

The Philosophical Transformation of Scientific Paradigm (Study of the Integration of Knowledge in the Perspective of the Qur'an)

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ABSTRACT: The philosophical study of scholarship in the Qur'an must depart from an understanding of the conception of the essence of human beings as the most glorious and best creation of Allah SWT has been equipped with a set of potentials. Therefore, there needs to be an integration of science with the values of Islamic teachings. Muslim scholars have sought an alternative concept of science on the basis of a worldview of Islam based on the Qur'an. This effort is known as "the Islamization of science". Islamization of science not only applies Islamic ethics to the use of science. But more than that, the process of return and purification of science on the essential principles, namely monotheism, the unity of the meaning of truth and the unity of the source of knowledge. Of these three principles are referred to as the basic principles of Islamic science. From this, ontology, epistemology, and axiology are revealed.

After that formulated a classification of science that refers to divine knowledge (revelation) and human science (sensory and rational) that pivot to Allah SWT. That is, this second type of science is organically inherent with the spirit of divine revelation. With this proposed proposition it can be emphasized that this study can answer the focus of the problem of how the integration of science according to the Qur'an. Through this framework of Islamization of science, it is compatible with the conception of man according to the Qur'an, both with regard to the nature of creation, the basic human potential, and the function of the human caliphate on earth.

I. BACKGROUND OF STUDY

As Muslims, we realize that since the beginning of the revelation of al-Quran, Allah commands us to explore and develop science by thinking about the creation of heaven and earth, telling us to think, observe and examine the universe. The Qur'an challenges humans to research the universe to the smallest extent (Surah al-Ghasiyah: 17-30). The meaning of the verse of al-Qur'an if deeply impregnated, it is actually an order and suggestion to explore knowledge as broadly as possible by conducting research on the universe. The problem is that all this time scientists, such as; biologists, chemists, physics, sociology, psychology and so on, in developing and researching the universe have not referred to the verses of the Qur'an. While most of the scholars who pursue the Qur'an and the hadith stop at the study of the text alone, it is not until the birth of the spirit to examine the universe of God's creation scientifically as the message of the Qur'an.

As a result, we are familiar with the terms dichotomy of religious science and general science. The science of Islam is a knowledge based on revelation, the hadith of the Prophet and the ijthad of the scholars. For example, the science of jurisprudence, monotheism, mysticism, exegesis, the science of hadith, the history of Islamic civilization and so on. While other general sciences are science based on experimentation and human reasoning based on empirical data through research. Such as, mathematics, astronomy, biology, chemistry, medicine, anthropology, economics, sociology, psychology and so forth. Both have their respective territories, separated from each other, both in terms of formal-material objects, research methods, the criterion of truth, and also the role played.

Because of concerns that came the idea or the concept of Islamization of knowledge or also known as the integration of science in an attempt to neutralize the influence of modern Western science. The idea of Islamization of science appeared first at the time held a first world conference on education of Muslims in Mecca in 1977. The conference which was initiated and implemented by King Abdul Aziz University successfully discussed 150 papers written by scholars from 40 countries, and formulated recommendations for reform and improvement of the Islamic education system held by Muslims throughout the world. One idea that

was recommended was regarding the Islamization of knowledge. This idea was made by Syed Muhammad Naquib al-Attas and Isma'il Raj'i al-Faruqi¹.

For al-Attas, the Islamization of science was the liberation of knowledge from interpretations based on secular ideology and from the meanings and expressions of secular humans². According to al-Attas, science that spreads to the middle of the world community, including the Islamic community, has been colored by the style of Western culture and civilization. While Western civilization itself has given rise to confusion. Civilizations are born of knowledge of the West has lost the essence, causing the chaos of human life. Therefore al-Attas saw that Western civilization is not suitable for consumption before being selected and sorted, the true from the false mixed³.

According to al-Attas, science rational, intellectual, and philosophy with all its branches shall be cleared from the elements and Western concepts and then entered with the elements and key concepts of Islam. For al-Attas, the Islamization of science was a process of elimination of the main elements and concepts that shaped Western culture, and the sciences developed, including the basic elements and concepts of Islam. However, before implementing the Islamization of science, there is something that should be implemented first, that is the Islamization of language⁴.

Meanwhile, according to al-Faruqi, the Islamization of knowledge it must observe a number of principles which constitute the essence of Islam. To pour back disciplines within the framework of Islam, it means making theories, methods, principles and objectives are subject to the oneness of God, the unity of the universe, the unity of truth and knowledge, unity of life and humanity.⁵

According to al-Faruqi, Western civilization and westernization have brought negative effects to Muslims. On the one hand, the Muslims have been acquainted with the modern Western civilization, but on the other hand they lost a solid footing, which is a rule of life that originates religious morals. As a result, Muslims are difficult to determine the choice of the right direction. Hence, Muslims finally impressed taking ambiguity (ambiguous / split personality). To eliminate this dualism, knowledge must be Islamized.⁶ Furthermore, Al-Faruqi states that before the Muslims suffered damage and deterioration, they should develop, build, and clarify the modern scientific disciplines in accordance with the worldview and values of Islam.⁷ The Islamization of Al-Faruqi Science Program consists of 12 work programs and then it is made as a foundation 5 objects work plan for the Islamization of science.⁸

In contrast to Ziauddin Sardar. He instead criticized the concept of Islamization of science which was initiated by Isma'il Raj'i al-Faruqi. He reconstructed the concept by using the terminology of Islamic science. Sardar's criticism is directed at the opinion of the relevance between Islamic science and Western science. He did not agree with al-Faruqi who stated the need for mastery of Western science prior to master Islamic science. Sardar explained that all science was born from a particular view and in terms of the hierarchy subject to such views. Therefore, the effort to find epistemology should not be initiated by giving a foundation to modern science. Because the Islamization of modern science can only happen with the paradigm that examines the external application of Islamic civilization that relates to the needs of contemporary reality. If you stick to the pattern of thinking that means merely exploiting Islamic science, but still uses Western thinking patterns.⁹

Sardar emphasized the need for the creation of a contemporary Islamic science as a counter to modern Western science. That is, a system of science based on Islamic values. This idea is different from Nasr who explores his criticism through traditional perspectives. Sardar intelligently utilized criticism from among philosophers and historians of science the West, especially the environmentalist thinkers even to the left-wing radicals are rampant in the West since the 1960s. His criticism led to the fact that the non-neutrality of modern science and the influence of modern Western culture in the form of science and impacts.

Sardar provides a solution by saying that the Islamization of science must begin to build the Islamic epistemology, so that it can generate knowledge system that is built on the pillars of Islam. Therefore, according

¹ Muhaimin, *Arah Baru Pengembangan Pendidikan Islam, Pemberdayaan, Pengembangan Kurikulum, hingga Redefinisi Islamisasi Pengetahuan*, (Bandung: Nuansa, 2003), h. 330.

² Abdullah Ahmad Na'im, dkk, *Pemikiran Islam Kontemporer*, (Yogyakarta: Jendela, 2003), h. 337.

³ *Ibid.*, h.338.

⁴ *Ibid.*, h.340.

⁵ Didin Saefuddin, *Pemikiran Modern dan Postmodern, Biografi Intelektual 17 Tokoh*, (Jakarta : Grasindo, 2003), h. 163.

⁶ Ramayulis dan Syamsul Nizar, *Ensiklopedi Tokoh Pendidikan Islam, Mengenal Tokoh Pendidikan Islam di Dunia Islam dan di Indonesia*, (Ciputat: Quantum Teaching, 2005), h.110.

⁷ *Ibid.*, h.129.

⁸ Keterangan lebih lanjut lihat Ismail Raj'i al-Faruqi, *Islamisasi Pengetahuan*, terj. Anas Mahyudin, (Bandung, Pustaka, 1995); lihat juga Khudori Soleh, "Mencermati Konsep Islamisasi Ilmu Ismail Raj'i Al-Faruqi". Dalam *Jurnal Studi Islam Ulul Albab*, Vol. 12, No. 1, (Malang: Fakultas Psikologi UIN Maliki Malang, 2011).

⁹ Abdullah Ahmad Na'im, dkk., *Pemikiran Islam Kontemporer*, (Yogyakarta: Jendela, 2003), h. 338.

to Sardar, what is needed is a radical re-orientation of science to the level of epistemology and filling his world view with the values of Islam in order to form an Islamic science is more suited to the physical and spiritual needs of Muslims. Sardar called this effort with the current of Islamic science. The values are used as the basis of epistemology by Sardar is ten grades, that is monotheism, the caliphate, worship, knowledge, allowed, forbidden, 'adl vs zulm, istishlah vs dhiya'.¹⁰ These ten formulations of value can be placed as a base to assess whether research programs and techniques into the category of Islamic science or not. Tenth formula this value can be placed as a base to assess whether research programs and techniques into the category of Islamic science or not. For example, the question can be asked is whether it leads to respect for human caliphate with respect to the natural world? and does it bring human welfare or futility?

Indeed, it must be admitted among Muslim scientists that there are still differences in perspectives in the effort of Islamization of science, especially the thought of al-Attas and Isma'il Raj'i al-Faruqi versus Ziauddin Sardar. This is reasonable because of differences in educational backgrounds, scientific disciplines and socio-cultural settings of each scientist. In this context, this research becomes very important to study the transformation of the scientific philosophical paradigm, especially with regard to the integration of science in the perspective of the Qur'an. This study is an attempt to build the platforms that science should refer to the divine knowledge (revelation) and the science of human knowledge (sensory and rational) that pivots to Allah. With this proposition it can be asserted that building a framework of thinking about the Islamization of science must depart from an understanding of human nature according to the Qur'an.

Such as Kuntowijoyo said that the main concept of the integration of science is the unification (not just a combination) between the revelation of God and the findings of the human mind.¹¹ Even further, Imam Suprayogo also defines scientific integration as positioning the Qur'an as a grand theory for knowledge.¹² Science and religion as if two entities that are different and separate from each other, have their respective territories, both formal objects and scientific material, research methods, truth criteria, roles played by scientists, even at the level of the provider institution.¹³

Based on this reasoning, the research of the transformation of the scientific philosophical paradigm, especially in relation to the thought of integrating science in the perspective of the Qur'an, it becomes important as an effort to Islamize science and presumably be an important part of the intellectual tradition of modern Muslims. According to Imam Suprayogo, the integration of science and religion can be described as a large "science tree" metaphor and its firm roots penetrate to the bottom of the earth.¹⁴ Thus, Imam Suprayogo believe that the text of the Qur'an is the source of knowledge, both in the level of scientific development theory as well as in the level of religious practice, which should be developed in the Islamic world are an integral campus at all faculties. This is where the importance of assessing explores philosophical paradigm of science through the interpretation of the text of the Qur'an which are integrated between science and the text of the Qur'an.

II. RESEARCH PROBLEMS

This research is focused on exploring how the philosophical paradigm shift, related to ontology, epistemology, and science axiology as a platform for building knowledge integration in the perspective of the Qur'an? This research departs from the fundamental understanding that to Islamize science must be based on the nature of human beings according to the Qur'an. With this understanding, a relation will be formed that science must refer to divine revelation (al-Qur'an) and human (sensory and rational) science which pivot to Allah, so that it happens, borrowing the term from Amin Abdullah, the *integration-interconnection*¹⁵ of knowledge.

III. THEORETICAL FRAMEWORK

In order to answer the research problems above, this research uses two theories simultaneously, hermeneutical theory and historical theory. Hermeneutical theory is one of the modern philosophical theories used to interpret religious doctrine contained in the holy book. Therefore, one of the important studies of hermeneutics is to formulate the right relation between texts (writers), writers or authors, and readers in the dynamics of the struggle of interpretation / thought of the text (*Nash*) included in religious texts in Islam. It must be realized, the authority (authority) of texts is only absolutely the right of God. Only God alone (author) knows

¹⁰ *Ibid*, h. 338.

¹¹ Kuntowijoyo, *Islam sebagai Ilmu*, (Yogyakarta: Tiara Wacana, 2006), h. 55.

¹² Imam Suprayogo, "Membangun Integrasi Ilmu dan Agama: Pengalaman UIN Malang". Dalam Zainal Abidin Bagir (ed), *Integrasi Ilmu dan Agama: Interpretasi dan Aksi*, (Bandung: Mizan, 2005), h. 49-50.

¹³ Amin Abdullah, *Islamic Studies di Perguruan Tinggi: Pendekatan Integratif-Interkonektif*, (Yogyakarta: Pustaka Pelajar, 2012), h. 92.

¹⁴ Imam Suprayogo, "Membangun Integrasi Ilmu dan Agama: Pengalaman UIN Malang", h. 228.

¹⁵ M. Amin Abdullah, *Paradigma dan Implementasi Pendekatan Integrasi-Interkoneksi dalam Kajian Pendidikan Islam*, (Yogyakarta: Pascasarjana UIN Sunan Kalijaga, 2014).

exactly what He really wants and wants in His words as stated in the text. Humans as readers, are only able to position themselves as interpreters of the texts revealed by God with all their shortcomings and limitations. Thus, the interpretation of the most relevant and should really only the desire and the will of the author, and not lie in the hands of the interpreter.¹⁶

In this research, the theory of hermeneutics,¹⁷ that is used is hermeneutics ever developed by Hans-Georg Gadamer. According to Hans-Georg Gadamer, hermeneutics is a circular interpretation. Humans can only understand (past, text, others) from the center of the human view and from its own history. Interpretation is always perspectival because interpretation is always limited by the horizon of the researcher who lives now. Interpretation will never arrive at a comprehensive interpretation because the attention of the researcher is only directed at the elements related to the contemporary interactions of the researcher. The maximum result of interpretation is fusion of horizons or the meeting of the horizon of the past when the text is created and the present when the text is interpreted.

Based on the theoretical framework of Gadamer's hermeneutics, to understand the thinking integration of science in the perspective of the Qur'an can be done in the following way. *First*, transliteration of al-Qur'an texts into Indonesian text. *Second*, efforts to establish a presumption (*prejudice*) is by doing research literature related to the subject matter of this research. *Third*, interpretation can occur if fusion of horizons takes place. The effort to achieve that is by comparing the points of thought in the text of the Qur'an with other references that have similar thoughts. Through this way, there will be intermingling horizon of thought at the time the text of the Qur'an is interpreted, so it can be formulated relevance of the content of the verses of the Qur'an with science that is developing at this time.

In this research also uses historical theory. This theory is used to explore the concept and classification of science is developed in history and has been formulated by the Muslim thinkers of classical and modern.

IV. METHOD OF RESEARCH

This research is included in the library research category. As a library research, this research is a library work, so as a source of data more on collecting and analyzing written sources related to research problems. In accordance with the main issues in the focus of this research, the object of research is the verses of the Qur'an. For this purpose, the existing interpretation books and the opinions of the muslim scholars (classical philosophers) or experts are related to the philosophical paradigm of science, especially the integration of science in the perspective of the Qur'an.

This study uses historical methods and content analysis. The historical method used to discover and explore the conception of thought and science of classification according to the classical philosophers, including the history of the rise of Islamization of science initiated by al-Attas and al-Faruqi and other contemporary Muslim scientists.

Meanwhile, to determine the depth of the moisture content of the verses of the Qur'an relating to the integration of science used content analysis, which is a method of study and data analysis in a systematic and objective. The pioneer of content analysis was Harold D. Lasswell, who pioneered the symbol coding technique, which is systematically recording symbols or messages, then being given an interpretation and this is closely related to the hermeneutic theory developed by Hans-Georg Gadamer.

Content analysis method tries to see the consistency of meaning in a text. This consistency can be translated into structured patterns that can lead researcher to an understanding of the value system behind the text. The content analysis method demands an objective, systematic, and generalizable work pattern. To analyze the content in the verses of the Qur'an, it is quoted from the scholars of interpretation, historians, and interpreters if it is deemed necessary to gain a deeper understanding of certain verses.

V. RESEARCH FINDINGS

1. Human Nature According to the Qur'an

From the perspective of Islamic teachings, to know the nature of human beings requires knowledge derived from divine revelation. In the Qur'an, according to Said Agil Husin al-Munawwar, not a few verses of al-Qur'an speak of humans, among others, through the story of the Prophet Adam As. The al-Qur'an explicitly explains that humans are created from the soil. Then, after perfect the incident was exhaled to them the divine spirit (QS. Shad: 71-72). The content of this verse, according to M. Quraish Shihab, when talking about the creation of the first man, the Qur'an does not describe in detail the events of the Prophet Adam As. Which is conveyed in this context only; 1). The initial (basic) material for humans is soil; 2). The material is enhanced;

¹⁶ Syahiron Syamsuddin, *Hermeneutika Al-Qur'an*, (Yogyakarta: Islamika, 2003), h.103.

¹⁷ E. Sumaryono, *Hermeneutik: Sebuah Metode Filsafat*, (Kanisius, Yogyakarta, 1999), h. 23. Penjelasan lebih jauh tentang hermeneutik dapat dibaca karya Josef Bleicher, *Hermeutika Kontemporer: Hermeneutika Sebagai Metode, Filsafat dan Kritik*, (Fajar Pustaka Baru, Yogyakarta, 2003), h. 5-29 dan Richard E. Palmer, *Hermeneutika Teori Baru Mengenai Interpretasi*, (Pustaka Pelajar, Yogyakarta, 2005), h. 3-13.

and 3). After the consummation process is completed, it is blown to him the divine spirit (QS. al-Hijr: 28-29; Shad: 71-72).

In contrast to the process of human events after Adam, said M. Quraish Shihab, through the involvement of God with other than Him, that the mother and father. The involvement of mothers and fathers have influence regarding children's physical and psychological form. Therefore, when talking about the creation of man, the Qur'an shows, the creator using the singular name replacement. But when talking about human reproduction after the Prophet Adam, the Creator designated by using the plural.

Based on the information above, it can be asserted that in the process of creation/human occurrence, both human beings Adam and humans post-Adam, basically created from the same substance; the element of "matter", namely the body which comes from the essence of the land on earth, and the element of "immaterial", that is the spirit that comes from Allah. In other words, God created human beings composed of spirit and body. It is a unity of the two elements are not separated, because if they are separated it is no longer called human.

According to Imam al-Ghazali in the book *Jawahir al-Qur'an* and *Ihya 'Ulm al-Din*, as quoted by Yahya Jaya, it confirms that the concept of humans according to the Qur'an is composed of material and immaterial or physical and spiritual elements. But he emphasized the understanding and the spiritual nature of human events, spiritual or soul. The human being is essentially his soul. With the human soul can feel, think, willing, and do more. Strictly speaking, the soul that becomes intrinsic nature of human beings because it is gentle, spiritual, *robbani* and eternal after death.

To show understanding of the spirit / soul, said Hasan Langgulung, Imam al-Ghazali uses four terms, namely; *al-qalb*, *al-ruh*, *al-nafs*, and *al-'aql*. According to Imam al-Ghazali in his book *Keajaiban Hati*, the four terms each have two meanings. In the first sense, *al-qalb* means physical qalb; *al-ruh* which is physical; *al-nafs* which means lust and anger; and *al-'aql* means knowledge. Whereas in the second sense, the four terms have the same meaning, namely the human soul or spirituality that is gentle, Rabbani, and spiritual which is the essence, the self, and the human Essence. Therefore, man in the first sense (physical) does not return to God, and in the second sense (soul) returns to Him.

In Yahya Jaya's opinion regarding Imam al-Ghazali's insight about humans, as explained above, it seems to have similarities with the results of M. Yasir Nasution's dissertation research. In his dissertation, M. Yasir Nasution explained that Imam al-Ghazali used the terms *al-qalb*, *al-ruh*, *al-nafs*, and *al-'aql* as an expression of human nature. He called the four terms as words that have the same meaning (*al-alfazh al-mutaradifat*). The use of these four terms is very likely based on the desire to bring together philosophical and Sufism concepts. Because term *al-nafs* and *al-'aql* are often used by philosophers, while *al-ruh* and *al-qalb* are often used by Sufis or often referred to as theosophy.

Clearly, from M. Yasir Nasution's research on human concepts according to al-Ghazali, conclusions; "The essence (essence) of man is the soul which is called *al-qalb*, *al-ruh*, *al-nafs*, and *al-'aql*, that is stand-alone immaterial substance, derived from the nature of *al-amr*, not housed, have the ability to identify and mobilize, has an eternal nature and created (*not qadim*) ". But in another opinion, Ali Issa Othman said that in the view of al-Ghazali the thing that distinguishes humans from other creatures is the nature of their spirit which is equated with the core of humans.

In this case, it seems that the soul is the antithesis of the body adri (*al-jism*) which forms a reality called humans. In this context, Imam al-Ghazali views that the body element (*al-jism*) is the most imperfect part in humans. It consists of material elements, which at one time the composition can be damaged. Because of that, it has no power at all. He only has a natural principle (*mabda 'thabi'i*) which shows that he submits to forces outside himself. Furthermore, in the case of the creation of the soul and its relationship with the body, Imam al-Ghazali stated that the soul was not created because of the readiness to accept it (*bi al-isti'dad al-khash*), but was created when the readiness (*ind al-isti'dad al-khash*). According to M. Yasir Nasution's understanding, this shows that between the soul and body there is no relation of being, in the sense that one causes another form. But after the two are realized (united), between them there is a understandable relationship; one of them affects the other. This relationship is no longer from existence, but in terms of activity seen in factual reality. To show this connection, al-Ghazali likens the body to clothing and soul with the person who is dressed. This relationship shows the relationship of activity; the one who holds the initiative is the person who is dressed and clothes are the tools used to achieve the goal. This means that the body is the instrument of the soul in realizing his actions. There is no form of relationship between the soul and body which has based al-Ghazali's argument about the eternal soul or spirit. According to him, entering the *al-nafs* into accidents brings the conclusion that the *nafs* is not eternal because accident is not independent and impermanent. He will be destroyed by the destruction of the substance that holds it (body, pen). Something that is impermanent cannot be used as the essence (essence, pen) of a human being. Therefore, he asserts that *al-nafs* in the sense of nature is a single immaterial substance that stands alone and cannot be destroyed. Single means cannot be divided; and stand-alone means that its existence is not bound to the body.

Al-Ghazali's opinion about existential structure and the nature of human beings has similarities with the opinions of other Muslim philosophers and thinkers. Thus, for example, Ibn Sina said that humans consist of two elements, soul and body. The body element with all its members is a tool for the soul in carrying out its activities. From that, the soul is essentially different from the body that is always changing, changing, over and decreasing, so that it experiences mortality after parting with the soul. Different things with the soul as substance (arāḥān), spiritually standing alone and will be eternal after separating from the body.

The statement of Ibn Sina implies that the soul is a spiritual substance that is different from the body; the soul is eternal and the body is mortal, so the essence of man is his soul. Although the thought of Ibn Sina strongly colored by shades of Plato, but in terms of soul connection with the bodies, they have different opinions. According to Plato, humans consist of two elements, namely; elemental material which is material in nature and soul which is non-material. The so-called soul is what has been humanizing. However, the soul and body are not unity, but parallel dualism. The soul comes first than the body. It is called that the soul has pre-existence, that is, before we are born. So, before we get a physical status, we are already as pure souls and live in a higher area where we can see a spiritual world.

In this case, Ibn Sina firmly denied the existence of a soul before the body or soul had pre-existence. For Ibn Sina, the human souls did not exist in a state of separation from the body, then placed in it. That is, the soul is only made every time the body can use it.

Another Muslim philosophers, such as al-Kindi also talked about the problem of human nature, though not in detail and in detail. Al-Kindi's thought which was heavily influenced by Aristotle, revealed that the human soul is the first perfection for natural jism who has a potential life. And in another place, he said that the soul is the perfection of natural organic jism that accepts life.

2. The Paradigm of Western Scientific

In the 20th century, the height of the development of psychoanalysis by Freud not only insulted religion, but it exceeded the expectations of modern humans, so far bringing down the prestige and pride of psychoanalytical rationality and awareness of subject autonomy. Freud, who was heavily influenced by Darwinism, announced the results of his research, that most human behavior was driven by biological libido alone, the animalistic subconscious instinct; that the ratio of human consciousness that is played is just a little like from the tip of the iceberg in the ocean which is the human subconscious. Darwinism and Freudianism have shaken the pillars of the faith of modern humans with greatness of ratio.

But the clockwork of history seemed to spin upside down. In the 21st century the "New Left" emerged, spearheaded by Frankfurt School figures completing the fall of modernism's rationality. Through philosophical-sociological and psychoanalysis analysis, they expose modern society's behavior such as greed for natural resources, irrationality, consumerism, tyranny, hegemony, fascism, tribalism. Modern humans have become robots and small screws of social machines that can no longer think clearly about choosing what is really good for them, based on their own nature of consciousness.

According to Jalaluddin Rakhmat; "When they get rid of God, Allah, they are actually not only alienated from God. They are thrown into the world without knowing where to go, they are lost." As a result of human sovereignty project launched by the renaissance and Aufklärung (reformation) that have failed, because the modern human has been shackled by new myths, new idols, new illusions, new superstition, and the new god! People have been shackled by their own wild adventures, until they are lost and thrown away from themselves, alienated from the universe and the True God.

The latest development of any science, beyond the expectations of modern man. Modern humans have undermined the belief of the scientific understanding of positivism, which seems to be the two pillars of their faith so far. The emergence of modern physics with the emergence of Einstein's theory of relativity and Quantum mechanics has demolished the theory of classical mechanics and the Newtonian mechanistic-positivist paradigm that modern humans have embraced for three centuries. The factual universe is a mystery that turns out to keep endless reviews. Awareness arises in modern humans, especially in academia and education, that they do not know anything about the whole universe and reality; that humans in fact and the universe are deeply related.

According to Nasr, renaissance humanistic anthropology is the background that encourages scientific revolution in the 17th century AD and the creation of Science that although on the one hand is non-human. That is, the rational mind of man is considered the most anthropomorphic and form of science that most likely, it makes humanist reasoning and empirical data based only on the human senses as the sole criteria for validity of all knowledge.

The development of science and technology with the face of "inhumanity" was caused by the domination of the secular-materialist worldview mixed with agnosticism, anthropo-centrism and atheism, as a tool and "basic philosophy" of the materialism ideology of liberalism-capitalism. In turn dominance, secular-materialistic modernism has caused a lot of problems crucial and critical for human life on earth. The multidimensional crisis that occurs from day to day has frightened most people in the world today, without modern humans being able to solve their basic problems thoroughly and comprehensively.

Such as Mahzab Frankfurt said that various areas of modern life, such as art, science, political economy and culture has become ambiguous because veiled by ideologies that favor certain parties that once alienated human individual in society. The development of modern science, which is based on empiricism and rationalism appeared to have put the human being anthropocentrism. In this respect, humans are no longer speak of the importance of religion for life. However, Nasr said that humans are seen as free (independent) beings from God and nature. Human liberate themselves from divine order to further establish the order of anthropomorphism, the order solely man-centered. Humans become "masters" of their own destiny which resulted disconnected from spirituality. The independence of reason (rationality) and the empirical reality that has been dated from the frame of religion gave birth to secularization of science. According to R. H. Tawney, towards the end of the 17th century, the branches of secular knowledge were practically cut off from the Divine and the source of the branches of secular knowledge was expressed as human reason which was not connected with the Divine.

In fact, Jalaluddin Rachmat stated that after theology removed from the area of science in the 17th century, scientists are required to get rid of any consideration of the value of scientific effort. Science must be based on a value-free scientific objectivity. Understanding that science is *value-free* or science is *value-laden*, it will affect human life directly. The science referred here is a variety of scientific disciplines, both natural sciences, social sciences, or humanities. Meanwhile, in order to understand the meaning of the word "value" that it notices to consumer diverse and complex so we can see it in terms of the meaning of words and opinions of the experts.

In Germany, the Frankfurt School's critical theory was born which was a counter-positivism and rejected the view of value-free science. According to this school, behind the "veil" of the objectivity of science, the interests of power are hidden. One of the founders of the critical theory, Herbert Marcuse, highlights how the rationality of modernity functions as an ideology and domination. He also emphasized that the way of thinking of modern society scientists has frozen into ideology and myth. Being ideological because positivism adherents claim that only the method allows objective truth about facts.

The explanation above leads us to a conclusion that modern science is not value-free. But, such as Achmad Baiquni said that modern science contains values that infiltrate through the consensus of experts who develop it. Modern science was born and developed in the context of certain values, paradigms and civilizations. This is where, as Kuhn said above, scientists work in certain belief systems or paradigms. Therefore, in Kuhn's epistemology, there is no possibility of value-free, neutral and objective science. Because the choice of paradigm is made based on pure axiological considerations.

3. The Integration of Scientific

In the scientific concept, there is no separation between one scientific discipline and another. Everything went according to context and complement each other and provide benefits in human life. If viewed from its historicity, the concept of scientific integration is not new, because it has been discussed by classical Islamic scholars. For example, *al-Shafi'i* in his landmark work of *al-Umm*, underlying master piece of his description of it by positioning the Qur'an and hadith as the main source of knowledge. Both of these guidelines set out basic principles and guidance for mankind to achieve happiness in this world and hereafter life.

Likewise, other classical Islamic scholars combine three aspects in scientific integration efforts, namely; spiritual, intellectual, and moral. The linkages between these three aspects are aligned with the close cohesion between faith, law, and morals. In a similar format, al-Ghazali described the three aspects of coherence, namely; *qalb* (heart), *'aql* (intellect), and *nafs* (lust). And, no less interesting is when Ibn Khaldun explained that human science is a natural human phenomenon which originates from two main references, revelation and the universe.

The above explanation is an indisputable argument that the discussion about scientific integration has also been present before the discourse of the last few decades. In fact, the discourse of integration of science by classical scholars has discussed the continuation of the concept, which can be called "beyond the context of the era". The term is often paired with "integration of science" is "Islamization of knowledge" which necessitates two main principles. First, the main source of all knowledge and science are the Koran and the hadith. Second, the method adopted to acquire science and knowledge should be Islamic.

In order to realize these efforts, it takes the fulfillment of four criteria, namely the nature, the laws of nature, Islamic teaching (principles and guidelines), and Islamic values (moral and aesthetic). In this context, Kuntowijoyo emphasized that the point of integration concept is the unification (not just a combination) between God's revelation and the findings of the human mind. According to him, the concept of integration is to give decent proportions to God and humans in science. That way, scientific integration is not "secularism", nor is "asceticism". He is expected to resolve the conflict between extreme secularism and radical religions in many sectors.

In addition, Imam Suprayogo defines scientific integration as positioning the Qur'an and hadith as the *grand theory* for knowledge. That way, the naqli argument can be integrated with the findings of science. The birth of the concept of integration is based on a dichotomy between the religious sciences and the general

sciences. Both are separated and as if walking their respective areas. It was also triggered by the separation between the Islamic education system and the modern education system which had a latent impact on Muslims. The assumption that develops is that "science does not care about religion, nor does (on the contrary) religion neglect to science". This also has implications for the development of the slogan "science for knowledge", which often reflects ethical values in its implementation. Science and religion as two entities that are different and separate from each other, have their own territory, both formal objects - scientific material, research methods, truth criteria, roles played by scientists, even at the level of the institution that organizes it.

Different reviews are described by Kuntowijoyo by introducing other models that are more "appreciating" secular science. According to him, secular sciences are a shared product of mankind, while integralistic science (later) is a product with all believers. He stressed that all of us now are products, participants, and consumers of secular sciences, so that they cannot be looked down upon. Appreciation of secular science can be done by criticizing and continuing the journey. There are two sources of knowledge, namely those derived from God (revealed knowledge) and those from humans (secular), both of which are termed Theanthropocentrism. He admitted that secular sciences are currently in crisis (unable to solve many problems), stagnant (closed to alternatives), and contain biases such as philosophical, civilization, religious, economic, ethnic, gender, political, and other.

Basically, the Qur'an does not recognize the principle of a dichotomy between religious science or non-religious science. In fact, al-Qur'an strongly recommends that everyone pay attention to the verses of *qauliyah* (al-Qur'an), besides using reason in understanding it. In the context of the use of reason, the utility of non-religious disciplines based on systematic scientific reasoning is needed.

The combination of the Qur'an and the sciences non-religion is a necessity in developing the study of the Qur'an. Because, if it does not accommodate a scientific approach to the study of the Qur'an, then the assessment product will be "skyrocketing" or "do not step on the earth". It will thus have an impact on the lack of interest in the assessment of the Qur'an to make it as the object of study. A number of verses from the Qur'an mention the urgency of the context of the integration of both. The concept of *ulul albab*, for example, which is mentioned in QS. Ali 'Imran: 190, it requires a combination of two concepts at once, namely *dzikr* and *fikr*. The concept of *dzikr* marks the dimension of *uluhiyah* (divinity), while the concept of *fikr* is a scientific dimension. Both must be integrated in order to produce valuable scientific concepts.

Accommodation of the scientific context in the study of the Koran is very urgent. This can reveal integrative values in the verse of the Qur'an itself. Besides giving "divine legality" from current scientific findings. Studies like this are fairly interesting and have attracted attention from reviewers of the Qur'an. Tersebutlah a number of books such as the Qur'an and the works of S. Agus Djamil (Mizan), al-Tafsir al-'Ilmi work of the Ministry of Religious Affairs, and much more.

Their studies seek to offer a scientific explanation of the verses of the Qur'an that have scientific cues. For example, QS. al-Rum: 48 and QS. al-Nur: 43 which explains the water cycle. In both verses, there is no detailed explanation of the water cycle. However, both verses only explain some parts of the whole process. The verses explain the stages of the formation of clouds that produce rain, as one part of the process of formation of the water cycle. There are two phenomena from the explanation of the two verses, that are the deployment of cloud and cloud unification. Both the opposite process is what causes the formation of rain clouds. QS. al-Rum: 48 describes the layered clouds (*stratus*) which will only be formed if the wind is blowing gradually and slowly push the clouds to the top. Furthermore, the cloud will be shaped like layers widened.

In the process of integrating science in the Qur'an, according to Muchlis M. Hanafi there are several principles of value. *First*, the ethical principle. In many verses, the Qur'an describes the function of man as the caliph (representative) of God who will develop and build the earth with all its challenges so that it can be inhabited properly in order to deliver humans to know their God. For example; QS. al-An'am: 165, QS. al-Aa'raf: 69 and 129, QS. Yunus: 14, QS. an-Naml: 62 and QS. an-Nur: 55. Considering these verses it can be concluded that the function of the Caliphate is related to two things, *first*: work, innovation, creativity and preventing damage to the earth, and *second*: commitment to the values outlined by God in all efforts in this world. Their relationship is strong, inequality one of which will bring about the destruction of the world and the hereafter.

Second, the principle of *tawazun* (balance). One of the basic principles of Islamic thought is to maintain a balance between spiritual and material needs. There are so many verses that condemn the behavior of followers of certain religions that forbid something that is lawful by Allah (QS. Al-A'raf: 32; QS. Ali 'Imran: 93; QS. Al-An'am: 140). It is very contradictory if Allah subjecting this nature for human benefit, then came religion to lay down rules that impede the fulfillment of material needs were served this nature. This integral view will not be realized without the balance of two basic elements in human beings, namely; physical and spiritual. It can be realized through scientific and applied methods.

Third, the principle of *taskhir* (conquest). In the view of Islam, nature with all its laws has been subjugated to humans in order to carry out the function of the caliph properly. There are a number of verses that explain human relations with nature which can be described as masters (Surah Ibrahim: 32-33; Surah Luqman:

20; Surah al-‘Ankabut: 61). Even though as a master, Islam does not want humans to be arbitrary employers, and also not like masters controlled by their servants; these two contradictory attitudes that have existed in Western civilization. In the history of European civilization, nature has been treated with fear, so it needs to be worshiped, and it is also treated like an enemy that must be squeezed and drained. In Greek mythology, as explained by Sir John A. Hamerton, the Greeks were so submissive to gods who came from things in this world. These objects are considered to have elements of life and divinity, so they feel the need to offer offerings (sacrifices). Zeus is not only considered to be the god of heaven, but his power surpasses the earth which makes him god in trees, sea, everything, and so on. This attitude of consecration and sanctification is very contradictory when modern science makes nature a colonized object to be squeezed and drained.

Islam does not view nature as having a power that cannot be avoided by humans, except by bowing to him, and not as an enemy that must be conquered, but by making it a means to build a harmonious life between humans and nature.

Taskhir is the principle that mediates between "cult" and "colonialism". In the principle of *taskhir* there is a relationship of love and understanding, ethics and aesthetics. God's oaths in the Qur'an that use objects and natural phenomena, such as the sky, stars, sun, moon, day, night, dawn are an acknowledgment of their existence as well as a picture of a friendly relationship. A similar attitude was shown by the Messenger of Allah who loved the natural things around him as he said to the mountain; "Mount Uhud is a mountain that loves us and we love it".

Cultivation of nature will not lead to progress and civilization. Likewise, "colonialism", although it can bring progress, but it will not create a civilization with broad understanding. Islam offers a solutive offer. With the principle of *taskhir*'s natural subjected to humanitarian purposes, at the same time it provides principles of values and signs that can enhance creativity and make people more civilized in their relationship with nature and the environment. The principle of *taskhir* cannot be implemented without mastering a more comprehensive scientific method.

Fourth, the principle of the relationship between the Creator and His Creation. Science, in the view of Islam, aims to prove the close relationship between the Creator and His creation. Through scientific discovery, many scientists proved that harmony and orderliness of this nature is under the control of the Creator.

VI. CONCLUSION

In this concluding part, the writer will once again have affirmed based on the information the Qur'an and study the philosophers or thinkers Muslims that human beings are creatures of Allah, which is *monodulus*. That is, humans are a series of two substances, namely; material component; physical origin of the soil, and the immaterial component; the spirit that is "blown" by Allah. In other words, humans are composed of physical and spiritual elements. Whereas the essence of human being according to philosophers or Muslim thinkers is the spirit as being themselves.

Human beings as creatures of Allah are the most exalted and the best that have been equipped with a set of potential. It is meant, among other things; the potential of monotheism (religious nature), intelligence, heart (*qalb*), and body. In addition to this positive potential, in human there is also a negative potential is human weakness, such as the potential to fall into the temptation of lust and the devil. Therefore, human is said to be being paradoxical, that has a tendency toward good and evil at the same time.

With the potential of the human being, Allah make it as a caliphate on earth. And in order for that potential to grow and develop properly, undoubtedly takes the scientific concept that is not a dichotomy. Because when science was loaded with the values of Western civilization which is more concerned with the senses and neutral rationality and ethics. Indeed, it will give birth to a human who has a private split (split personality) in society. Furthermore, in the process of regenerating the people, there are human beings who separate social life, politics, economics, science and technology from the teachings of Islam.

Realizing that fact, the need for the integration of science with the values of Islam. Muslim scholars have been looking for alternative concepts of science on the basis of the world outlook (worldview) of Islam based on the Koran. This effort is known as the "Islamization of science". On the basis of Islamization of knowledge not only apply Islamic ethics in the use of science. But more than that, the process of return and refining knowledge on essential principles, namely *tawhid*, the unity of the meaning of truth and unity of the source of knowledge. Of these three principles are referred to as the basic principle of Islamic science. From here is derived ontology, epistemology, and axiology science.

After that the classification of science is formulated which refers to the knowledge of God (revelation) and human knowledge (sensory and rational) which pivot to Allah. That is, this second type of science is organically inherent with the spirit of divine revelation. With this proposition put forward, it can be emphasized that this study can answer the focus of the problem on how to integrate science according to the Qur'an. Through the framework of thinking, Islamization of science is in harmony with human conception according to the Qur'an, both related to the nature of creation, basic human potential, and the function of the human caliphate on earth.

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