʿ*) are also used for the interpretation of law. Jurists use these last two resources to derive rules. Hence, Islamic jurisprudence has two parts: the interpretation (*ijtihād*) of the basic sources, what it usually called ‘principles of jurisprudence’ (*uṣūl al-fiqh*), and the rules (*aḥkām*) that are derived from this interpretation, namely, legal practice (*furūʿ al-fiqh*).

Within the Islamic intellectual tradition, jurists have prestige and social relevance because they are the ones who apply divine law. Although the Prophet, as the recipient of revelation, drew the rules and criteria of action that guide his community from his revelation, legal difficulties appeared well after his death (see Chapter 1). The immediate successors to the Prophet applied the law from the Qurʾān and the *aḥādīth* in conformity with what the Prophet had taught, but no discipline yet existed to compile and systematize legal criteria. As an independent discipline, jurisprudence began to develop in the 8th century. In the second half of the century, scholars began to define a methodology for studying law.

The first treatise on jurisprudence is an epistle written by al-Shāfiʿī (d. 820 CE) (Hallaq 1997: 21). This treatise was the first attempt to set forth a method for interpreting the law and formulating rules. According to al-Shāfiʿī, not only Islamic law but also the methods by which the law is discovered rest upon the divine sources. Al-Shāfiʿī argued that *ijtihād* (or *qiyās*) was a method of interpreting the law that came from the Qurʾān itself. According to al-Shāfiʿī, there are cases in which the divine sources provide a clear legal solution and, therefore, no inference is necessary. However, in those cases in which there are no clear resolutions, it is necessary and obligatory to infer a solution from the divine sources (Hallaq 1997: 22–23). Although al-Shāfiʿī’s letter is rarely mentioned in juridical treatises in the 9th century, it is generally accepted as the first attempt at jurisprudence as we know it today (Hallaq 1997: 30–35).

Although there are outstanding jurists from the 8th century, it is not until the middle of the 9th century that some of them began to form circles of followers, which gradually developed into juridical schools. There

are four of these circles in the Sunni tradition, which received the name of their founders: Abū Ḥanīfa (d. 767 CE), Anas ibn Mālīk (d. 795 CE), Abū ‘Abd Allāh Muḥammad ibn Idrīs ibn al-‘Abbās ibn ‘Uthmān ibn Shāfi‘ī (d. 820 CE), and Ibn Ḥanbal (d. 855 CE).

Conceptions of jurisprudence that assimilated philosophy did not appear until the 11th century. The first two scholars to incorporate Greek logic into jurisprudence were al-Ghazālī (d. 1111 CE) and his teacher al-Juwaynī (d. 1085 CE). Al-Ghazālī is particularly relevant to the Islamic intellectual tradition, given his extensive work on theology, jurisprudence, mysticism, and his critical treatises against philosophy (Rudolph 2019; Opwis 2019). Al-Ghazālī was one of the major theologians of the Islamic tradition and a scholar who truly engaged in understanding and criticizing, but also in adopting, philosophical concepts and arguments. Traditionalist jurists distrusted logic, but al-Ghazālī, who was an intellectual with a Shāfi‘ī-Ash‘arī background, decided to engage with Aristotelian logic, as seen in his works.

In treatises like *The Standard of Knowledge* (*Mi‘yār al-‘ilm*), *The Touchstone of Thinking* (*Mihakk al-naẓar*), and *The Correct Balance* (*al-Qisṭās al-mustaqīm*) al-Ghazālī was convinced that logic was a relevant and valid tool for discussing theological matters. In fact, in *The Correct Balance* he connects logic with revelation and accepts the philosophical method as useful to attain knowledge (‘ilm) of God. In the introduction to one of his most relevant juridical treatises, *The Essence of the Science of the Methods of Jurisprudence* (*al-Mustaṣfā min ‘ilm al-uṣūl*), he insists upon the necessity of logic as an essential tool for any kind of knowledge. However, within this treatise, he does not carry out any formal logical analysis. In *Quenching the Thirst* (*Shifā al-Ghāṭil*), a juridical work, a syllogistic legal analysis is present. There, he explains how the deduction proceeds; the jurist applies a general principle (the major premise, usually a legal principle or a prescription) to a particular case or situation. In other words, to reach a decision, the jurist needs to interpret the legal principle and then decide how to apply this principle to a particular case.

In *Quenching the Thirst*, al-Ghazālī explains three kinds of proofs or demonstrations (*barāhīn*) that could be applied to legal situations: (1) causal demonstration (*i‘tilāl*) (the demonstration that provides the explanation of the cause), (2) non-causal or indicative demonstration (*istiḍlāl*) (a merely descriptive or explanatory demonstration), and (3) the reduction to absurdity (*khulf*) (1990a: 338–339). An example of causal demonstration would be the following:

Stolen property must be restored to its owner.

This is stolen property.

Therefore, it must be restored to its owner.

Also:

Property should be restored if destroyed.

Productive assets are property.

Therefore, productive assets should be restored if destroyed.

In these examples, there is a general principle and the particular case is subsumed under that general legal principle (1990a: 340–341). But, of course, in legal controversies there are disagreements. An adversary may agree with the first premise and disagree with the second. He may argue, for example: “I agree that theft is the motive for restitution, but I do not agree that restitution in the case of usurpation applies to productive assets.” When there is disagreement concerning the second premise, the adversary must present a different premise that affects the conclusion. Jurists are required to prove the consistency of their arguments and thus prove that their conclusion is the most suitable for that specific legal case.

The ‘indicative demonstration’ is a form of causal demonstration, but, in this case, the inference points to a conclusion from one matter to another without there being a necessary relation between them (1990a: 346–355). Al-Ghazālī explains some variants of this type of demonstration, but the most illustrative inference is the one that is used when two situations resemble one another. Take the following example: if a divorce case is considered valid, a temporary separation or distancing between a husband and a wife ought to also be considered valid (1990a: 351). Certainly, this kind of inference could be a matter of juridical controversy. However, what is relevant is the way in which jurists can build their inferences, transferring the conclusion from one matter to another similar matter. Finally, the third kind of demonstration is, as mentioned, the reduction to absurdity, a well-known type of reasoning in logic, used to invalidate the position of opponents by showing the absurd or impossible implications of their positions. When exemplifying this kind of demonstration al-Ghazālī brings up a juridical discussion on whether a Muslim who vows to perform retreat (*iʿtikāf*) in a mosque is obliged to fast and pray. He argues that while retreat implies a fast, prayer does not constitute a condition for retreat (1990a: 357–358). Of course, his stance is controversial, but this debate is beyond the scope of this discussion. What is important here is to point out that al-Ghazālī accepts logical formalizations in legal discussions.

Al-Ghazālī had several followers, like the jurists Ibn Qudāma (d. 1223), al-Āmidī (d. 1233), Ibn al-Hājib (d. 1248), and others (Hallaq 1990: 322–327, 330–334). His theological treatises also contain the acceptance of logic as a methodological tool. In his autobiography, *Deliverance from Error (al-Munqidh min al-dalāl)*, he reviews the different methodologies used by the seekers of the truth (theologians, philosophers, those who are persuaded by religious

authorities, and the Sufis). In his careful analysis of philosophical disciplines, he criticizes physics, metaphysics, ethics, and politics, but he accepts the superiority of mathematics and logic as philosophical disciplines that provide accurate methodologies. He mentions that logic helps improve theological argumentation. In fact, in *The Correct Balance*, another short treatise to which he constantly refers in his autobiography, he explains that Aristotle's syllogism is a crucial method for understanding revelation. For this purpose, he examines the structure of each kind of syllogism in the treatise. Although al-Ghazālī wrote several works on logic, *The Correct Balance* is his only treatise devoted explicitly to the use of syllogisms in the Qur'ān. Thus, al-Ghazālī's intention in that treatise goes beyond the mere comprehension of syllogisms; he holds that logic is helpful for interpreting the Qur'ān and that human reason is necessary to know God. To understand divine revelation correctly, al-Ghazālī affirms that it is necessary to weigh knowledge with the 'correct balance,' a clear allusion to a verse in the Qur'ān: "Weigh with a just balance" (Qur'ān 17: 35).

This 'balance', according to al-Ghazālī, consists in five scales emerging from the Qur'ān. He states:

[K]now that the balances of the Qur'ān are basically three: the balance of equivalence, and the balance of concomitance, and the balance of opposition. But the balance of equivalence is divided into three—the greater, the middle, and the lesser. So the total is five.

(1980b: 248)

The first three balances correspond to the three kinds of syllogisms explained in Aristotle's *Prior Analytics*, whereas the other two syllogisms correspond to the conditional syllogisms, the *modus tollens* and the *modus ponens*. Two examples of the way in which al-Ghazālī reconstructs Qur'ānic propositions will be illustrative. The *modus tollens* is exemplified by the typical conjunctive conditional 'if P, then Q; but not Q; therefore not P'. For example:

If the world has two gods, heaven and earth would have gone to ruin.
But it is a known fact that they have not gone to ruin.
Therefore, from these two it follows a necessary condition, viz. the denial
of the two gods.

A second example to the same effect is the following:

If there had been other gods beside the Lord of the Throne, they assuredly would have sought a way to the Lord of the Throne.
But it is a known fact that they did not seek that.
Therefore, from these premises it follows necessarily the denial of gods
other than the Lord of the Throne.

The *modus ponens* is exemplified by the disjunctive conditional (*modus tollendo ponens*), 'P or Q; but not P; therefore Q'. For example:

Either we are in manifest error or you are in manifest error.

But it is known that we are not in error.

Therefore, from their coupling, a necessary conclusion follows, viz. that you are in error.

Compared to his other treatises on logic, *The Standard of Knowledge* and *The Touchstone of Thinking*, the explanation of syllogisms in *The Correct Balance* is rather basic. For this reason, it may have been an introductory treatise or a work in which he was trying to simply show the advantages of syllogistic reasoning over the methods of theologians and jurists who denied the importance of logic. In short, al-Ghazālī held that logic is crucial for jurisprudence because it strengthens arguments and helps detect defective, vague, and fallacious arguments.

Al-Ghazālī remarkably gives logic a special place in jurisprudence. He states that logic is a helpful tool for jurisprudence and theology, but at the same time he does not hold, as philosophers do, that rational discourse is above revelation. Rather, both divine revelation and logical proofs should lead the mind to the same conclusions. Logic is not above revelation, nor does revelation replace logical reasoning. Logic leads to truth. Revelation is true *in se*. In this sense, they are interconnected. If syllogisms are used properly, they lead to the same conclusions as revelation. This does not mean, of course, that the truth of revelation comes from logic. Logic is a method that supports revelation. Al-Ghazālī admits that the Qur'ān contains hidden or invisible (spiritual) meanings that require interpretation (1980b: 263). The syllogism is a path to unraveling these hidden meanings. It is crucial to adopt the best method for understanding the Qur'ān; otherwise, it is easy to get caught up in ambiguities, which give rise to doubt and confusion. Logic is the correct method for detecting formal errors and the best route for attaining truth. In this sense, al-Ghazālī proceeds as philosophers do but with an important difference: logic never alters the content or inner dimension of the divine message. As seen in the next chapter, al-Ghazālī thinks philosophers have altered revelation, and some of them have tried to subordinate revelation to logic.

In conclusion, al-Ghazālī gave priority to logic as an appropriate method of verification. The science of the syllogism embodies the laws that govern our thinking. Therefore, logic provides the criteria that we must follow to discern whether or not a claim is valid. Since revelation is not self-evident, it is necessary to follow the principles of reasoning, which, according to al-Ghazālī, are presented by the Qur'ān itself. If the Book provides the 'scales' or principles of reasoning, revelation itself states the necessity of appealing to logical reasoning for verifying Qur'ānic verses. In this sense,

the Qur'ān itself provides the method that must be followed for understanding the divine message. According to al-Ghazālī, the Qur'ān has been composed with beautiful verses that can be converted into formal arguments with premises and conclusions. If these syllogisms are valid, we can conclude that: (1) the Qur'ān can be read systematically, (2) logic is helpful for avoiding ambiguities and equivocal interpretations of the divine message, and (3) logic is useful for verifying that both reason and revelation lead to the same conclusions.

Further Reading

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