

## Philosophy In Islam: A Brief Survey

Mohd Nasir Omar

Department of Theology and Philosophy, National University of Malaysia,  
43600 Bangi, Selangor, Malaysia

---

**Abstract:** The term Philosophy (falsafah) does not occur either in the Qur'an or the Sunnah. However, the word al-hikmah which appears in several places in the Qur'an and the Sunnah has been identified with Philosophy by most schools of thought in Islam. Most of the great Muslim philosophers including such men as Al-Kindi (d.874), Al-Razi (d.825), Al-Farabi (d.850), Miskawayh (d.1030), Ibn Sina (d.1037) and Ibn Rushd (d.1198) have also identified Philosophy with al-hikmah and thereby the philosophers with al-hukama'. Al-hikmah appears in various Qur'anic verses, of which the most often cited is, He granteth wisdom (hikmah) unto whom He will and he unto whom wisdom is granted, he truly hath received abundant good. But, none will receive admonition but men of understanding (al-Qur'an, 2:269). The term hikmah also appears in the Hadith literature in such saying as the acquisition of hikmah is incumbent upon thee, verily the good resides in hikmah. This study thus, seeks to make a critical survey of the meaning of Philosophy or al-hikmah as understood by the Muslims, especially the Muslim philosophers.

---

**Key words:** Philosophy, al-hikmah, al-falsafah, muslim philosophers, Malaysia

---

### INTRODUCTION

Greek Philosophy was known in the East for many centuries before the advent of Islam. Jundi-Shapur in Persia, Harran in Mesopotamia and Alexandria in Egypt were among the most eminent centres on this side of the world which were noted for Hellenistic culture (O'Leary, 1939; Peters, 1968a, b; Walzer, 1962). It was in these places that Greek thought passed to the Arabs. Historically, Greek science was studied as early as the 4th century, not however by the Muslims but by the Arab Syrian Christians. Numerous Greek treatises on theology, Philosophy and logic were definitely part of their syllabus of learning. Thus, borrowing the words of De Boer (1970), The Syrians, it is true, produced nothing original but their activity as translators was of advantage to Arab-Persian science. It was Syrians who brought wine, silk and other precious items to the West. But, it was the Syrians also who cultivated Greek sciences for >5 centuries before they eventually transmitted them to a relatively small group of mediaeval Muslim scholars, i.e., the philosophers.

This transmission took place extensively after the first half of the 9th century and extended until about early 11th century. Nevertheless, it would be a mistake to think that without the assiduous works of the translators, Islamic Philosophy would not have come into existence as some writers including Walzer (1962) had claimed. For the Muslims had already produced the first renowned Arab Muslim philosopher, Al-Kindi (d. 873), apparently before

hardly any single philosophical translation of Greek works had been done. Further, the fact that philosophical distinctions arose earlier in Islamic theology (Kalam) and by now were fairly well established, although there was no clear link with Greek Philosophy is another interesting and significant fact in this context. Leaman (1985) for one insists:

Yet it would be a mistake to regard Philosophy in Islam as starting with the translation of Greek texts. Interestingly, philosophical distinctions arose in Islamic theology without apparent direct connection with Philosophy but rather through the development of appropriate rules of legal reasoning

While Hourani (1986), on the other hand, makes a much more precise comment as follows:

Western scholars including Van den Bergh, Walzer, Wolfson and others who became obsessed with the search for Greek sources for everything written by the mutakallimun, sometimes even taking parallel statements made centuries apart as evidence of derivations, even though the lines of transmission cannot be traced at all. But more recently the discovery of 'Abd Al-Jabbar's Mughni has given a new impetus to the study of Kalam in its own context and tradition

Following the establishment of the School of Baghdad, Bayt al-Hikma (The House of Wisdom), an official institute for translation and research set up by the

‘Abbasid Caliph Al-Ma’mun (d. 833) in 830 AD, the Muslim philosophers began to apply themselves directly to the original Greek sources, in addition to the works of the translators and commentators, particularly, those of the Neo-Platonists at their disposal (Al-Andalusi, 1967; Al-Mubashshir, 1958). With these varied views belonging to different cultures and schools of thought, not to mention the Persian and Indian elements, in addition to their own ability to revise, assimilate and improve them, the Muslim philosophers formulated a Philosophy full of their peculiar characteristics and originality.

It is not surprising, therefore that Islamic intellectual culture was then transported back to mediaeval Christian Europe roughly from the 9th century until it began to decline in the 16th century AD. Without the Muslims and the Arabs, argued Watt (1982) European science and Philosophy would not have developed when they did. Nevertheless, it was Muslim and Jewish scholars who played a vital role in this later cultural transmission, in contrast to the former, i.e., the transmission from classical Greek to Islamic mediaeval Baghdad which was carried out mainly by the Christian translators such men as Hunayn Ibn Ishaq (d. 874), Ishaq Ibn Hunayn (d. 911), Ibn Zur‘a (d. 1008) and others. But yet again, it would be wrong to assume that none of the translators, in either case, was a Muslim as Walzer (1962) seemed to have maintained. The great Muslim philosophers, such as Al-Kindi (d. 873), Ibn Al-Khammar also called Hasan bin Suwar (d. 1017), ‘Isa bin ‘Ali (d. 1001) and Abu ‘Uthman Al-Dimashqi (died after 914), to mention but a few were themselves leading translators (Al-Andalusi, 1967; Al-Tawhidi, 1953). Thus, many Muslim philosophers were also able to read the Greek philosophers in their own language. Moreover, the role of the Caliphs and other patrons of learning, including Caliph Al-Ma’mun (d. 833) and Caliph Al-Mutawakkil (d. 861) who in turn, generously supported and spent a considerable sum of money on employing translators including the famous Christian Hunayn Ibn Ishaq (d. 874) and others, should not be ignored for their role in having made this cultural interaction possible.

As a result, by the 11th century, most of Aristotle’s major works on logic: *Categories*, *De Interpretatione*, *Analytica Priora*, *Analytica Posteriora*, *Topica*, *De Sophisticis Elenchis*, *Rhetorica* and *Poetica*; on natural science: *Physica Auscultatio*, *De Coelo*, *Meteorologica*, and *Book of Animal*; on psychology: *De Anima* and on ethics: *Perhaps Magna Moralia* and *Ethica Nicomachea* had been translated into Arabic. However, only a very small portion of Aristotle’s *Politics* and *Metaphysics* had been translated but their places appeared to have been taken by Plato’s *Republic* and *Laws*. Plato’s *Timaeus* and probably some of his dialogues were also accessible to the mediaeval Arabic philosophers (Juljul,

1985). Besides, they also knew Greek authors of late antiquity and Neo-Platonic writers such as Galen (d. 199), Plotinus (d. 269), Porphyry (d. 310), Proclus (d. 485), Plutarch (d. 481) and others. Some of their important writings, such as Galen’s *Ethics* (*Kitab al-Akhlaq*); the last three sections of Plotinus’s *Enneads* (*Uthulujjiya Aristatalis*), Porphyry’s and Themistius’s commentaries on Aristotle’s *Ethica Nicomachea* and Nicolaus of Damascus’s (1st century AD) summary on the same work of Aristotle was also available.

Thus, students of Islamic Philosophy today should, therefore, be familiar with: firstly, Greek philosophers such as Plato, Aristotle and their Neo-Platonic commentators such men as Galen (d. 199) and Porphyry (d. 310) who have been Arabised as Aflaton, Aristu, Jalinus and Furfuriyus. Secondly with Muslim philosophers, for example, Al-Kindi (d. 873), Al-Farabi (d. 950), Al-Razi (d. 925), Ibn Sina (d. 1037) and Ibn Rushd (d. 1198) who in the same way, were westernised as Alkindius, Alpharabius, Rhazes, Avicenna and Averroes. And thirdly with Christian, Muslim and Judeo-Arabic transmitters and scholars including Hunayn Ibn Ishaq (d. 874), Abu ‘Uthman Al-Dimashqi (died after 914), Al-Kindi (d. 873) and Maimonides (d. 1204) who were largely responsible for both the continuity and interplay of the above great traditions: Greek, Arabic and European. There will be a day, we hope when students are able to read the writings of Aristotle, Ibn Rushd and Thomas Aquinas together or to write about Maimonides as they write about Al-Farabi, Plato and Aristotle. All the earlier mentioned three major fields of Islamic Philosophy, particularly the first two as we have briefly mentioned before have already received due attention by modern scholarship. However, it is unfortunate that as yet so few scholarly studies have been done on the influence of Islamic Philosophy upon European thought. Yet, the first comprehensive survey of such a kind by Professor Montgomery Watt, “The Influence of Islam in Medieval Europe” in 1982 is of great help, particularly, in providing very useful materials for further research on the subject.

## PHILOSOPHY AND ITS DIVISIONS

The term Philosophy (*falsafah*) does not occur either in the Qur’an or the Sunnah. However, the word *al-hikmah* which appears in several places in the Qur’an and the Sunnah has been identified with Philosophy by most schools of thought in Islam. *Al-hikmah* appears in various Qur’anic verses of which the most often cited is:

He granteth wisdom (*hikmah*) unto whom He will and he unto whom wisdom is granted, he truly hath received abundant good. But none will receive admonition but men of understanding (al-Qur’an, 2:269)

The term hikmah also appears in the Hadith literature in such saying as:

The acquisition of hikmah is incumbent upon thee, verily the good resides in hikmah

However, the definitions of Philosophy given by the Muslim philosophers themselves are more applicable. To mention but a few examples, Al-Kindi the first Muslim philosopher, defines Philosophy as the knowledge of the reality of things within man's possibility because the philosopher's end in his theoretical knowledge is to gain truth and in his practical knowledge to behave in accordance with truth. Al-Kindi's immediate successors, Al-Razi (d. 925) and Al-Farabi (d. 950), accepted this view in principle, though adding their own opinions. Al-Razi viewed Philosophy as a striving to resemble God in so far as possible whereas Al-Farabi (1983) regarded Philosophy as having the scientific state of mind in the quest and the love for the highest wisdom.

As with regard to the goal of Philosophy, Al-Farabi like his predecessor Al-Kindi, holds that the end towards which the philosopher should tend in acquiring Philosophy is the knowledge of God and hence, the actions he should perform are nothing but the good or the imitation of God. Al-Safa (1928), a group of 10th century philosophers, on the other hand, seem to have summarised all the previous and current definitions of Philosophy as follows: The beginning of Philosophy is the love of the sciences; its middle is knowledge of the reality of things to the extent to which man is capable and its end is speech and action in conformity with this knowledge.

To sum up, Philosophy was commonly defined by the Muslims in a two-fold complementary divisions, one as a knowledge of the reality of all that exists, divine and human and the other as the doing of good and fulfilling one's functions within the measure of one's capacity (Al-Tusi, 1964). Like Aristotle (1985) and Eterovich (1980), they called the former speculative or theoretical Philosophy while the latter, practical Philosophy. Thus Sina (1963), for example, writes:

Science is divided into a theoretical, abstract part and a practical part. The theoretical part is the one whose end is to acquire certainty about the state of the beings whose existence does not depend on human action. Here, the aim is only to acquire an opinion. Examples of it are the science of (God's) unity and astronomy. The practical part is the one whose aim is not merely to acquire certainty about the beings; its aim can be the

acquisition of a sound opinion about a matter that exists through man's endeavour with a view to acquiring by it what is good. Thus, the aim here is not merely to acquire an opinion but rather to acquire an opinion for the sake of action. Therefore, the end of the theoretical part is truth and the end of the practical is the good

The Arab philosophers such men as Yahya (1966), also appear to have shared these views. They both agree that Philosophy is essentially divided into theoretical and practical. To cite an instance, Yahya relates:

Science is the apprehension of the reality of the things that are by virtue of which they are. theoretical (nazhari) derives from nazhar (lit. seeing or sight) and nazhar is an investigation, the ultimate aim of which is the apprehension of the reality of that which is inquired into. Thus, a theoretical (science) is a science the ultimate aim of which is the apprehension of the reality of things. Practical derives from practice and practice is the acquisition of an object (objective) formally (i.e., with respect to its form). The practical (science) is a science the ultimate aim of which is bringing about the good and avoidance of evil

## THE REAL PHILOSOPHER

Following this division, the Muslims divide each part of the Philosophy, i.e., theoretical and practical into their respective divisions and add that the true philosopher is the one who masters all the subject matters of both parts. Al-Tusi (1964), for instance, like other scholars, lists three major subjects: Metaphysics, Mathematics and Natural Science under theoretical Philosophy while Ethics, Economics and Politics fall under practical Philosophy. He further subdivides these fields of study into much smaller branches and accordingly affirms:

In whomsoever, these concepts are realised, such is a perfect philosopher and a man of excellence, his rank being the highest among human kind

Miskawayh, whom Al-Tusi (1964) refers to as the perfect philosopher, likewise stresses previously that there is no shortcut to become a real philosopher, since one has to be familiar with all sciences. One should first acquire discipline under speculative Philosophy comprising logic, natural Philosophy and divine Philosophy and proceed with ethics, economics and politics. The last three subjects, says Miskawayh are the subdivisions of practical Philosophy. According to him:

That fortunate person who has attained proficiency in both speculative and practical wisdom, is entitled to the honourable appellation of sage or philosopher

Otherwise, Miskawayh continues:

A man is only entitled to be called according to the science he serves. For instance, the one who knows the exact sciences will be called a mathematician, the one who knows the world of the stars an astronomer, another will be a physician, another a logician, another a grammarian, etc. None of these can be called a philosopher. But he who gradually acquires all the sciences and reaches the ultimate and final stage can be called by the honourable title of philosopher

Thus, the expression Philosophy among the Muslim philosophers, at the very least refers to almost all the available scholarly and scientific disciplines within the purview of Aristotelian literature, such as Mathematics, Natural Sciences, Metaphysics, Ethics, Economics and Politics. As Rosenthal (1975) puts it:

Muslim scholars are agreed as to the fundamental division of the sciences into Arabic (Islamic) sciences and foreign (that is, predominantly Greek) sciences and there is a core of truth to it. As far as the Greek sciences were concerned, they took over from late Hellenistic times an established canon of individual disciplines, classified by and large in the same manner, we find dominant also in mediaeval Christendom. This canon is known to be derived from a division of the sciences, most familiar to the Arabs, into theoretical (Mathematics, Natural Sciences, Metaphysics) and practical (Ethics, Economics, Politics), the definition of the former group going back to Aristotle himself and that of the latter to his school

To many of them, Philosophy is a part or perhaps one of the most crucial parts of human science (al-'ulum) but very much inferior when compared to the Islamic religious sciences (Miskawayh and Al-Tawhidi, 1951; Al-Amiri, 1988; Al-Tusi, 1964). Though in the more usual practice, the Arabs or Muslims in particular, divide sciences into: Religious (diniyya, illahiyya, milliyya) or traditional (naqliyya). The knowledge that has to do with Islamic Shari'a, i.e., jurisprudence (fiqh), speculative theology (kalam) and their like and philosophical (falsafiyya, hikmiyya) or rational ('aqliyya). That has a definite link with Greek learning in general; likewise, they called those who were skilled in the former 'ulama' (scholars) while the

latter falasifa or hukama' (philosophers) (Al-Amiri, 1988). But, it seems that it was also prevalent predominantly among the Baghdad philosophers to attribute the title philosopher to those who master both fields of knowledge, i.e., traditional and rational or religious and philosophical together. Miskawayh, in this case writes:

The happy man is the one who has the chance in his childhood to become familiar with the Islamic law (shari'a), to give himself up to it and get accustomed to follow all its commands and who, when he attains the stage in which he is able to comprehend motives and causes, takes up the study of Philosophy and finds it in agreement with what had become ingrained in him by habit, with the result that his judgement becomes firm, his insight penetrating and his determination effective

As a result, it was a well-known phenomenon in the Arabic mediaeval ages that philosophers were at the same time dubbed with the title 'ulama' or with one particular subject matter of traditional sciences like fuqaha' (jurists), mufasssirun (Qur'anic commentators) and matakallimun (theologians) as with respect to that of the philosophical sciences like logicians, physicians and so on. The Arabics philosophers such men as Yahya (d. 974) and Miskawayh (d. 1030), in this instance reveal a legitimate understanding of their own traditional learnings whereas in the same way they enjoy other titles, the former as the philosopher as well as the logician and the latter as the philosopher, historian, ethicist and physician. Ibn Rushd (d. 1198), on the other hand was very famous in both the East and the West as a philosopher (hakim) but it was Ibn Rushd also who was similarly noted as a jurist (faqih) and worked as a judge (qadi) as well as a physician (tabib).

Further, though philosophers seem to have attempted to give a special preference to Philosophy over other disciplines, this does not mean, however that they themselves were somewhat excused from religious duties. There are numerous reports which assure us that although the Baghdad philosophers were devoted to intellect, they practised their own respective religions (Kraemer, 1986). The Muslims, including such men as Al-Farabi (d. 950), Al-Sijistani (d. 1001), Miskawayh (d. 1030) and others observed the teachings of Islam while the Christians including Yahya (d. 974), Ibn Zur'a (d. 1008) and Ibn Al-Samh (d. 1027) adhered to the doctrines of Christianity and so did the Jews, the Sabians and other scholars with respect to their corresponding systems of belief.

Abu Zakariyya' Al-Razi, to cite a few examples, describes the life of the philosophers in general as

consisting in making oneself like to God and in treating all men justly. Ibn Rushd indicates that all Muslim philosophers deem that the Islamic law is true and therefore, obligatory upon them whereas, Ibn Sina (Arberry, 1957) believes that the observance of such a law which he himself seems to have followed in his life will protect one's soul from evil and bodily passion. Al-Farabi takes almost the same view but insists on a more general scope which can apply to all philosophers regardless of the divergences of their religious convictions. Thus, he writes:

A philosopher must perform the external acts and observe the duties of the law, for if a person disregards a law ordained as incumbent by a prophet and then pursue Philosophy, he must be deserted. He should consider unlawful to himself what is unlawful in his community

### CONCLUSION

To sum up, Philosophy (hikmah or falsafah) then as it is widely understood by the Muslim philosophers, signifies perhaps one of the most important branches of human crafts, for it brings together both theoretical and practical disciplines: Mathematics, Natural Sciences and Metaphysics and Ethics, Economics and Politics respectively. Philosophy is, therefore seen as the art that makes use of all the arts, the virtue that makes use of all the virtues and the wisdom that makes use of all wisdoms (Al-Farabi, 1983). Similarly, the one who acquires skills in Philosophy, i.e., the philosopher is more excellent than any other scholars, because of the excellence of Philosophy. He is as in the mind of Aristotle, the one in whom:

Habitual rightness of desire is combined with habitual truth of judgement and who is equally competent in formulating general rules of action and in applying them to the swiftly changing situations of life, in such a way as to do justice to all concerned (Allan, 1970)

If a philosopher is seen from a political perspective, according to Plato, Al-Farabi (d. 950) and Al-'Amiri (d. 982), he is the one who possesses the art that enables him to rule and perhaps to make others listen to him. If he is seen from a religious perspective, he is argued Plato (1974), Galenus (1963) and Galien (1937), the one who imitates God by controlling his passions and by acquiring virtues and in daily life as seen by many, he is the one who treats all human beings justly who knows himself

very well and even frees himself from fault and above all, he is a happy and perfect man who endures a blissful life because Philosophy acquaints him with what is called true happiness. Al-Amiri (1988) for one insists that:

He who masters the philosophical sciences is blessed with three advantages. In the first place, he is extremely close to perfect human virtue in that he is familiar with the true reality of things and has the possibility of controlling them. Secondly, he has insight into all that reveals the wisdom with which the Creator has created the various things in the world and he understands their causes and results and the wonderful order and splendid arrangement they have. Thirdly, he is well versed in the arguments against traditional claims and is in no danger of soiling himself with vain dogmas through a blind belief in authority

Thus, a philosopher (hakim or faylasuf) that being so, is a religious scholar, scientist, politician and the like all rolled in one but not every scholar or scientist is a philosopher. These blended skills and qualities will enable him to reach the ultimate aim of his existence which is happiness in the present life as well as in the next. This highest summit is then scarcely open to any but the supreme philosophers. He should be as described by Ikhwan Al-Safa':

Of East-Persian derivation, Arabic in faith, of Iraq, i.e., Babylonian in education, a Hebrew in astuteness, a disciple of Christ in conduct as pious as a Syrian monk, a Greek in the individual sciences, an Indian in the interpretation of all mysteries but lastly and especially, a sufi in his whole spiritual life (De Boer, 1970)

### REFERENCES

- Al-Amiri, 1988. Al-Ilam BI-Manaqib Al-Islam. In: Dar Al-Asala Lil-Thaqafa Wal-Nashr Wal-Ilam, Ghurab, A.A. (Ed.). Rayad, USA., pp: 79-93.
- Al-Andalusi, S., 1967. Tabaqat Al-Umam. In: Manshurat Al-Maktaba Al-Hidariyya Wa-Matba Atuha, Al-Ulum, S.M.B. (Ed.). Al-Najf, USA., pp: 64-65.
- Al-Farabi, 1983. Kitab Tahsil Saada. In: Dar Al-Andalus, Al-Yasin, J. (Ed.). Beirut, USA., pp: 88-89.
- Al-Mubashshir, B., 1958. Mukhtar Al-Hikam Wa-Mahasin Al-Kalam. In: Al-Mahad Al-Misri lil-Dirasat Al-Islamiyya, Badawi, A.R. (Ed.). Madrid, USA., pp: 126-222.
- Al-Safa, I., 1928. Rasail Lkhwan Al-Safa. In: Matbaa Al-Arabiyya, Al-Din, K. and Al-Zirkali (Eds.). Vol. 4, Cairo, USAS., pp: 1-23.

- Al-Tawhidi, 1953. Al-Imta Wal-Muanasa. In: Matbaa Lujna Al-Talif Wal-Tarjama Wal-Nashr, A. Amin and A. Al-Zayn (Eds.). Vol. 3, Cairo, USA., pp: 33-34.
- Al-Tusi, 1964. Akhlaq al-Nasiri, Translated by G.M. Wickens, The Nasirean Ethics. George Allen and Unwin Ltd., London, UK., pp: 43-50.
- Allan, D.J., 1970. The Philosophy of Aristotle. 2nd Edn., Oxford University Press, London, UK.
- Arberry, A.J., 1957. Revelation and Reason in Islam. George Allen and Unwin Ltd., London, Pages: 122.
- Aristotle, 1985. Magna Moralia. In: The Complete Works of Aristotle: The Revised Oxford Translation, Barnes, J. (Ed.). Princeton University Press, New Jersey, USA., pp: 1868-1921.
- De Boer, T.J., 1970. The History of Philosophy in Islam. Luzac, London, Pages: 216.
- Eterovich, F.H., 1980. Aristotle's Nicomachean Ethics: Commentary and Analysis. University Press of America, USA., Pages: 27.
- Galenus, Paul W. Harkins, 1963. On the Passions and Errors of the Soul. Ohio State University Press, Ohio, USA., Pages: 136.
- Galien, C., 1937. Being an Arabic Summary of Galen's De Moribus. University of Egypt, Egypt, pp: 1-51.
- Hourani, G.F., 1986. Maimonides and Islam. In: Studies in Islamic and Judaic Traditions, Brinner, W.M. and S.D. Ricks (Eds.). Scholars Press, Georgia.
- Juljul, I., 1985. Tabaqat Al-Atibba Wal-Hukama. In: Muassassa Al-Risala, Sayyid, F. (Ed.). Beirut, USA., pp: 23-24.
- Kraemer, J.L., 1986. Humanism in the Renaissance of Islam: The Cultural Revival during the Buyid Age. E.J. Brill, Leiden, The Netherlands.
- Leaman, O., 1985. An Introduction to Medieval Islamic Philosophy. Cambridge University Press, Cambridge, pp: 5-6.
- Miskawayh and Al-Tawhidi, 1951. Al-Hawamil Wal-Shawamil. In: Matbaa Lujna Al-Talif Wal-Tarjama Wal-Nashr, Amin, A. and A. Saqar (Eds.). Cairo, USA., pp: 268-269.
- O'Leary, D.L., 1939. Arabic Thought and its Place in History. Forgotten Books, London, pp: 105-122.
- Peters, F.E., 1968a. Aristoteles Arabus: The Oriental Translations and Commentaries on the Aristotelian. International Publishing Company, Netherlands.
- Peters, F.E., 1968b. Aristotle and the Arabs: The Aristotelian Tradition in Islam. University Press, New York.
- Plato, 1974. The Republic, Translated with an Introduction by Desmond Lee. Penguin Book, London, UK., pp: 260-355.
- Rosenthal, F., 1975. The Classical Heritage in Islam. Routledge and Kegan Paul, London, Pages: 298.
- Sina, I., 1963. On the Divisions of the Rational Sciences. In: Mediaeval Political Philosophy: A Sourcebook, Lerner, R. and M. Mahdi, (Eds.). The Free Press of Glencoe, New York, pp: 76-76.
- Walzer, R., 1962. Greek Into Arabic. Bruno Cassirer, Oxford, UK.
- Watt, W.M., 1982. The Influence of Islam on Medieval Europe. Edinburgh University Press, Ediburgh, Pages: 43.
- Yahya, 1966. On the Four Scientific Questions Regarding the Art of Logic, Translated by N. Rescher in Studies in Arabic Philosophy. University of Pittsburgh Press, Pittsburgh, pp: 38-47.