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**SYSTEM OF KNOWLEDGE IN ISLAM AND ITS**  
**TRANSFORMATION<sup>1</sup>**

In what contexts were scholastic pursuits placed in traditional societies before the pre-modern era? What kinds of disciplines were known to the Islamic intellectual world and how were they understood? We can observe gradual changes over the course of time in scholarship as created and practiced by scholars in the Muslim lands. These changes are indicative of the way Islam, even if indirectly, has involved itself with different scholastic disciplines. In the present article, I will examine the classifications of the intellectual and traditional sciences as proposed by several philosophers or thinkers, and explore the links and relationships between Greek knowledge and knowledge based on the Islamic revelations.

**(1) Knowledge in Islam**

In the Qur'ān there are several passages which exalt the importance of science and knowledge (both of which are expressed as “*ilm*” in Arabic).

“God will exalt those who believe among you, and those who have knowledge, to high ranks”. (Q. 58: 11) This can be interpreted to mean that God endows higher ranks and more esteem to those who have religious belief and knowledge than those who do not.

“Say (unto them, O Muhammad): Are those who know equal with those who know not?” (Q39: 9) This means that people with learning are not equal with those without learning, and that people with learning have positions much higher than those of people without.

“As for these similitudes, We coin them for mankind, but none will grasp their meaning save the wise”. (Q. 29: 43) This means that without knowledge, one cannot understand the revelations of God; knowledge is indispensable for religion.

Although the nature of the knowledge implied in these phrases is not necessarily clear, it is at least possible to induce from these phrases that the possession and pursuit of knowledge is thought of highly in Islam. Furthermore, the lack of clar-

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<sup>1</sup> The present article is an amended version of my paper originally prepared for the Avicenna International Colloquium in Hamadan, Iran in August 2004, which is based on my previous study published in Japanese, «Isuramu no Dentouteki Chi no Taikei to sono Henyou (The Traditional System of Knowledge in Islam and Its Transformation)» // «Ajiagaku no Shoraizou (Prospects of Asian Studies for the Future)». Tokyo: The Institute of Oriental Culture, University of Tokyo, 2003. P. 405—430.

ity about the type of knowledge may be thought to imply a respect for knowledge in general.

Like the Qur'ān, the words of the Prophet Muhammad also contain many references to knowledge, including the following examples<sup>2</sup>.

“For those who walk the road in search of knowledge, God will prepare the road to Paradise”. (Muslim)

“Those with knowledge are the inheritors of the prophets”. (Abū Dāwūd and others)

“The pursuit of knowledge is a duty for every Muslim”. (Ibn Mājjā)

“On the day of resurrection there will be intercession to God by three: the Prophets, then the scholars, and then the martyrs”. (Ibn Mājjā)

“On the day of resurrection, the ink of the scholars will weigh as much as the blood of the martyrs”.

“Seek knowledge, even if it takes you to China”.

In addition to these words from the Prophet, Imam ‘Alī writes as follows: “Oh Kumayl! Knowledge is better than possessions. Knowledge protects you, but you must protect possessions. Knowledge is something to judge by, but possessions are things that must be judged. The more possessions you use the fewer you have, but the more you use your knowledge, the more you obtain”<sup>3</sup>.

We may conclude from these passages from the Qur'ān and *ḥadīth* that, generally speaking, knowledge and science were held in high esteem in Islamic civilization, and that the pursuit of knowledge was a respected human activity.

## (2) Khwārizmī's classification of the sciences

*Keys of the Sciences (Maḥātīḥ al-'ulūm)*<sup>4</sup> by Khwārizmī (d. 997) is a concise, systematic account of contemporary scholastic disciplines. It includes important principles of classification that were also adopted later by Ibn Khaldūn (d. 1406)<sup>5</sup>.

Khwārizmī's classification divides scholastic disciplines into two broad categories, namely: 1) knowledge indigenous to the Arabs, referred to as the sciences of *Sharī'a* ('*ulūm al-sharī'a*) or Arab sciences (*al-'ulūm al-'arabīya*); and 2) knowledge of foreign origin, referred to as the non-Arab sciences ('*ulūm al-'ajam*). The first category, the Arab sciences, includes six academic disciplines: 1) jurisprudence (*fiqh*); 2) theology (*kalām*); 3) grammar (*naḥw*); 4) sciences of the scribes (*kitāba*); 5) poetry (*shī'r*) and prosody ('*arūḍ*); and 6) history (*akhbār*).

The second category, the non-Arab sciences, includes two broad groups, namely philosophy and other technological sciences. Philosophy (*falsafa*) is further di-

<sup>2</sup> They are taken from: *Abū Ḥāmid al-Ghazālī. Iḥyā' 'ulūm al-dīn*. Bayrūt: Dār al-Ma'rifa, n. d. Vol. 1. P. 5—8.

<sup>3</sup> See: Nahj al-balāgha / Ed. Subḥī al-Ṣāliḥ. Bayrūt, 1980. P. 496.

<sup>4</sup> *Al-Kātib al-Khwārizmī. Kitāb maḥātīḥ al-'ulūm* / Ed. G. van Vloten. Leiden, 1968 (1<sup>st</sup> ed. 1895). I also consult the Cairo, 1401/1981 edition.

<sup>5</sup> *Ibn Khaldūn. al-Muqaddima* / Ed. M. Quatremère. Bayrūt, 1970 (1858). Vol. 2. P. 385—406; Vol. 3. P. 1—434.

vided into two branches, namely: 1) theoretical or speculative (*naẓarī*) philosophy; and 2) practical (*ʿamalī*) philosophy. The field of logic, sometimes viewed as an independent third branch of philosophy, is also classified as either a sub-branch of theoretical philosophy, or as an instrument or tool of philosophy. Theoretical philosophy embraces three fields, namely the natural sciences (*ʿilm al-ṭabīʿa*), the study of divine matters (*ʿilm al-umūr al-ilāhīya* — i. e. metaphysics, or what is called *theologia* in Greek), and the mathematical sciences (*al-ʿilm al-taʿlīmī wa-ʿl-riyāḍī*). Practical philosophy covers ethics (*ʿilm al-akhlāq*), household management (*tadbīr al-manzil*), and politics (*siyāsa*).

In summary, Khwārizmī's classification of contemporary sciences employs the basic dichotomy of Arab versus foreign sciences, in which sciences based on the Islamic religion are viewed as indigenously Arab, and distinguished from philosophical sciences of foreign (Greek) origin.

### (3) Classification of the intellectual sciences according to Ibn Sīnā

The philosopher Ibn Sīnā (d. 1037) presents a systematic classification of the intellectual sciences in his epistle *Classification of the intellectual sciences*<sup>6</sup>. As the title indicates, this deals solely with the intellectual sciences, or what Khwārizmī characterized as philosophy among the non-Arab sciences. It does not deal with the Islam-based Arab or *Sharīʿa* sciences.

Ibn Sīnā's classification is basically identical with that of the non-Arab sciences presented by Khwārizmī. Notably, however, in his explanation of the intellectual sciences Ibn Sīnā refers to the connection between the *Sharīʿa* sciences and sciences of Greek origin. This connection can be seen in the two fields of divine science and practical philosophy. In his account of divine science, he comments on the topics of Islamic revelation and resurrection. He states that if bodily resurrection exists, then revelation and *Sharīʿa* are what make it possible<sup>7</sup>. In his account of practical philosophy, he argues that political science makes it clear that human beings require the prophets and *Sharīʿa*<sup>8</sup>.

In summary, Ibn Sīnā's academic framework relates *Sharīʿa* knowledge as based on Islamic revelation with divine science and practical philosophy, and by doing so includes it within these fields. As well as stating that the philosophical sciences are not inconsistent with *Sharīʿa* (*sharʿ*)<sup>9</sup>, he brings knowledge based on *Sharīʿa* into the realm of philosophical sciences.

### (4) Classification of the sciences according to Ghazālī

Ghazālī (d. 1111), who was active approximately one century after Khwārizmī, presents a very distinctive classification of the sciences. This can be found at the

<sup>6</sup> *Ibn Sīnā*. Aqsām al-ʿulūm al-ʿaqliyya // Tis' rasā'il fi 'l-ḥikma wa-'l-ṭabīʿiyyāt. Al-Qāhira, 1989. P. 104—118.

<sup>7</sup> Op. cit. P. 115.

<sup>8</sup> Op. cit. P. 108.

<sup>9</sup> Op. cit. P. 118.

beginning of his major work, *Revivification of the religious sciences*, where he discusses knowledge and how it is to be classified<sup>10</sup>. Ghazālī views two questions as critical in his classification, namely whether a particular science is praiseworthy or blameworthy in the eyes of God, and whether it should be regarded as an individual duty (*fard 'ayn*) or collective duty (*fard kifāya*).

Ghazālī divides knowledge into two broad categories: 1. *shar'ī*; and 2. non-*shar'ī*. Knowledge of the first category is entirely praiseworthy, and a collective duty. It centres on the knowledge of the Qur'ān and the *sunna* of the Prophet, and embraces the derivative sciences of jurisprudence and knowledge concerning the states of the soul. Knowledge of the second category, namely non-*shar'ī* knowledge, can be either praiseworthy (*maḥmūd*) or blameworthy (*madhmūm*), or of a neutral nature (*mubāḥ*) that we might call permissible. As examples of the three, Ghazālī counts medicine as praiseworthy, magic as blameworthy, and history as permissible. It is of note that Ghazālī includes both medicine and history in the category of non-*shar'ī* knowledge, in contrast to Khwārizmī's earlier classification, where medicine was viewed as a foreign science and history as an Arab science. It is clear that Ghazālī's principles for classification differ significantly from those of Khwārizmī, and are based fundamentally on the degree to which each discipline is meaningful or beneficial in terms of the Islamic religion.

It is widely acknowledged that Ghazālī brought a stop to the development of Islamic philosophy. He makes his stance clear: philosophy (*falsafa*) is no more than a miscellaneous collection of four fields, namely mathematics, logic, metaphysics, and the natural sciences, and is not an independent field of learning. In regard to theology, he states that its beneficial elements are covered by the Qur'ān and the *sunna* of the messenger of God, that its often disputatious nature is prone to produce unfruitful controversy, and that it is therefore too weak to be an independent field of knowledge. In these terms, it is not surprising that Ghazālī's classification should fail to include philosophy and speculative theology.

With regard to jurisprudence, Ghazālī's stance is that it has little to do with salvation in the hereafter, and instead relates solely to welfare in this world since it centres on the maintenance of worldly order. Although granting it *shar'ī* status, he concludes that it also includes blameworthy elements.

In essence, Ghazālī bases his classification of the sciences on the question of what is most crucial for the faithful Muslim in his preparation for his ultimate destiny in the hereafter. His focus is on the salvation of adherents to Islamic belief, and his classification views as fundamental the effectiveness of the sciences in facilitating salvation. This focus on salvation makes Ghazālī's stance an extremely *Islamic* classification of the sciences. Ghazālī views philosophy, the epitome of

<sup>10</sup> Ghazālī. Op. cit. Vol. 1. P. 13—41. See also (Editor) «“ilm”» // Encyclopaedia of Islam (new edition). Vol. 3. P. 1133f; Nakamura K. «Ghazālī's *fiqh*» // Religious Thought of Islam (in Japanese). Tokyo, 2002. P. 36—48. Osman Bakar analyses in detail Ghazālī's classification of knowledge in his «Classification of Knowledge in Islam». Cambridge, 1998. P. 203—226.

Greek knowledge, as useless for salvation and therefore excludes it from his list of the sciences. In terms of the relationship between Greek knowledge and the Islamic knowledge of revelation, it is clear that the latter is overwhelmingly crucial to Ghazālī's classification.

Incidentally, it may be noted that while jurisprudence is generally viewed as a typically Islamic discipline, an embodiment of Islamic revelation, Ghazālī gives pride of place to knowledge about the states of the soul since it relates more strongly to welfare in the hereafter.

### (5) Bābā Afḍal and Mullā Ṣadrā

It seems that Ghazālī's framework for classification of the sciences, with its strongly Islamic value system, had a significant influence on later scholars. Two may be mentioned here: Bābā Afḍal al-Kāshānī (d. 1213/14), who wrote a number of epistles in Persian on Aristotelian philosophy; and Mullā Ṣadrā (d. 1640), who systematized Islamic mystical philosophy by bringing together the traditions of mystical thought and Aristotelian philosophy as they developed in Islam. While any direct influence from Ghazālī is debatable, it is clear that the classifications of knowledge proposed by these two philosophers share an affinity with Ghazālī's, since they incorporate the Islamic soteriological principle into the frameworks of their classifications.

Bābā Afḍal al-Kāshānī's classification of the sciences can be found in his *Book of eternity (Jāvidānnāma)*<sup>11</sup>, where a threefold classification is made, into sciences of this world, sciences of the hereafter, and intermediate sciences related to thinking. He further divides his sciences of this world (*'ulūm-i dunyawī*) into two classes, sciences of representation (*'ilm-i guftār*) and sciences of behaviour (*'ilm-i kardār*). The former includes the sciences of language, logic, and music, while the latter includes technology, the science of scribes and alchemy, *sharī'a*, and knowledge of moral behaviour. His intermediate sciences are mathematics, the natural sciences, and astrology. His sciences of the hereafter (*'ulūm-i ākhiratī*) include knowledge about the soul and the condition of the hereafter.

Classification of the sciences according to whether they relate to this world or the hereafter is definitely important to Bābā Afḍal, and he shares Ghazālī's stance in viewing jurisprudence as a science of this world. While the sciences of this world can be said to exist irrespective of the faith of the individual, Bābā Afḍal argues that those who lack knowledge of the sciences of the hereafter are ignorant, and that their wrong or distorted understanding means that they are unbelievers. He emphasizes the lower status of the sciences of this world in comparison to

<sup>11</sup> *Bābā Afḍal al-Kāshānī. Jāvidānnāma // Muṣannafāt-i Afḍal al-Dīn-i Muḥammad-i Marāqī-yi Kāshānī / Ed. M. Mīnovī, Y. Mahdawī. Tīhrān, 1331 S. H. Vol. 1. P. 4—6. As for its English translation, see: Chittick W. C. The Heart of Islamic Philosophy: The Quest for Self-Knowledge in the Teachings of Afḍāl al-Dīn Kāshānī. Oxford: Oneworld, 2001. P. 195—197.*

those of the hereafter, because of the latter's inherent value within the Islamic belief system.

Mullā Ṣadrā built on Bābā Afḍal's argument to produce his classification, which is largely identical. In his *Elixir of Gnostics (Iksīr al-'ārifīn)*<sup>12</sup> he divides the sciences into two categories, sciences of this world and those of the hereafter. While this stance differs from Bābā Afḍal's in formal terms in including Bābā Afḍal's intermediate science of thinking within the category of sciences of this world, his discussion of the science of thinking has much in common with Bābā Afḍal's stance in giving it an essentially intermediate status. After his classification of the sciences<sup>13</sup>, Mullā Ṣadrā discusses classes of knowledge that are individual duties (*farḍ 'ayn*). These embrace knowledge about God, including encounters with God, the Oneness of God, God's attributes, and God's acts, as well as knowledge about human existence, the first mode of being (this world), and the second mode of being (the hereafter). The types of knowledge that Mullā Ṣadrā lists as individual duties clearly belong to his category of sciences of the hereafter.

The view developed by Bābā Afḍal and followed by Mullā Ṣadrā does not make a clear distinction between foreign philosophical sciences and the traditional Islamic sciences of the Arabs as Khwārizmī's does. Instead, it divides the sciences into the two categories of sciences of this world and those of the hereafter according to a fundamentally Islamic religious viewpoint. Classification is hence based on Islamic principles. Ghazālī bases his fundamental distinction on whether a particular science is based on *Sharī'a*, and evaluates each science in terms of its significance to salvation in the hereafter. The classifications of Bābā Afḍal and Mullā Ṣadrā also share this fundamental stance.

### (6) The Islamization of knowledge

The expansion of the Islamic world brought with it the formation of various types of knowledge. Khwārizmī presents the variety of knowledge in an objective and descriptive manner. His classification is based simply on whether the knowledge is indigenously Arab or foreign in origin. This correlates with the dichotomy of tradition versus universal reason.

Ibn Sīnā's classification is of the intellectual sciences, and excludes those traditional fields based on Islamic revelation. His distinction between the two is not as clear as Khwārizmī's, since it includes some topics based on Islamic revelation in the philosophical sciences. This may be viewed as the first step towards unification of the philosophical sciences and fields based on Islamic revelation.

Later, Ghazālī, true to his faith, based his classification of the sciences on the question of the degree to which each science contributes to the salvation of the in-

<sup>12</sup> *Ṣadr al-Dīn al-Shīrāzī. Iksīr al-'ārifīn* / Ed. and transl. into Japanese by S. Kamada. Tokyo, 1984. P. 4—23. See also: *Mullā Ṣadrā. The Elixir of the Gnostics* / Ed. and transl. into English by W. C. Chittick. Provo: Brigham Young University Press, 2003. P. 4—15.

<sup>13</sup> Op. cit. P. 25—26 (*Chittick*. P. 17—18).

dividual. He downgraded jurisprudence, criticized philosophy, and distinguished clearly between the relevance of the sciences in terms of this world and the hereafter, giving greater value to the sciences that benefited the latter. This may be characterized as an attempt to integrate various forms of knowledge within a single value system, normative in regard to Islamic soteriology.

This religiously oriented stance of Ghazālī is clearly reflected in the classifications of the sciences of Bābā Afḍal and Mullā Ṣadrā, and becomes an important framework for subsequent prescriptions of knowledge within the Islamic world. In accordance with their faith, both Bābā Afḍal and Mullā Ṣadrā contrasted worldly knowledge with that of the hereafter, and developed distinctive classifications that gave greater value to the latter. Their classifications differ from that of Ghazālī, but can still be seen as extrapolations of an attitude favouring the Islamic faith that originated in Ghazālī's ideas.

This diachronic survey of the varying classifications of the sciences from Khwārizmī to Mullā Ṣadrā has revealed the gradual unification of Greek, namely foreign, philosophical science and the revelation-based science of Islam. In the classification of Khwārizmī, the two remained mutually independent. Ibn Sīnā developed a classification in which the revelation-based sciences were partially brought under the umbrella of the philosophical sciences. Although Ghazālī's attitude towards philosophy was negative, his classification demonstrated a unified appreciation of the sciences in so much as they were of relevance to Islamic salvation. While employing a soteriological framework, Bābā Afḍal and Mullā Ṣadrā differed from Ghazālī in considering philosophical inquiry to be the most important academic pursuit. This represents a culmination in the assimilation of the Greek sciences into the revelation-based knowledge system of Islam.

Although traditional accounts of the history of philosophy often state that the development of Islamic philosophy came to an end with the work of Ibn Rushd (d. 1198) of Cordoba, a more recent view is that philosophy (*falsafa*) became truly Islamic after Ibn Rushd<sup>14</sup>. The idea is that, while characteristics of Greek philosophy were retained in Islamic thought until the time of Ibn Rushd, a truly Islamic philosophy, differing significantly from the Greek variety, was born as Islamic philosophy embracing Islamic mystical thought. The diachronic survey of the various classifications of the sciences made by Islamic philosophers undertaken in this article has served to clarify the transformation of Greek philosophy to Islamic philosophy, or in other words, the process of Islamization of Greek knowledge.

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<sup>14</sup> Corbin H. *Histoire de la philosophie islamique*. Paris, 1986. P. 13—17.