

# Neutrality Debate in Philosophy against The Integration of Science Technology and Religion

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The relation of social science and technology values of morality is a hot issue that continues to develop in the philosophy of science. Some think that science is value-free, while others think that science is bound by values. The aim of this article is to examine the implications of this view on the integration of science and religion. The method used in this research is a literature study by using several books and journals as a reference. In addition, consultations with several resource persons who are experts in the field of integration of science technology and religion were also carried out as a form of reinforcement of the final results of research. Based on the epistemological theory that divides the epistemology of Islam into bayani (text), burhani (empirical rationality) and irfani (inner experience) from Muhammad Abid Aljabiri, the model of integration of science and religion gave birth to three points of view. From the results, the revivalists who offer a strategy of Islamisation of knowledge. Departing from the revivalist perspective in understanding the Koran (bayani), they believe that science is not neutral, but subjectively bound by the values contained in the Koran (theocentric). Therefore, secular Western science must be converted to Islam. Second, modernist groups that offer universal science concepts. The neo-modernist groups that offer the integration of science and religion on an ethical basis make up the third viewpoint.

**Keywords:** *Neutrality of science, Islamisation of science, Universal science, Positivist, Hermeneutics.*

## Introduction

The development of science and technology is increasingly growing rapidly, and now humanity has entered an era known as the era of industrial evolution 4.0. Thanks to the advancement of science and technology, humans have been given guidance in various fields such as health, transportation, communication, education, economics and so on. But the problem is, is the progress of science and technology related to morality? (Suriasumantri, 1998). This question raises the problem of scientific metaphysics; does science want to study nature as it is free from value considerations, or does it have to be bound by values, including ethics and religion? This question then gives birth to the following question; does science always bring blessings and benefits to humans, or conversely does science and technology actually bring disaster and human misery? These problems subsequently triggered the birth of axiological problems in science. What exactly is the aim of developing science? Is science created for the betterment of science or is it for certain purposes? Is science created solely for the purpose of explanation (prediction), forecasting (prediction) and controlling (controlling) of a phenomenon or is science born for other purposes, such as domination and power? (Santoso and Santoso, 2003).

This conflict between science and morals is not really a new problem. Since the beginning of its growth, the relationship between science and morals has indeed proceeded less harmoniously. Copernicus (1473-1543) proposed a theory of the universes of nature and said that the earth revolved around the sun, and not vice versa as stated by the religious realm. The conflict that originated in this metaphysical interpretation accumulated in the Galileo inquisition court in 1633. Galileo (1564-1642) was forced by the religious court to revoke his statement that the earth revolved around the sun. Galileo's inquisition court can be interpreted as a symbol that reflects the struggle between science that wants to be free from values outside the scientific field and teachings outside the scientific field that want to make its values as a metaphysical interpretation of science (Suriasumantri, 1998).

Entering the era of the renaissance, scientists won and science gained autonomy in studying nature as it really is. Armed with scientific autonomy, science can freely develop itself. The scientific concept which was originally contemplative and abstract then developed into the concrete form of technology to solve practical problems, both in the form of hardware and software. Bertrand Russell called this development a transition from contemplation to manipulation (Russell, 2004). In this stage, science does not only aim at explaining natural phenomena, but further aims to manipulate the factors associated with these phenomena. It is at this stage of manipulation that moral problems reappear in different ways. If in the stage of contemplation, moral issues are related to scientific metaphysics, then the stage of manipulation of moral problems is related to the use of scientific knowledge. If in the concept development stage, moral problems are related to scientific ontology, then in the application

stage of the concept, moral problems are related to scientific axiology. Ontology is related to the nature of reality, while axiology is related to the usefulness of the knowledge acquired (Suriasumantri, 1998). Armed with scientific autonomy, scientists have succeeded in developing technology. But the technology they created turned out to save potential that is damaging to human's own living system.

The conflict between science and morality then gave birth to polarisation among the scientific community itself (Lacey, 1999). The first group thinks that science is value-free. Science must be neutral towards values, both ontologically and axiologically. Scientists only try to capture natural laws objectively, without polluting human interests. The resulting laws should be applicable by anyone, anywhere and anytime objectively without knowing the boundaries of space and time. After scientists have succeeded in finding knowledge, it is up to other people to use it, whether for good or bad purposes. This view of the neutrality of science towards values is shared by many positivistic-leaning scientists, such as Francis Bacon. According to him, the truth is not contemplation, but operation. This attitude breeds pragmatism in the world of science, because the success of a science is seen from the pragmatic consequences that it causes. This situation in turn directs scientists to the attitude of keeping a distance from the problem of value directly (Musytansyir and Munir, 2004).

Meanwhile, the second group believes that the neutrality of science towards values is only limited to scientific metaphysics, whereas in its use or even in the selection of research objects, scientific activities are always bound by moral principles. In short, all science, especially social science, cannot be developed without involving human values or interests. Knowledge that grows and develops in society will be difficult to break away from the values that grow in that society. Sociologist Max Weber was not sure when social scientists carried out their activities, he was not affected by certain interests that helped determine the choice of the subject matter and empirical analysis he proposed (Musytansyir and Munir, 2004). Weber's view is more or less the same as Habermas'. In his monumental work, *Knowledge and Human Interests*, Habermas classifies knowledge into three groups according to their respective interests. First, empirical analytical sciences, such as natural sciences, which tend to be interested in the technical use of objective processes whose purpose is to rule over nature. Second, the social sciences-hermeneutic sciences, such as history, research in the meaning of writing and other historical documents. These sciences aim to understand through interaction and language in order to capture a meaning. These sciences organise their objects under the interests of the expansion of intersubjectivity, and thirdly, the emancipatory-critical sciences group which helps humans in acting together. This includes economics, political sociology and reflexive sciences such as psychoanalysis and ideological criticism oriented toward liberation from the environment of power. The basic method of these sciences is a critical reflection on the history of human objects (Habermas, 1971; Hardiman, 1993). Every scientist is always faced with choices, including the choice of the methodological approach

used, the choice of data collection techniques and data analysis techniques. The choices a scientist makes are unwittingly influenced by the scientist's interest. In these choices values, both epistemic and non-epistemic, play an important role (Douglas, 2007).

The rejection of the claim of value-free science was also raised by Agnieszka Lekka-Kowalik based on the argument of rationality and scientific responsibility. The rationality of science cannot be seen only as an instrument because it will limit the autonomy of science. The responsibility of science is limited to the responsibility for the cognitive validity of research results and for application reliability. However, science is considered not responsible for the consequences that arise from the use of science in society. The reason is that scientists must not evaluate morally or socially what science has produced. Science finds, but it is society, both individuals and institutions, that sets the goals and uses of scientific knowledge. Problems arising from the misuse of research results in science do not have to be handled by science. A scientist who takes a stand on such problems will be considered unprofessional. In contrast to this view, Agnieszka Lekka-Kowalik said that the problem of abuse of science is a moral problem in science itself. This cannot simply be left to policy makers, government agencies, ethics committees, and the like. This is part of the scientific obligation to consider the possible implications of obtaining and disseminating research results, receiving funding from certain institutions, developing certain technologies (Kowalik, 2010).

Issues related to the relation of science and values also become a warm discourse in the philosophy of Islamic sciences. This discourse then further impacts on the formulation of the integration model of rational science and traditional Islamic science. The idea of integration of rational science and traditional Islamic science itself emerged as an effort to eliminate the dichotomy between rational or secular sciences (acquired knowledge) and religious sciences (revealed knowledge) and secular science hegemony in Islamic educational institutions (Huda et al., 2020). Overcoming this dichotomy, some Muslim thinkers initiated the need for integration between the two kinds of science. But they differed on the pattern of integration offered. Syed Hossein Nasr said there was a need to formulate a new type of science based on the principles, world views and Islamic approaches that he called Islamic science, Ziauddin Sardar offered the concept of "ethical and beneficial science" and Mehdi Golshani offers the concept of "theistic science" (Guessoum, 2010). Others, however, reject the conception of Islamic Science and defend Western Science and say that Western science is an embodiment of Islamic science, especially expressed by secular Muslim thinkers.

One of the differences of opinion was triggered by differences in their views on the concept of science relations and values. Is knowledge free of value (value free) or value bound? Some Muslim thinkers believe that every science is bound by values (value-bound). Consequently, Islamic sciences must be bound by the monotheistic worldview which is at the core of Islamic teachings (Nasr, 1981; Al-Attas, 1983). Therefore, this secular Western science needs

to be returned to the monotheistic worldview. Meanwhile, other Muslim scientists believe that science is value-free and universal. Therefore, science can be grafted into any religious system, including Islam (Butt, 1991). Scientists only try to capture natural laws objectively without polluting human interests. These laws can be applied objectively by anyone without knowing the limits of space and time. This view is shared by Muslim scientists such as Abdus Salam and Pervez Hoodhoy.

This paper aims to outline the philosophical arguments that underlie the views of Islamic thinkers who believe that science is value-free, and Islam thinkers who believe that science is bound by values (bound-value). The search for philosophical arguments will bring about the consequence of searching for the concept of hermeneutics in understanding Islamic teachings (al-Quran). What is the nature of the text (al-Quran) in the view of scientists (ontological problems)? How do these scientists understand the Koran (methodological problems)? And what are the implications for the formulation of relations between modern science and Islamic science?

## **Method**

The method used in this research is a literature study by using several books and journals as a reference. In addition, consultations with several resource persons who are experts in the field of integration of science technology and religion were also carried out as a form of reinforcement of the final results of research.

## **Social Science Revivalism and Knowledge**

The concept of science in Islam from the beginning has given birth to a fundamental problem. The terminology commonly used by the Koran to refer to science is *adalah ilm*. But some Muslim thinkers, such as Ziauddin Sardar, refuse to equate the term 'ilm' with Western science in terms of the accompanying moral dimension. Conservative Muslim scholars, such as Farouq Ahmad Al-Dassouqi, proposed that science be broadly defined by including and aligning the religious sciences with the natural sciences. Al-Dassouqi saw some secular thinkers view religious knowledge as "religion" and limit science to experimental sciences (Guessoum, 2008). In other words, the terminology of Islamic science and secular science already contains fundamental problems at the moral level and also in terms of substance.

This problem can be analysed through the way the Muslim Ummah views the understanding of the Koran. Every Muslim believes that the Koran is a divine revelation and at the same time a source of knowledge, even though the Koran is not a book of science. However, they differ in their position of revelation (text) amid social problems (context) (Hidayat, 1996). Should revelation be understood rationally or traditionally? Is revelation understood through

intra quran or through extra quran? What is the relationship between revelation (Islam) and modern science? In answering this question, several categories emerge in Islam. Seyyed Hossein Nasr, as quoted by Nidhal Guessoum, divides into two categories; modernists and ethics (ethicists), while Ziauddin Sardar divides into three categories: traditionalist groups, conventional groups and i'jaz groups (amazing scientific facts in the Koran) (Guessoum, 2011). Meanwhile this paper uses and modifies the terminology used by Fazlur Rahman; namely revivalist, modernist and neo-modernist Islamic groups (Rahman, 1979).

**Table 1:** *Relationships of Social Science and Religion*

<b>Revivalist</b>	<b>Modernist</b>	<b>Neo-Modernist</b>
Bayani	Burhani	Bayani Burhani Irfani
theocentric	anthropocentric	theocentropocentric
Subjective and not neutral	Objective-neutral	Intersubjective - relative neutrality
Sacred Sciences (Scientia Sacra)	Positive social science	Hermeneutic Social Sciences
Islamisation	Universal science	Ethics-based integration

The revivalist Islamic movement has a rigid view of understanding Islamic teachings. They tend to prioritise the understanding of normative and textualist Islam, and tend to follow the infant epistemological model. Baby epistemology is a model of Islamic epistemology that makes the text (al-Quran) as a source of knowledge (Al-Jabiri, 1990). In the book *Islam and Modernity: Transformation of an Intellectual Tradition*, Fazlu Rahman explains the category of normative Islam and distinguishes it from historical Islam (historical Islam) (Rahman, 1982). According to Rahman, normative Islam is the teachings of Islam contained in the Qur'an and the Sunnah of the Prophet, while historical Islam is an Islamic doctrine that is manifested in the history of Islamic civilisation with all the socio-historical factors that surround it. This category implies a gap between Islam in the form of revelation (normative Islam) and the manifestation of that revelation in history (historical Islam). According to adherents of "normative Islam", the Koran and the teachings contained therein are perfect and do not require dialogue with social dynamics. They do not give space for ijtihad (free reasoning) in understanding the substance of Islamic teachings (Esposito, 2001; Rahman, 1979). As a result, the tradition of classical Islamic thought continues to be preserved and used as the main reference (Meuleman, 1993; Arkoun, 1994).

This normative Islamic epistemology tends to be transcendental-speculative and rational-idealistic (Arkoun, 1986; Madjid, 2000). As a result, Islamic thought moves statically in the area of normative thought in the religious sciences (al-ulûm al-dîniyyah), while rational sciences (al-ulul al-qaqliyyah) occupy a marginal position. Furthermore, Islamic thought is less concerned with the reality of the Kauniyyah verses (cosmology) and the empirical reality of the

Kauniyyah-ijtimâ'iyah verses (social phenomena) contained in the Koran (1995; Arkoun, 1990).

In contrast to "Normative Islam", historical Islam sees a dialectic in the history of the development of Islamic disciplines which is basically a product of the interaction of the ulama with the social, cultural and political factors that surround it. For example, the thoughts of Imam Hanafi (founder of the Hanafi school of thought) who lived in the middle of Baghdad, metropolitan cities, trade centres and centres of intellectual development at that time would give birth to a very different formulation of Islamic sciences, for example, with Imam al-Syafi 'i (founder of the Shafi'i school of thought) who lived in an agrarian Egypt, while the thought of Imam Shafi'i himself experienced the evolution of qaul al-qadîm (old opinion), a view of the religious issues which he raised when he lived in Baghdad, towards qaul al-jadîd (new opinion) which he raised when he lived in Egypt. Of the two models of thought, it turns out that there are several views of qaul al-qadîm (old opinion) which were revised by qaul al-jadîd (new opinion) because the social, cultural and political factors he faced while living in Baghdad and Egypt were very different (Mudzhar, 1988; Hasan, 1988). These historical facts show how Islamic epistemology justifies social plurality due to the different role of "language games" (borrowing the term from Ludwig Wittgenstein).

The tendency of this normative understanding, revivalist Islamic thought makes the text of revelation (al-Quran) and the prophetic tradition (sunnah) as the only source of knowledge. Therefore, the revivalist movement aspires to restore all new realities that occur in new situations to harmonise with the Koran and the Sunnah. This belief affects their views in the concept of philosophy of science, especially with the problem of science and value relations. They believe that all knowledge is not neutral, and in the context of Islamic sciences, all knowledge must be returned to the value system contained in the Koran and the Sunnah.

The development of science must not give birth to an attitude of arrogance and pride, because the truth of the knowledge produced by humans is only relative truth. Muslims must strive to create their own science by incorporating what is positive in modern science into the worldview in which God is in power (Nasr, 1981). Thus, revivalists believe that science cannot be neutral. This group is of the opinion that the neutrality of science towards values is only limited to scientific metaphysics, whereas in its use or even in the selection of research objects, scientific activities are always bound by moral principles. For a Muslim, these moral principles are already established in the Koran and the Sunnah of the Prophet, and therefore the revivalist views tend to be theocentric in character.

This revivalist view is evident in the thoughts of Seyyed Hoosein Nasr, who is also known as a figure of neo-traditionalism, because of his high attention to the essence or heart of a religion. Based on the view of neo-traditionalism, Nasr criticized western science, which was considered to have lost its sacred value. Therefore, the reconstruction of Western science must be returned

to the heart of the teachings of Islam which lie within the teachings of monotheism. So the strategy offered by Nasr is the sacralisation of *sanis* (*scientia sacra*) as opposed to the rationalisation which is as intense as modern science (Nasr 2001).

This revivalist idea also became the basis for the development of the idea of the Islamisation of knowledge, as initiated by Al-Attas, Al-Faruqi. Epistemologically, Al-Attas and al-Faruqi believe that knowledge is not value-free (Wan Daud, 1998). Therefore, the knowledge generated from secular Western civilisation is irrelevant to be applied to Muslim societies with a view of monotheism. Both also believe that God is the source of all knowledge (God is the origin of all knowledge) and that knowledge is the basis of faith and good deeds (knowledge is the basis of faith and good deeds). Both also agree that the root of the problematic of Muslims lies in the education system, especially the problem of knowledge itself. Therefore, the solution is the Islamisation of that knowledge, namely the Islamisation of contemporary or modern secular knowledge. The Islamisation of knowledge intends to restore modern secular knowledge to return to the spirit of monotheism and eliminate the dichotomy between Islamic sciences and modern secular knowledge.

The first process (verification) eliminates the basic elements and concepts that make up Western culture and civilisation, especially in the human sciences, while the second process (infusion) is to include Islamic elements and key concepts in each branch relevant to current science (Wan Daud, 1998). Al-Attas hopes that through these two processes knowledge will be born in accordance with the nature that contains elements and concepts of *din* (religion), human beings (humans), '*ilm* and *ma'rifah* (knowledge), wisdom (wisdom),' *adl* (justice), and '*amal* (right action) (Al-Attas, 1983). Both of these processes aim to free science from the understanding of secular ideology (Al-Attas, 1999). Thus, Islamisation of knowledge according to Naquib Al-Attas implies the desecularisation of science as well as the infiltration of Islamic values. According to Wan Mohd Nor Wan Daud, the Islamisation of knowledge process formulated by al-Attas contains two philosophical movements. First, filtering, evaluating, interpreting and evaluating ideas and facts. Second, creating and producing meanings that are relevant to individuals and society and in accordance with Islamic metaphysics, Islamic epistemology and principles of legal ethics in Islam (Wan Daud, 2013).

In contrast to Naquib Al-Attas, Islamisation of knowledge according to Al-Faruqi implies the Islamisation of modern science by reformulating and reconstructing social science and natural science based on the principle of monotheistic worldview (Al-Faruqi, 1988). According to Al-Faruqi, the principle of monotheism must be present from the beginning of the formulation of a science, both in aspects of methodology, strategy, problems and objectives, data selection and data interpretation. Al-Faruqi then developed the methodology of the Islamisation of modern knowledge based on the principle of monotheism and includes

12 stages (Hashim & Rossidy, 2000): Determination of Islamic relevance typical of scientific disciplines, critical assessment of modern science; current level of development, survey of problems faced by Muslims, survey of problems faced by mankind, creative analysis and synthesis, the pouring back of modern scientific disciplines into the Islamic framework; books from the university level, and dissemination of knowledge that has been extended to Islamisation (Al Faruqi, 1988). The twelve steps formulated by Al-Faruqi can be simplified into two processes. First, Islamisation of modern knowledge begins with efforts to fully master and understand all modern disciplines. Second, to eliminate, change, re-interpret and adapt the components that exist in Western science with the principles of the Islamic worldview.

Thus, Nasr, Al-Attas and Al-Faruqi both believe that all science is bound by the values and interests of the scientists and cultures that gave birth to it. This view is based on the argument that different civilisations will produce different knowledge. A civilisation is a total manifestation of its spiritual and material culture. Behind every civilisation, there is a human vision that motivates and guides how to behave towards nature and guides them in solving their problems. In other words, it is this vision that gives birth to the way of life that characterises the culture (Ehsan Masood, 2006). Consequently, sciences born from Western civilisation will have a close relationship with the secular vision they contain, and therefore Western science needs to be Islamised.

### **Modernist and Universal Science**

Modernist Islamic groups tend to understand the Koran and the Sunnah rationally. They tend to follow the Burhani epistemology model which makes empirical reality a source of knowledge (Al-Jabiri, 1989). This group is influenced by the Mutazilah theology which believes that good and bad are determined by human reason, and that God has given freedom to humans and the universe to act in a system called natural law (sunnatullah). Therefore, modernist Islamic groups view that science is universal so that science is not associated with specific civilisations. In addition, science is also culturally neutral, so that it cannot be linked to certain cultural value systems (Hoodbhoy and Abdus Salam, in Hashim and Rossidy 2000). Thus, science is seen as value-free so that it can be grafted into any religious system, including Islam.

For secular modernists, all knowledge operates on the basis of the law established by Allah (sunnatullah). This modernist view is much influenced by episteme burhani (epistemology of rational-empirical Islam), especially the empiricist tradition developed by Ibn Rushd and Ibn Khaldun. Ibn Rushd's philosophical thinking itself greatly influenced and at the same time inspired the revival of Aristotelianism in Western Europe (Fakhry, 2004), and indirectly influenced the style of Western philosophical thought, ranging from rationalism, empiricism

to positivism. This view of positivism has then dominated Western philosophical thinking until now. The difference is that in the hands of Ibnu Rusdy and Ibnu Khaldun there are efforts to harmonise religion and science, so in the hands of positivism, science has lost its spiritual vision. Positivism views sensory knowledge, especially as manifested in the natural sciences as the only norm for knowledge activities (scientism). Finally, the paradigm of natural sciences is used as implicit normative assumptions in the epistemology of positivistic social sciences (Hardiman, 1993).

This view of scientism inherent in positivism is widely held by modernist Muslim scientists. They believe that all knowledge works on the basis of the law established by Allah (sunnatullah), so that science is universal and free from human interests. One of his supporters is Abdus Salam and Pervez Amirali Hoodbhoy. According to Abdus Salam and Pervez Amirali Hoodbhoy, science is seen as value-free so that it can be transplanted into any religious system, including Islam. However, the teachings of Islam in this case must be adapted to the terminology of modern science so that Islam can be grounded, in the terminology of the Quraish Shihab (Shihab, 1994). Scientists only try to capture natural laws objectively without polluting human interests. These laws can be applied objectively by anyone without knowing the limits of space and time.

Furthermore Abdus Salam, winner of the Nobel Prize in Physics, said that science is universal, while its application is influenced by various cultural factors. He did not believe that there were serious metaphysical problems in modern science that demanded a reconstruction of the building of modern science. Abdus Salam bases his argument on the Koran which repeatedly urges believers to observe, ponder, reflect on, understand and learn from the universe using their reason (Guessoum, 2011).

Like Abdus Salam, Pervez Hoodbhoy, who also won the Nobel Prize, rejected the terminology of Western science, Islamic science, Greek science or other civilisations. According to Hoodbhoy, there is no Islamic science about the physical world and hence the effort to create Islamic science is a futile work. According to Pervez Hoodbhoy, the aim of religion is to enhance morality and not explain scientific facts. Therefore, attempts to create knowledge with new epistemology will fail (Hoodbhoy, 1991). Therefore, Abdul Karim Soroush said that the Islamisation of science was illogical or impossible. The reason is that reality is neither Islamic nor non-Islamic. Therefore, science as a true proposition is neither Islamic nor non-Islamic (Syahrial, 2017). The views of Abdus Salam and Pervez Hoodbhoy by Sardar are called positivist, as well as scientific fundamentalism (Guessoum; 2011).

### **Neo-Modernists and Value Neutrality**

The neo-modernist view of Islam exists to bridge the gap between the revivalist and modernist views of Islam. If revivalist Islamic groups prioritise religious sciences (sacred science-scientia sacra) which are patterned theocentric, and modernist Islamic groups tend to prioritise secular sciences (rational science) which are anthropocentric, then neo-modernist Islamic groups try to combine both to give birth to science theo-anthropocentric style (Yasin et al., 2020). Theo-anthropocentric sciences are sciences that are epistemologically based on the empirical social world, but do not escape from the nature of the transcendental world so that dialogue takes place between revelation and empirical reasoning.

In one of his articles, Rahman recounted when Allah created Adam as, He gave him Science. So for humans, Science is as important as existence. If humans only have a form without knowledge, they are less noble. The Qur'an states that when Allah wanted to create Adam, He told the angels. Because of the ability of intellect (intellect, reason, aql) that God has given to humans, then he can reveal knowledge. Because of this knowledge, human beings have a sense of responsibility (Huda et al., 2020). Rahman gave an example; if we give a sword to a child, maybe he will harm himself, unless he has a sense of responsibility that can control him. The Qur'an explicitly states that humans do not yet have a sufficient sense of responsibility. Although his knowledge is very broad, his sense of moral responsibility is still so small (Rahman, 1988).

In understanding the Koran, neo-modernist Islamic groups are more focused on contextual interpretation. They tried to build epistemological arguments based on bayani burhani and irfani. If bayani is text based (al-Quran), burhani is based on empirical rational reasoning, then irfani is based on deep inner experiences in understanding reality (Al-Jabiri; 1989). Therefore, when understanding the Koran, they first distinguish aspects of parole and langue. This view of the intertextuality of this verse can also be found in the view of Maliki's jurist, al-Syathibi (d. 1388) who states that the eternal validity of the Koran rests only on general principles (ushûl kulliyah) and not on individual parts al-Quran. Therefore, the liberalists say that the most important thing from the Koran is its meaning. They are of the opinion that what is the basis for the Koran is moral so that the pronunciations for him do not have to limit someone to capture their meaning.

The neo-modernist Islamic group then developed hermeneutical social science. Hermeneutic social science is social science that is built from the relation of understanding of the world of texts, the world of authors and the world of readers. To understand these three worlds, religious sciences are needed which are the concern of the revivalists and baby epistemology, and also empirical social sciences which are concerned with positive social science, burhani. In order to bridge the world of texts and the world of directors who lived in the past and the

world of readers who live in the present, it requires the territorial, irfani aspects so that the texts of the past remain relevant in the present. In other words, related to the issue of scientific neutrality, liberal moderate Islamic groups face relative neutrality (Muawanah et al., 2020). This means that knowledge is substantively neutral, but in its implementation it must be bound by universal morality that is extracted from religious messages.

Hermeneutics itself was originally a method of interpreting scriptures, but now its status has shifted to a common name for contemporary studies that discusses a particular form of hypotheses in "epistemology of understanding" (Howard, 2001). Hermeneutics then becomes an alternative epistemology of the human sciences (Geisteswissenschaften) whose object is the expression of life (Lebensaeusserung) which includes concepts, actions and appreciation (Erlebnis) of humans. In contrast to the natural sciences that use the *erklären* method (explaining causality), human sciences uses the *verstehen* (understanding) method (Hardiman, 1994). What *verstehen* wants to know is not the causal relationship, but the meanings contained in the experience and symbolic structure produced in this world (Hardiman, 1991). As part of the *verstehen* method, the main task of hermeneutics is how to interpret a classic text or a social reality in an alien past that is entirely the property of people living in different times, places and cultural settings. In other words, hermeneutics always wrestles with issues of understanding the text in a broad sense, including historical events, symbols and myths (Riceour, 1991).

Fazlur Rahman is a contemporary Islamic thinker who has made hermeneutics a tool of analysis in formulating hermeneutical social science by dialoguing al-Qur'an texts that were born in the past with the present world (Azhari et al., 2019). Hermeneutical social science seeks to make texts born fourteen centuries ago to remain dynamic, lively and functional for the present age. In this position, hermeneutics is needed not only for the horizontal deduction of law, but also for vertical developments in order to find the *legis ratio* (*'illat al-hukm*) or statements that are generalised with the assumption of "al-Qur'ân yufassiru ba'dluhu ba'dla" (some verses of the Qur'an explain some other verses) (Huda et al., 2020). In other words, hermeneutics operates in a comprehensive model of understanding the Qur'an as a whole, not as separate, atomistic and partial commands, as happened in traditional medieval interpretive methods (Rahman, 2000).

Hermeneutic social science starts with the aims and principles of the Qur'an that must be understood in the framework of formulating a unified and comprehensive social moral theory (Rahman, 1979). These general principles or *legis ratios* produced by this vertical movement are what Rahman later called the ideal law which contains ethical principles and must be distinguished from the rule of law (legal law). According to Rahman, these ideal laws or moral principles are representations of the true divine will, whereas specific legal rules must be seen as contextualising that ideal law in a specific environment. In exploring this ideal

law, the social sciences of hermeneutists try to describe the hermeneutics of the Koran into a method he calls the "systematic interpretation method", which technically includes two multiple movements ( double movement) whose substance contains a model of interpretation from the present situation to the Quranic time, then back to the present (Rahman, 1970).

Thus, in the formulation of hermeneutic social sciences, the moral principles of the Koran occupy a central position and these moral principles are believed by Rahman as the only tool that can bind all dimensions of hermeneutic social sciences in order to return to the spirit of the whole Qur'an. Therefore, in Rahman's scheme of thought, al-Qur'an's ethics will be the link that connects religious and secular sciences.

### **Conclusion**

The relation of Science and values of morality is a hot issue that continues to develop in the philosophy of science. The first group thinks that science is value-free. That is, science must be neutral from moral, cultural and religious values, both metaphysically and axiologically. Meanwhile, the second group believes that the neutrality of science towards values is only limited to scientific metaphysics, whereas in its use or even in the selection of research objects, scientific activities are always bound by moral principles. All science, especially social science, cannot be developed without involving human values or interests.

The Science Debate and morality values further influence the concept of the relation of science and religion in the philosophy of Islamic sciences. First, there are revivalist groups offering a strategy of Islamisation of knowledge. Departing from the revivalist perspective in understanding the Koran (bayani), they believe that science is not neutral, but subjectively bound by the values contained in the Koran (theocentric). Therefore, secular Western science must be converted to Islam. This group is yearning for the birth of knowledge that is monotheistic. Second, modernist groups that offer universal science concepts. Departing from the perspective of a rational understanding of modernist Islam (burhani), this group believes that science is neutral or value-free. Science is only subject to natural law (sunnatullah) that God has created. Therefore, science is objective without being bound by any ideology or religion. This group puts forward positivistic sciences. The third group, is the neo-modernist group that offers the integration of science and religion based on ethics. Building on dialectical and dialogical understanding of the Koran between bayani, burhani and irfani (theo-anthropocentric), this group offers an intersubjective understanding model and therefore this group offers the concept of hermeneutic sciences.

## REFERENCES

- Abdullah, M. A. (1995). *Studi agama: Normativitas atau historisitas*. Yogyakarta. Pustaka Pelajar.
- Al-Attas, S. Muhammad, N. (1980). *The concept of education in Islam: A framework for an islamic philosophy of education*. Kuala Lumpur: ABIM.
- Al-Attas, S. Muhammad, N. (1983). *Islam and secularism*. Kuala Lumpur. ISTAC.
- Al-Attas, Syed, M. N. (1993). *Islam and secularism*. Kuala Lumpur: ISTAC.
- Al-Attas, Syed M. N. (1999). *The concept of education in islam: A Framework for An Islamic Philosophy of Education*. Kuala Lumpur. ISTAC.
- Al-Jabiri, Muhammad Abid. (1989). *Takwîn al-'Aql al-'Araby*. (Beirut. Markaz Dirasah al-Wahdah al-'Arabiyyah.
- Al-Jabiri, Muhammad Abid. (1990). *Bunyah al-'Aql al-'Araby: Dirasah Tahlîliyah Naqdiyyah li Nudzum al-Ma'rifah al-'Arabiyyah*. Beirut. Markaz Dirâsah al-Wahdah al-'Arabiyyah.
- Arkoun, M. (1986). *Tarikhîyyah al-fikr al-'araby al-islami*. Beirut. Markaz al-Inma'.
- Arkoun, M. (1990). *al-Islâm; al-Akhlâq wa al-Siyâsah*. Beirut. Maraz al-Inma' al-Qaumi.
- Arkoun, M. (1994). *Rethinking Islam: Common questions. Uncommon answers*. Oxford. Westview Press.
- Azhari., Roslina., As'ad, M.U., Karim, A.T.B.A., Jermisitiparsert, K., Umam, R. (2019). Benchmarks of authority in Suruhanjaya Perkhidmatan Awam and the commission of state civil services (KASN). *International Journal of Innovation, Creativity and Change*, 8(8), 351-362.
- Butt, N. (2011). *Science and Muslim Societies*. London. Grey Seal.
- Douglas, H. (2007). Rejecting the ideal of value-free science. in Kincaid. Harold. John Dupré. and Alison Wylie. (eds). *Value-Free Science? Ideals and Illusions*. New York: Oxford University Press. 2007. Oxford Scholarship Online. 2009. doi: 10.1093/acprof:oso/9780195308969.001.0001
- Esposito, J. L., & John, O. V. (2001). *Makers of contemporary islam*. Oxford University Press
- Fakhry, M. (2004). *A history of islamic philosophy Third Edition*. 3rd Edition, Columbia University Press.



- Guessoum, N. (2008). The Quran. Science. and the (Related) contemporary muslim discourse. *Zygon*. 43 (2). 411-431
- Guessoum, N. (2010). Science. religion. and the quest for knowledge and truth: an Islamic perspective. *Cult Stud of Sci Educ*. (5). 55–69. DOI 10.1007/s11422-009-9208-3.
- Guessoum, N. (2011). *Islam's quantum question reconciling muslim tradition and modern science*. London. I.B. Tauris.
- Habermas, J. (1971). *Knowledge and human interests*. Boston. Beacon Press.
- Hardiman. F. B. (1991). Positivisme dan Hermeneutika: Suatu Usaha untuk Menyelamatkan Subyek, *Basis*. Maret. 1991.
- Hardiman. F. B. (1993). *Kritik ideologi: Pertautan Pengetahuan dan Kepentingan*. Yogyakarta. Kanisius.
- Hardiman. F. B. (1993). *Menuju masyarakat komunikatif*. Yogyakarta. Kanisius
- Hardiman. F. B. (1994). Ilmu-Ilmu sosial dalam diskursus modernisme dan post-modernisme. *Ulumul Quran*. 1 (5). 1994.
- Hasan. A. (1988). *The early development of islamic jurisprudence*. Islamabad. Islamic Research Institute.
- Hashim, R. & Rossidy, I. (2000). slamization of knowledge: A comparative analysis of the conceptions of ai-attas and ai-fariiqi. *Intellectual Discourse*. 8 (1). 19-44
- Hashim, R. (2007). Intellectualism in higher islamic traditional studies: Implications for the curriculum. *The American Journal of Islamic Social Sciences*. 24 (3). 92-115
- Hidayat, K. (1996). *Memahami bahasa agama: Sebuah kajian hermeneutik*. Jakarta. Paramadina.
- Hoodbhoy, P. (1991). *Islam and science religious orthodoxy and the battle for rationality*. London. Zed Books.
- Howard, R. J. (2001). *Pengantar teori-teori pemahaman kontemporer: Hermeneutika: Wacana Analitik. Psikososial dan Ontologis*. terj. Kusmana dan M.S. Nasrullah. Bandung. Nunasa.
- Huda, S., Muawanah., M., Syazali, M., Palupi, E.K., Umam, R., Tortop, H.S. (2020). Islamic education in supply chain system by prioritizing manners as a success factor of

millennial generation on socializing. *International Journal of Supply Chain Management*, 9(2), 853-863.

Huda, S., Suherman., K., Syazali, M., Umam, R. (2020). The effectiveness of al-qurun teaching model (ATM) viewed from gender differences: The impact on mathematical problem-solving ability. *Journal of Physics: Conference Series*, 1467(1), 26.

Huda, S., Yasin, M., Fitri, A., Syazali, M., Supriadi, N., Umam, R., Jermisittiparsert, K. (2020). Numerical Ability Analysis: The impact of the two stay-two stray learning model on the sequence and series topic in islamic boarding school. *Journal of Physics: Conference Series*, 1467(1), 012002.

Lacey, H. (1999). Values and the conduct of science: Principles. *Principia*. 3(1). 57-85

Muawanah., Y, M., Huda, S., Tsani, I., Syazali, M., Umam, R., Jermisittiparsert, K. (2020). Career management policy, career development, and career information as antecedents of employee satisfaction and job performance, *International Journal of Innovation, Creativity and Change*, 6, 458-482.

Meuleman, Johan H. (1993). Nalar islami dan nalar modern: Memperkenalkan pemikiran mohammed arkoun. *Ulumul Quran*. 4 (IV). 128-132.

Mudzhar, M. A. (1998). Social History Approach to Islamic Law. *Al-Jamiah*. No. 61.\

Munifah., Huda, S., Hamida, U.D., Subandi., Syazali, M., Umam, R. (2019). The use of management strategies to attract the public's interest in pesantren: A new model for pesantren dynamics study, *International Journal of Innovation, Creativity and Change*, 8(8), 363-383.

Musyriansyir, R. dan Munir, M. (2004). *Filsafat ILMU*. Yogyakarta. Pustaka Pelajar.

Nasr, S. H. (1981). *Knowledge and the sacred*. Edinburgh. Edinburgh University Press.

Nasr, S. H. (2001). *Science and civilization in islam*. Chicago. ABC International Group.

Rahman, F. (1970). Islamic modernism: Its scope, method and alternatives. *International Journal of Middle East Studies*, 1(4), 317-333.

Rahman., (1979). *Islam*. Chicago. Chicago University Press.

Rahman, F. (1979). *Islam: Past influence and present challenge*. eds. A.T. Welch dan P. Cachi. Edinburgh University Press.



- Rahman, F. (1979). *Islam: Past influence and present challenge*. eds. A.T. Welch dan P. Cachi. Edinburgh University Press.
- Rahman, F. (1982). *Islam and modernity: Transformation of an intellectual tradition*. Chicago. Chicago University Press.
- Rahman, F. (1982). *Major themes of the quran*. Chicago. Bibliotheca Islamica.
- Rahman, F. (1988). Islamization of knowledge: A Response. *The American Journal of Islamic Social Science*. 5 (1). 3-11.
- Rahman, F. (2000). *Revival and reform in islam: A study of islamic fundamentalism*. Oxford. Oneworld.
- Riceour, P. (1991). *From text to action: Essay in hermeneutics. II*. Evanston. Northwestern University Press.
- Russell. B. (2004). *History of western philosophy*. London. Routledge.
- Santoso, H dan Santoso, L. (2003). *Filsafat ilmu sosial: Ikhtiar awal pribumisasi ilmu-ilmu sosial*. Yogyakarta. Gama Media.
- Shihab, Q. (1994). *Membumikan al-Quran: Fungsi dan peran wahyu dalam masyarakat*. Bandung. Mizan.
- Suriasumantri, Jujun S. (1988). *Filsafat Ilmu: Sebuah pengantar populer*. Jakarta. Pustaka Sinar Harapan.
- Wan D. Wan, M. N. (1998). *The educational philosophy and practice of Syed Muhammad Naquib al-Attas-An Exposition of the original concept of Islamization*. Kuala Lumpur. ISTAC.
- Wan, D Wan, M. N. (2013). *Islamisasi ilmu-ilmu kontemporer dan peran universitas islam dalam konteks dewesternisasi dan dekolonisasi*. Bogor. Universitas Ibnu Khaldun & casis utm.
- Yasin, M., Huda, S., Putra, F.G., Syazali, M., Umam, R., Widyawati, S. (2020). IMPROVE Learning Model and Learning Independence: Influence and Interaction on Mathematics Problem-Solving Abilities in Islamic Boarding School, *Journal of Physics: Conference Series*, 1467(1), 012003.