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Philosophy of science actualization for Islamic science development Philosophical study on an epistemological framework for Islamic sciences

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ABSTRACT

Philosophy is a free-thinking, radical, and universal method of obtaining a truth, and the philosophy of science is the free-thinking, radical, and universal application of science principles and rules. The philosophy of science is not a methodology but is a reflective process rooted in the principles of science. The philosophy of science represents a component of philosophy, not only a research method or a scientific paper's procedures, and it serves as the foundation and direction of scientific development, which is continually seeking truth or reality (*unfinished journey*). Cases of deterioration in the field of Islamic social sciences include exact or natural sciences. Discussions on Islamic scholarly epistemology show similar problems to those of Western epistemology. This study reviews the methodologies, truth, and objectivity. Conducting philosophy of science procedures instils confidence in what has previously been defined as a science "*scientific statement*". In this case, the philosophy of science offers a wide range of approaches or paradigm models, and various methods can be adopted by all sciences, including the Islamic religion sciences.

1. Introduction

As previously explained and still valid today, science is divided into two groups, "*natural* science" and "*social science*".[2] The Islamization of science seems to be more prominent in the social sciences. Recently, many books have addressed the movement, particularly those published by Islamic institutions, such as MTs, MAs, and Islamic higher education institutions, such as "Islamic Institutes or Islamic universities". The subjects addressed include Islamic Mathematics, Islamic Science, and even Islamic puzzles.[3]

A study in Islam is expected to please Allah SWT[4] but is also expected to contribute to the welfare of mankind.[5] Therefore, Islamic scientists differ from Western scientists who are unaware of

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[2] Other terms include *applied science* and *social science*. The terms *natural science* and *applied science* are used by Bahm in his book: ***What is Science?***, pp. 30–34. Many other thinkers, such as M. Weber and many of the Anglok group, are eager to divide science into two groups: *natural science* and *social science*. Van Peursen, ***Susunan Ilmu Pengetahuan***, (Jakarta: Gramedia, 1985), pp. 5–6.

[3] The idea of the Islamization of science was initiated formally in an international seminar in 1982 in Islamabad led by Ismail el-Faruqi. The idea enjoyed widespread acceptance among Moslem intellectuals, and its effect was felt as far as Indonesia. This movement was on the Pan-Islamism agenda pioneered by Jamaluddin al-Afgani of Turkey in the 19th century and initiated by the Libyan president Muammar Qhadapi. The seminar was organized by the International Institute of Islamic Thought to formalize role ideas and to hold discussions to obtain a clearer understanding of the Islamization of science and to develop an agenda for action. In Indonesia, A. M. Saefuddin authored a book on the Islamization of economic thinking. M. Dawam Raharjo, ***Melihat ke Belakang, Merancang Masa Depan, Sebuah Pengantar*** to P3M (Perhimpunan Pengembangan Pesantren dan Masyarakat), ***Islam Indonesia Menatap Masa Depan***, (Jakarta: PT. Guna Aksara, 1989), pp. 1–10.

[4] Q.S az- Zumar: 9 Q. S. al-Mujadalah: 11, and many others.

[5] As stated in the al-Hadist of the Prophet, which means, "The best of you is the more useful for others".

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religious science's purpose or what is required or forbidden by the religion. Islamic scholars believe that the truth is not determined by human kind, "*anthropocentrism*", but that the truth comes from God, "*theocentris*", which demonstrates the differences between the views of Moslem scholars and Western secular scientists. Moslem intellectuals in the pursuit of knowledge may conduct a variety of experiments using several methods to find new problems but, in practice, they are prohibited from harming another individual.[6]

The development of science in the Islamic world, particularly in a philosophical sense, began with theology reviews.[7] This era in the history of science was short-lived and shifted toward philosophy during a period known as the Islamic scholastic period.[8] After scholasticism had faded following the period of Ibn Rusdy, the diffusion of Islamic philosophy ceased; the consequences were ignorance and backwardness in the Islamic world with a lack of modern thinking that existed in the Western world.

The Islamic deterioration was not limited to the social sciences field but included exact or natural sciences. Ibn Sina, renowned in the medical field, would never have as much involvement in Islamic history after this generation. Further discussion on Islamic scholarship epistemology shows that the problems encountered are similar to those in Western epistemology. The subjects to be reviewed in this study include methodologies, truth, and objectivity.

Describing the meaning of science philosophy and Islamic science development requires an understanding of philosophy, science, Islamic science sources, and individual Islamic sciences to clarify definitions. These terms form the basis of this essay.

2. Discussion

2.1. Philosophy and science overview

2.1.1. The definition of philosophy

Etymologically, philosophy is derived from the Greek word "*philosiphia*", which consists of two syllables, "*philo*", which means love, and "*sophia*", which means wisdom. Thus, philosophy means love of wisdom.[9]

According to experts, the definition of philosophy depends on the authority and reflects the location, life time, disciplines, and specifications of the authority. Some philosophy definitions follow:

- *First,* philosophy is a set of attitudes and beliefs towards life and nature, which are usually accepted uncritically.
- *Second,* philosophy is a criticism process or beliefs and upheld attitudes.
- *Third,* philosophy is an attempt to obtain a universal perspective.
- *Fourth,* philosophy is composed of words that explain meaning using logical language concepts.
- *Fifth,* philosophy is either a set of problems or any problem that has caught the attention of an individual and requires an immediate answer.[10]

These definitions of philosophy represent individual viewpoints based on different mindsets and varied perspectives.

Ya'kub cited other definitions of philosophy from several prominent scientists:

1) Aristotle (384–322 BC) defined philosophy as the truth science.
2) Heraclitus (536–470 BC) suggested that philosophy scholars elaborate on science and have greater understanding.
3) Cicero, (106–3 BC) suggested that philosophy is the mother of science and the ultimate science.
4) Thomas Hobbes (1588–1679 M), an English philosopher, said that philosophy is the scientific explanation of causality.
5) Immanuel Kant (1724–1804 M), a Germany philosopher, argued that philosophy is a science that investigates the basic reasons to act or to find something.[11]

Philosophy can be defined as a radical, universal, and free-thinking process for truth seeking. Philosophy is not the same as the knowledge of philosophy. Philosophizing is a process and method for finding results, while the knowledge of philosophy is based on results obtained through a philosophical process.

2.1.2. The definition of science

Defining science was a simpler endeavour in the past. The definition of science depends on a philosophical system, with restrictions and demarcations between each particular science.[12] An analysis of science or knowledge is not straightforward because there is no consensus among scientists concerning puzzling scientific terms or problems, which may persist forever. A problem will either become a subject for analysis or it will never be resolved. Therefore, there is a need for further research to provide resolution to scientific problems.[13]

Bahm explored six important elements of science: issues, attitudes, methods, activities, conclusions, and life influences. The function of scientific elements is to define the meaning of science itself.[14] Verhaak described the characteristics of science as an attempt to gather knowledge results through a systematic system, as suggested in the terms "*fundamental idea/philosophy of*". The exploration results occurred in a wide variety of models classified into two basic models: the posteriori model or priori model.[15]

Realizing the difficulty of finding common ground regarding the definition of science, scientists often classify science into natural science and social science.[16] Both categories have existed since the days of ancient Greece, which distinguished between *physic* "*regularity*" and *nomos* "*deal*". *Physic* is a natural science, and *nomos* is a

[6] An example of limited practices by Moslem scientists is artificial insemination and organ transplants because of ethical concerns. For example, Islam accepts insemination IVF, where the sperm and ovum are from a husband and wife who are endorsed by Islam. Transplants are not opposed by Islam as long as they result in benefits for the individuals involved. P3M, ***Op. Cit.*** p. 150.

[7] Various schools emerged in this period, such as Mu'tazila, Ashariah, and Khowarij. Read: Harun Nasution, ***Teologi dalam Islam: Aliran–aliran, Sejarah, Analisa dan Perbandingan***, (Jakarta: Universitas Indonesia UI. Press, Cet. V. 1986).

[8] Additional transition process descriptions are provided by Irma Fatimah. ***Filsafat Islam: Kajian Ontologis, Epistimologi, Aksiologis, Historis dan Prosfektif***, (Yogyakarta: Lembaga Studi Filsafat Islam, Cet. I, 1992).

[9] Hamzah Ya'kub, ***Filsafat Ketuhanan***, (Bandung: PT. Al-Maa'arif Penerbitan Percetakan Ofset, Cet. II, 1984), p. 11.

[10] Harold, H. Titus, Marilyn S. Smith and Richard, T. Nolan, ***Living Issues and Pholisophy***, Edisi 7. Translated By: Prof. DR. H. M. Rasyidi, ***Persoalan–Persoalan Filsafat***, (Jakarta: Bulan Bintang, Cet. I, 1984), pp. 10–15, compared with Bertens, K., ***Panorama Filsafat Modern***, (Jakarta: Gramedia, 1987), pp. 13–28, and Tan Malaka, ***Madilog: Materialisme, Dialektika dan Logika, Seri Pemikiran Nasional***, (Jakarta: PT. Pusat Data Indikator, Cet. I, 1999), pp 41–53.

[11] Hamzah Ya'kub, ***Op. Cit.***, pp. 12–13.

[12] Science was no longer defined as the nature of science but rather by the methodology that was being implemented. Van Peursen, ***Op. Cit.***, 1985, p. 1.

[13] According to the writer, this resembles knowledge homework.

[14] Axiolgy: ***The Science of Values***, (New Maxico: World Books al-Buquerqee, 1990), pp. 14–49.

[15] A *priori* model was pioneered by Plato, while a *posteriori* was pioneered by Aristotle, which was obtained through the causality that characterizes knowledge. Verhaak and Haryono, Priest, R., ***Philosophy of Science***, (Jakarta: Gramedia, 1989), pp 1–12.

[16] Peorsen, ***Lok. Cit.***, or going to footnote number 2.

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