

Science and Islamic Spirituality

Thesis, Antithesis, and Synthesis

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Abstract— This study aims to discuss the relation between science and Islamic spirituality in Hegel's dialectics approach, a logical thinking that places something in dialectics between thesis, antithesis and synthesis. In relation with science and Islamic spirituality, places the spirit of Islam on science is a thesis, the Islamic spirituality's view of science is antithesis, and effort to integration of science in Islamic spirituality is a synthesis. The Islamic spirituality's view of science as knowledge—according to Ia G Barbour—is rather than contradictory. This is influenced by epistemological structures which differ the Islamic spirituality is built on *revelation-intuitive* reason, and science is built on *positivism-empiric* reason, besides supported by apology attitude as well as positioned Islamic spirituality as knowledge which is same with shariah (*al-ilm ash-shariah*) become anomaly which as if science is contradict with shari'ah (*al-ilm gharu shari'ah*). Appearance the awareness of muslim intellectuals to reconcile the science and islamic spirituality in as synthesis, mapped in three models, namely Islamization of knowledge as an attempt to found science in the argumentation of Qur'anic verses, Saintification of Islam as an effort to islamic approached to science, and islamic science is formulate science based al-Qur'an (revelation). The third pattern is trying to make takwil of the Qur'an verses as an inspiration to development of science by combine the *empiric-positivism-intuitif-revelation* reason as has become the interest of scholars muslim in islamic parapetetic and illumination tradition era.

Keywords— *Islamic science; irfani; al-Isyraqiyat epistemology*

I. INTRODUCTION

Discussing the relationship between science and spirituality of Islam, according to hegelic dialectics—a method of metaphysical philosophy used to understand reality as a journey to perfection by unifying the opposite—is a process of uniting two different sides of science developed positive-empiric with Islamic spirituality built through revelation-intuitive epistemology.

In the history of Islamic thought, its both relationship has shown the ups and downs in building Islamic civilization. The relationship of science and spirituality of Islam is not only about the intersection issue between Islam and science but Islam also, through the scientists and scholars of the first Muslim generation (ie, around the 7th century to the 14th century AD), has contributed enormously to the science advancement identical with the achievements of positive science such as mathematics, physics, chemistry, astronomy,

and medicine. The rapid development of science at the time, not only because of the scholars' activity in transforming science and philosophy from Greece to Arab [1], but rather they provide correction and create new science as the perfection of previous Greek science[2].

The tendency to contradict Islam as a religion and science those days is little found. Both have complementary relationships —or, according Amin Abdullah's term, "integrative - holistic"[3]— which means there is no distinction between them. Both are believed to be a means to discover the grace and majesty of God in the universe (kauniyah verses).[4]

The belief is built on the theological motivation that Islam strongly advocates the use of reason in observing[5] natural phenomena as two basic scientific methodologies. The word *Ilm* and its derivation is the most dominant word in the Qur'an after Allah's name to show a very high Islamic concern for science.[6] The command of using mind, in the Qur'an, as the basis of the rationality of science, with the command of observing nature as the basis of the empirical science, always goes hand in hand. For example, in sura ar-Rum: 22, al-Baqarah: 164, Ali-Imron 190-191, Jonah: 5, and al-An'am: 97, Allah's Word is also often accompanied by the question *afalā ta'qilūn* (why don't you use your mind) and *afalā tatafakkarūn* (why don't you think), and *la ayāti li ulil albab* (there are signs for people who think), has signed that the development of science must be based on the reality observation (burhani) but using rationality which comes from God ('irfany).

This gesture that makes *ulama'* / Muslim intellectuals highly appreciate science, and positioned the Qur'an as the first source of science development, - both *al-'ulum al naqliyyah* and *al-'ulum al' aqliyyah*[7]. They placed the same position between *al-'ulum al naqliyyah* and *al-'ulum al' aqliyyah* (science). According to *al-'ulum al naqliyyah* derived from the construction of the scholars' thinking on the interpretation of revelation, and strength of the islamic jurisprudence (*hujjah*) still relative. For them, the Qur'an alone occupies the position of the *qad'i* (absolute), while the commentaries are *dzanni*, which sometimes still requires another interpreter to clarify or abort the interpretation.

However, the early scientific tradition of parapetatics according to George Sarton lasted for only 7 centuries or from the 6th to 14th centuries.[8] Furthermore, the period in which science is increasingly kept away from the Islamic world, along with the strengthening of orthodoxy theology asy'ariyah.

Especially the support of al-Ghazali who brilliantly counteracts the rational view of the philosophers who are regarded as heretics and pagan cultivators further strengthens censure opinions over the intellectual creativity of Muslims.

Although the earliest peripatetic tradition was revived during the illumination by Ibn Rushd, it was unable to raise up the 'ulama' at that time to re-establish Islam as the center of scientific development. The tendency of scholars to study the spirituality of Islam that leads to fatalism, further diminishes the role of rationality and empirical - as the building of science - in the world of Islamic thought. The strengthening of the tradition of Sufism and closing itself from the door of *ijtihad*, making Muslims confined in fatalistic and *taqlid* traditions (*madhhab*), and away from the hustle and bustle of Islamic civilization. While science that was once part of the life of the 'ulama' in the early peripatetic period, was taken to be mastered and developed by the West marked by the Renaissance in France.

The emerging awareness of the Muslims of the lagging science and technology of western hegemony has led to various Islamic renaissance movements which have been driven by the 'ulama' as well as the Muslim intellectuals in order to restore the position and the important role of ratios in the life of Muslims. This means that both the revivalist movement (purification) and the dynamics (modernization) in Islam are identical with rationalization.[9] This thinking – according to Harun Nasution (w.1998) [10]– is influenced by perceptions of the height of reason in Islam. This perception met with the same perception of the Greeks who had entered the Islamic world in the early peripatetic period. But if Islamic rational thinking is religious, then the Greek rational mind is secular.

The Islamic renaissance movement has spawned a very diverse response. The response came from an increasingly intensive contact between the Islamic world and Western civilization. One of the major issues raised by Muslim thinkers is the attitude that must be taken towards modern science in the Western world. This means that modernity, westernisation and secularization is not only a matter of the relationship between the Islamic world and Western Civilization, where modern science in the Western world is regarded as non-existent in a true science.

II. PROBLEMS OF SCIENCE AND ISLAMIC SPIRITUALITY CONTRADICTION: THESIS AND ANTITHESIS

The problem of Islamic scholarship faced by Muslim intellectuals from the early 18th century to the present day is related to the paradigmatic relationship between Islamic science and spirituality. In the wider community, there is a strong belief that the spirituality of Islam and Science are two non-reconcilable entities. Both have their respective territories, separated from one another, both in terms of material formal objects, research methods, truth criteria, roles played by scientists. The dialectical relationship between the two. As in the philosophical method established by Hegel that the dialectics in question are two opposed and then reconciled. or commonly known as thesis, antithesis, and synthesis.

Many thinkers are deeply convinced that Islamic spirituality can never be reconciled with science. Because Islamic Spirituality is a study that describes the essence of the search for transcendental meaning, which since the 19th century has not been widely used in meanings related to spirits

or psychic phenomena, while science places its kajain on empirical causality that is more likely to relate to phenomena of physics.

Islamic spirituality is the stage of a man's inner journey to seek a higher world with the help of the *riyadahat* and the various practices of self-restraint so that his attention does not turn away from God, merely to reach the peak of eternal happiness. In this case Sayyed Hossein Nasr, gives the Spiritual picture as something that refers to what is related to the world of spirits, close to the Divine, containing *kebatinan* and interiority equated with the essentials. While science is the result of positivistic reasoning construction, [11] which places the scientific method on metaphysical, axiological and epistemological assumptions.

Islamic spirituality has a framework of *irfani* epistemology that is considered to be different from the natural and logical sciences (*ulum al-aqliyah*) that have been produced by Muslim intellectuals in the peripatetic period developed by using *buryani* epistemology. This difference is evident from the contradictory interpretation between the science and spiritual Islam (*Sufism*), in addition to the Muslim belief in the obligation and independence in laying the truth of the two sciences.

Conversely, in the study of epistemology or theory of knowledge, science is a type of knowledge that has certain characteristics and methods and systematics. Science is proclaimed to discover the truth, broaden understanding or knowledge, to describe, explanation, interpretation, prediction, retontnosis, discovery, application, and control. Science is one type of knowledge that is explained by the scientific method.

Knowledge in this study is broader than science. Knowledge is all the thoughts, ideas and understandings that humans have about the world and everything in it, including humans in their lives. Knowledge –according to Akhyar Yusuf Lubis[12]– is more knowledge-oriented everyday, so it is a form of knowledge that is used for everyday purposes. From the method aspect, knowledge can be obtained easily without using certain methods. Producing knowledge that can be categorized as science –referring to Thomas Huxley's opinion – is that one must perform a set of processes involving observation, hypotheses, experiments, and the like as a systematic or scientific logical reasoning [13].

Among activists of Islamic renewal, it appears that the teachings of *Sufism* -viewed from the side of history- are the cause of the withdrawal of Islamic science. this is marked by the statement of Ghazali who rejects philosophy as the frame of epistemology in understanding the teachings of Islam, because philosophy is understood as a not-*shari'ah* science which is not allowed to be studied [14].

The distinction between the two sciences is similar to Emile Durkheim who divides the world at least in the mind, *profane* and *sacred*. The term *profane* is generally used to characterize everything that is related to the world, related and derived from the daily life of man. While the term *sacred* is widely used to mark everything that is considered to come from the supernatural world. General Science is in a *profane* world, a part of everyday life, as well as an assessment of the natural human events encountered in everyday life [15]. The science of religion is in the *sacred* world and comes from God's revelation.

The division is also based on the developmental and specialized factors of science in Islamic societies. A more focused and profound study of science makes science *terhierarki* as what was expressed by Ibn Khaldun, in his

muqaddimah who divide the knowledge of the Muslim community of the city into two kinds; between science that is natural to man through the guidance of his mind, and the traditional science (*naqli*) where human beings get it from the person who created it. Natural science is considered as the sciences of philosophy. Man acquires these sciences through his ability to think that is already a character for him and with his human perceptions he is guided to objects with the problem of arguments and methods of instruction. So as to know the difference between right and wrong in the philosophical sciences is based on his own thinking, considering he is a man who has a mind [16].

While traditional science, is a type of conventional science (*al-'ulum an-naqliyyah al-wadliyyah*) which all rely on the given *syari'at* given. In it there is no place for reason, except when reason is used to connect the details with basic principles (*ashl*). The basis of all traditional science is the legitimate material of the Qur'an and Sunnah. That is the law that has been approved by Allah and His Messenger to us. Also the sciences that relate to the material, in the sense that we can benefit from it, which then needs the tools sciences, the sciences of the Arabic language. Because Arabic is the language of Islamic Religion, and the Qur'an is revealed in that language [17].

The types of traditional science raised by Ibn Khaldun are based on the actualization of the responsibility of Muslims to know the laws of Allah which have been obligated upon them derived from the Qur'an and Sunnah, either through texts or by *ijma'* (consensus) and *qiyas* (combinations)[18] which later gave birth to the science of interpretation, the science of *qiraat*, the science of *hadith*, *ushul fiqh*, *fiqh*, *kalam*, *lughah*, and *adab*.

III. MET SCIENCE AND ISLAMIC SPIRITUALITY

Mets Science and Spiritual Islam (*fiqh*, *tasawuf* and *theology*) The Muslim intellectual offers three variant integrations, there are: Islamization of knowledge, Scientific of Islam (natural of theology) and Islamic Science. Islamization of knowledge is a model of integration, which aims to seek compliance with the scientific discoveries of the verses of the Qur'an. This view is meaningful in an effort to Islamize of science. Modern science, which has been developed in the West has been separate from religion. The development of science and technology is increasingly sophisticated, but apparently increasingly ignoring the ethical values and religion, so that needs to be Islamized [19].

According to the definition of Hanna Djumhana Bastaman, a psychologist from the University of Indonesia, states that Islamization of Science means an attempt to reconnect science with religion, which means reconnecting the *sunnatullah* (natural law) with the Qur'an, both of which are verses God. This notion is based on the claim that the verses of God are composed of two things; verses that are linguistic, verbal and using the human language, ie al-Qur'an (*qauliyah*); and non-verbal verses in the form of natural phenomena (*qanuniyah*)[20].ss

Meanwhile, according to Naquib al-Attas[21], Islamization of science is an effort to free science from the meaning of ideology and secular principles, so that new science is formed according to Islamic nature. He realized that the virus contained in modern-secular science is the greatest challenge for Muslims today.

In the view of Al-Attas, modern Western civilization has made science problematic. Besides having misunderstood the

meaning of science, Western civilization has also eliminated the intent and purpose of science. Although modern Western civilization also produces useful science, it has also caused damage to human life. In al-Attas's view, Westernization of science is the result of confusion and skepticism. Westernization of science has raised doubts and conjectures to the stage of scientific methodology. Not only that, Westernization of science has also made doubt as a valid epistemological tool in scholarship. According to him, Westernization of science is not built on revelations and religious beliefs, but is built on a cultural tradition reinforced by philosophical speculation associated with secular life that concentrates the human race as a rational mantra. Consequently, the science and ethical and moral values governed by the human ratio are constantly changing.

Islamizing Modern science contains the notion that science and other modern knowledge are considered to require epistemological correction. Modern science developed in the West is fundamentally different from that of scholarship in Islam on the level of ontology and epistemology. At the level of the ontology of modern science only makes the real world as the object of study, so in turn they only limit the mind and the five senses (empirical) as the epistemological framework [22]. So the initiative to give birth to science that breathes Islam is an *i'tikad* later known as Islamization of science.

The pattern of work in the birth of science that breathes Islam consists of two options namely; first follow the flow of thought Ismail Razi al-Faruqi who focuses on the Islamization of socialism and humanism sciences by seeking conformity to the verses of the Qur'an and Islamic jurisprudence [23]; Both follow the flow of thought Syed Hussein Nasr by restoring the relationship of science with Islamic civilization. According to him, Islamic Science is not a part of Western science, but an independent way of looking at nature's work. Science is not a value-free activity, meaning that if western science has much to do with Western civilization, then Islamic science certainly has much to do with Islamic civilization. It is necessary revitalization of Islamic civilization, so that the values of the past can be grounded and become an icon of pride of Muslims, can incarnate in every line of life of Muslims today[24].

Epistemologically knowledge in Islam is based on the idea of unity that is at the heart of Islamic revelation. The purpose of all knowledge in Islam is to show the unity and connectedness of the unity of the divine principle, where the unity of nature is the image. Thus there is a relation between revelation and the unity of nature towards the purpose of all of them, namely the closer recognition to God. Viewed as text, nature is a symbol, which must be read in accordance with its meaning. The Qur'an is a partner of text in human words, its verses are called *ayat* [41], like a natural phenomenon. Both, nature and the Qur'an speak forth about the presence and worship of God.

Furthermore, Islamic saintification is the antithesis of Muslim intellectual dissatisfaction over the project of Islamization of science. Generally the critics of Islamization of Sciences argue that science is studying objective and independent facts from humans where culture and religion must be separated from values, while the goal of religion is more to increase morality than to explain the facts of science. Thus the truth of a science is not determined whether it is Islamic or un-Islamic, but on the objectivity in exposing the knowledge itself. Criticism of Islamization of Knowledge was also proposed by Kuntowijoyo, it says that science that is truly

objective does not need to be Islamized because Islam recognizes objectivity, a technology will be the same in the hands of Muslims or infidels. Whichever method is the same, whether it is a survey method, participant method, or grounded method can be used safely without the risk of conflicting with the faith. There is no need for any worries on the truly objective and true sciences. For a truly objective science to rely heavily on individual intentions, it is the individual's intention that requires Islamization not his knowledge[25].

Kuntowijoyo through his criticism offers the Islamic intellectual movement towards Islamic scholarship (Islamic saintification), according to him the problem of Islamization of Knowledge is how the position of knowledge in Islam, is not knowledge is culture and culture is muamalah. Because mu'amalah then the formula is "all but allowed forbidden". If knowledge is too egocentric (overwhelming) to claim the truth then its status is not muamalah. Observing Kuntowijoyo's comparison of Islamic saintification with Islamic codification, and Islamization of Science, Saintification of Islam-in this context is the movement from text to context, saintification is the opposite, from context to text; while codification dwells around text exploration, almost without regard to context. These three movements are the manifestations of the desire to return to the text (al-Qur'an and Sunnah). The Islamization of science, he argues, is more reactive, that is the reaction to the scientific building which is already manifest, which is deemed incompatible with Islamic values, and wants to be returned to Islam which is understood as text [26].

The Islamic Saintification Movement in Kuntowijoyo's view is illustrated by the periodization of the Muslim knowledge system, where Muslims move from a period of Islamic understanding as a myth, as ideology, and finally as Science. Islam as a myth is understood as something that is finished and needs to be preserved, kept pure from non-Islamic mixtures, and if necessary retained from outside attack. Both Islam as ideology, already rational, although still too apriori or nonlogis.

Literally, the phrase "Saintification of Islam" means making Islam a science. With Islamic saintification, which wants to be addressed is the aspect of the universality of Islam as rahmatan lil alamin. In this context Islam appears in the form of science, culture and Islamic civilization built by Muslims for centuries. Then manfaatkan by the West in order to build the glory of the nation. Ziauddin Ahmad [27] says that Islam influences political thinkers about human rights, Rousseau's thoughts on the trias politics (Legislative, Executive, and Judicial Power) concepts of God, religion and nature. Islam also influences the concept of justice (trusted). Similarly, Ibn Khaldun's sociological thought for example influenced the thinking of John Dewey, of his epistemological concept of pragmatism. The teachings of Islam also influence the thinking of Rabendranat Tagore, English literature, scientific progress, the progress of Arabic numerals, medicine, surgery, and a number of other leading medical personnel.

The Islamic science which is considered to be the most effective of the previous model, is a science completely built on the foundation of the Qur'an and Sunnah. Islamic science can be realized if there is a normative and historical consciousness. Normative consciousness arises because explicitly or implicitly the Qur'an and Sunnah emphasizes the importance of science. Normative awareness then foster the historical consciousness that makes the command of al-Qur'an and al-Sunnah as Inspiration in reading the reality of life. So

there was a growing awareness that the Qur'anic guidance on science would not be grounded without the conscious effort of the scientists to read the reality, either the progress of science that had been achieved by other nations, as well as the contextualisation of teaching in scientific research activities [28].

The Islamic science is an integral feature of *ulum an-naqliyah* and *ulum al-aqliyah* (modern knowledge science) - According to Agus Purwanto [29] -which implies that the product of science in Islam comes from revelation (Qur'an), while Muzaffar Iqbal [30] uses the term "inspiration", meaning that the development of science in Islam is inspired by the verses of the Qur'an. Although al-Qu'an is not a book of science, such as mathematics, astronomy, or medicine, but the verses in it inspire scientists to prove and give birth to modern science.

Said to be a product, modern science has been created by man in uncovering reality. Related to this understanding then *al-ulum al-aqliyah* also becomes not single or in other words there will be more than one *al-ulum al-aqliyah*, and *al-ulum al-aqliyah* with each other distinguished on what the meaning of reality and what way which is acceptable to know the reality. In every building of science or *al-ulum al-aqliyah* always rests on the three main pillars of the ontological, axiological and epistemological pillars. The three pillars of Islamic science must be built from the principle of monotheism in the sentence *laa ilaaha illallah* and discripted in *arkanul iman* and *arkanul islam*.

The ontological pillar explains the subject matter of science. Islam must accept both material and nonmaterial reality [31]. Beings are not limited by the material and the senses but also the immaterial ones. The order of creation or creature consists of three fundamental states of material, psychological and spiritual state. In *Sufi* language these three states are each called the *nasut*, *malakut* and *jabarut*.

The pillar of axiology, associated with the purpose of science built or formulated. The ultimate goal of Islamic science is to know His Creator through His created patterns. The goal of Islamic science is to know the true nature of things as given by God. Islamic science also aims to show the unity of natural law, the interconnection of all parts and aspects as a reflection of the unity of the divine principle. Knowing the nature and law of every species of being means to know Islam or the submissiveness of such species to the Divine Will because according to the Qur'an all beings other than humans are Muslims. With this understanding the scientist becomes closer and subservient to the Creator [32]. The purpose kemashlahatan for people in the form of material products is the derivative of the final goal of the achievement of the Creator. This is the basis of Islamic axiology.

In the most important epistemological Pillar is how or by what we achieve knowledge. The Qur'an which is the greatest miracle of the Prophet is at the same time the source of Islamic intellectuality and spirituality. It is a foothold not only for religion and spiritual knowledge but for all kinds of knowledge. Man through this faculty gains knowledge from various sources, nevertheless the source of all sources of knowledge is none other than God is the Knower. One source of knowledge is the Qur'an.

IV. AL-ISYRAQIYAT EPSITEMOLOGY

[33] stated that the integralization of all science by putting it in a hierarchy as found in traditional Islamic sciences. Basically all knowledge must be based on wisdom based on revelation. Thus, the unity of science, wisdom, and scripture, or science, philosophy and religion is a hierarchical unity that replaces the polar unity between science knowledge and philosophical wisdom. Science is not just *empirical-rational-intuitive*, but *empirically-rational-intuitive-revelational*.

Traditionally Islamic, the empiricism of science is concerned with *jism* and *nafs*, rationally related to *aql*, intuitive with regard to *qalb*, and revelationality relating to the spirit. Thus the unity of the hierarchy of Islamic science is concerned with the integral unity of man as a knowing subject comprising *jism-nafs-aql-qalb-ruh*. In modern language, the unity is closely related to the unity of matter-energy-information-value with the source of transcendental unity of those values.

V. CONCLUSION

In Hegel's point of view, a method of thinking about dialogue based on George Wilhem Friederich Hegel (1770-1831), that the relationship between science (*al-ulum ghoiru shariah*) and Islamic spirituality (*al-ulum ash-shariah*) is communicated in the thesis, antithesis and synthesis. In a thesis, Islam recognizes all science (*ulum al-aqliyah*) and (*ulum an-naqliyah*) as part of the spiritual of Islam, the holy command "Read!" (Surat al-'Alaq [96]: 1-5) the ultimate inspiration for scholars' to always develop all the knowledge needed for the welfare of the whole universe (*rahmatan lil'alamin*).

Furthermore, it is said to be antithesis at the time of Islamic spirituality, that is derived from the interpretation of revelation (*ulum an-naqliyah*), pledged itself as the science of *shariah* (*al-'ulum an-naqliyyah al-wadliyyah*) which all rely on the majority of *shariah* the given. In it there is no place for reason, except when reason is used to connect detailed issues with basic principles (*ashl*), ie to reject the *ulum al-aqliyah* as a compulsory science to study.

Sinthesa sebagai usaha integrasi telah melahirkan tiga model antara Islamization of knowledge as an attempt to found science in the argumentation of Qur'anic verses, Saintification of Islam as an effort to islamic approaced to science, and islamic science is formulate science based al-Qur'an (revelation). The third pattern is trying to make takwil of the Qur'an verses as an inspiration to development of science by combine the *empiric-positivism-intuitif-revelation* reason as has become the interest of scholars muslim in islamic *peripatetic* and *illumination* tradition era.

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