CHAPTER IV

ANALYSIS

A. Relationship between Metaphysics and Physics as the basis of Sciences according to al-Attas.

Al-Attas explains that there are fundamental differences between Western science and Islamic science, namely metaphysics. Metaphysical aspect is the view or knowledge of reality in the whole and non-physical reality which truth is recognized. However, al-Attas still relates it to the physical-material world. In accordance with his opinion, metaphysical aspect and physical-material are two domains interrelated as fellow beings (*wujūd*). However, the physical world is a relative reality and absolute reality is the real form and one form called "the Truth" (*al-haq*). The existence of the physical material world is actually a form of a particular determination (*ta'ayyunāt*) and self-manifestation (*tajalliyyāt*) of absolute reality. Framework of unity existence in al-Attas' metaphysics dismisses the notion of realism, monism denying the existence of absolute reality.

The relationship between absolute reality and physical material world, al-Attas borrows the articulation from followers of the Sufi Ibn al-Arabi about ontological scheme reduction (*tanazzul*) of absolute reality in five stages. Its arrangement includes the divine Oneness (*wāḥidiyyah / the divine Oneness*), the names and attributes (*al-asmā' wa al-ṣifāt/the names and attributes*), the permanent archetypes (*al-a'yān al-thābitah/the permanent archetypes*), archetypes exterior (*al-a'yān al-khārijiyyah/the exterior archetypes*) and natural sensory *'ālam al-shahādah/the world of emphirichal things*)[1]. Hierarchy of reduction (*tanazzul*) is the manifestation of God on the level of *wujūd* to be caught by humans. While on the way up (*taraqqī*), human knowledge journey towards God is as

[1]Syed M. Naquib Al-Attas, *Prolegomena to The Metaphysics of Islam: an Exposition of the Fubdamental Elements of The Worldview of Islam*, Kuala Lumpur:ISTAC, 1995, p. 260

absolute reality. Ontological scheme of al-Attas depicts that the true scientific knowledge in Islam does not lead to sensory reality which using human senses and rationality such those used in Western science. But also uses the intuitive faculty[2].

This means that horizontal pragmatic Islamic science with empirical world objecting to determine the nature of work, should be aligned with the vertical contemplative knowledge about the essence of nature. Therefore, knowledge of the empirical world must be able to lead the knowledge of things beyond as its final destination.

Al-Attas analogizes the universe which is elaborated through science-with scripture, because nature is the "sign" (*āyat*) of God in which meaning should be revealed. The verses (*āyat*) are not merely learned as was done by Western science, because in Islam, studying the universe is to uncover the truth beyond[3]. Cosmological view formed by al-Attas asserts that the universe has suspended reality. They are symbol having an existence that cannot be separated from the meaning symbolized. Because meaning is the primary goal, and the ultimate truth is in the truth meaning contained in it. There is no independence between the creator and the created because according to al-Attas everything is a manifestation so that everything came from ongoing "creation". Therefore, al-Attas portrays the absence of causation because both are created simultaneously and related to an integrated system. Because causes does not produce results, but it is a condition formed in a system called *sunnah Allah*. In science, it is well-known as natural law.

Al-Attas' Islamic metaphysics view can be interpreted as a restatement of the previous thought of the Sufis. He describes the ontological and cosmological view as basic science which is judged as

[2]Syed M. Naquib Al-Attas, *Islam and The Philosophy of Science* (Kuala Lumpur:ISTAC,1989), trans. Saiful Muzani, *Islam dan Filsafat Sains*, Bandung:Mizan, 1995, p.37-39

[3]Syed M. Naquib Al-Attas, *The Concept of Education in Islam:A Framework for an Islamic Philosophy of Education*, Kuala Lumpur:ABIM, 1980, trans. Haidar Bagir, *Konsep Pendidikan dalam Islam Syed M. Naquib al-Attas*, Bandung:Mizan, 1996, p.46

appropriate with the purpose of Islam. In addition, the metaphysical approach used by al-Attas is also as a critique of positivistic science epistemology. Science is never free-value because it depends on the interpretation. And current authorizing interpretation is that interpretation of modern philosophy, positivistic which requiring that everything is objective and measurable, so that nature is merely understood as material without meaning. Science intends to form the worldview of Islam, whereas Islamic metaphysics is a framework. Thinking contextually and beginning from social reality without alluding to values of truth of revealed text will only make a person lose the directions to head for the absolute truth. Thus, if we think in a historical framework which is naturally changing, without putting it in the normative framework basically permanent, will lose the substance of Islamic teachings itself. As the solution, Al-Attas sets up an integral approach through the concept of worldview of Islam which refers to the Islamic intellectual tradition critically and creatively.

It will indicate that Islamic thought is conceptual and integral, means projecting the Islamic worldview which is dynamic, orderly and rational emitted by Islam as *dīn* (religion). Islamic worldview is set up from the concept of science, and its development is established from the Islamic metaphysics framework which involves understanding the truth and absolute reality. In its relation with the process of Islamization of knowledge, al-Attas gives a concrete step in the form of educational institutions. As software, al-Attas use the concepts of metaphysics Islam, Islamic philosophy, philosophy of education, human concept, the concept of happiness, the concept of religion and morality are all described systems worldview of Islam.

In *farḍu kifāyah* knowledge such as science, al-Attas insists the disposal of foreign elements as well as liberation of knowledge from interpretation based on secular ideology. This is meant to rebuild the Islamic civilization by understanding the worldview of Islam. Because the Islamic character and its outlook on life shows that physical reality always

has spiritual dimensions, scientific thought always has dimension natural, accurate understanding of Muslims about Islam. Moreover, the success of the people are laid on integrating the reality of doctrine of revelation and social reality, the absolute reality and relative reality, normative values and historical facts and others[4]. If the absence of filtering science, then what will be occurred is the degradation of Muslims civilization, and critically impact on the concept of metaphysics, Islamic epistemology and ethics.

B. The concept of Natural Sciences in the Discipline of Epistemology

Criticism of al-Attas on contemporary science is focused on science in the sense of natural sciences. Due to the understanding of science in modern context at first are natural sciences and its scientific method[5]. Although ultimately a scientific meaning spreads to social science group, but they possess different methods and objects and issues which are not the same as natural science. Moreover, the pros and cons of discourse between science and Islam move from Muslims backwardness in the discipline of natural science and technology. Therefore, al-Attas makes the idea of Islamization of contemporary knowledge which explicitly talks about natural sciences in principle and its worldview without touching the methodological and theoretical aspects.

Al-Attas admits that there are similarities between Islamic science and modern science, including its methods. Modern science is based on senses and ratios, so is Islamic science. As well as its mechanical work, there is no significant difference because basically Islamic science and modern science start from the observation of natural phenomena and the collection of data, followed by experimentation and its conclusion involves ratio. Al-Attas does not question the methods used by modern

[4]Syed M. Naquib Al-Attas, *The Educational of Philosophy and Practice of Syed Muhammad Naquib al-Attas* (Kuala Lumpur:ISTAC, 1998), trans. Hamid Fahmy, dkk, *Filsafat dan Praktik Pendidikan dalam Islam*, Bandung:Mizan, 2003, p.16

[5]Mulyadhi Kartanegara, *Menyibak Tirai Kejahilan: Pengantar Epistemologi Islam*, Bandung:Mizan, 2003, p.2

science, nor to create a new method which is different or special Muslims. Because according to him, that the modern scientific method has ever used by Muslim scientists in the heyday of Islam. The problem is the assumption or the view that science is the only science that is authentic and just deal with the phenomenon. In addition, the knowledge that does not use scientific method is considered invalid.

There are two implications of that view, first, the view which marginalizing revelation as a source of knowledge. Because in Islam, that the revelation also provides the knowledge for things that cannot be attained by mind and senses. Second, the problem of al-Attas also results in reducing all human knowing potencies only to the mind and the senses. In Islam, mind is not just a rational ability, but it is also an inner faculty of human which contains intuition. This intuition is used to absorb the direct knowledge from God through *Kashf*. Besides the assumption of modern science will never find the reality and complete truth and deliver on the ultimate truth as the purpose of seeking knowledge in Islam[6]. Epistemologically, modern science cannot acknowledge itself as neutral. Its partiality is shown in the epistemological discipline that science is not only related to empirical objects although not associated with anything, scientific research methods should override partiality towards certain values or views, as well as the formulation of the theory. But modern science cannot be separated from a certain philosophical outlook.

The idea of Islamic science becomes fundamental talk in the discipline of the views of the various principles behind scientific research practice. Because in al-Attas' view, there are certain ideology or philosophical outlook in epistemological science. This idea arises because al-Attas has criticized the view towards positivism behind the epistemology of modern science. For him, the epistemology of modern science overrides other truth, particularly religious metaphysical truth. Due

[6]Syed. M. Naquib Al-Attas, *Islam and the Philosophy of Science*, trans. Saiful Muzani, *Islam dan Filsafat Sains*, Bandung:Mizan, 1995, p.37

to positivism will lead someone to atheism, because God cannot be proven through scientific methods. Not an error if scientific object is empirical reality, but the problem is if the empirical realities are recognized, clearly becomes distorted religious teachings. Here is the view is that al-Attas want to replace with another view which is taken from the Islamic teachings.

Al-Attas stated that Islamic epistemological science is observation method and experimentation is one of the ways to obtain the truth. However, it is only related to empirical objects, not all objects, and also only partly explains the reality, not exhaustive. Due to the complex reality requires a complex method anyway. Therefore, enterprises to gain the truth take a variety of methods, not only the scientific method[7]. It has been suggested that not only the empirical reality exists in nature, but there are also non-empirical reality. The diversity of methods and also the reality is the value in the concept of Islam which is designed for science in order to change the values considered incompatible with Islam, such as positivism and neutrality of science. In the context of modern science, Islamic teachings are inserted to replace materialism and positivism. Another form is replacing the principle of non-Islamic by Islamic. In this case, al-Attas merely discusses it in the territory of philosophical epistemology and does not provide an explanation of epistemological application such as scientific method steps. He just adds intuition as a source of knowledge that must be taken into account as well.

Al-Attas approves the senses, reason and intuition as an instrument to acquire knowledge. Thus, the idea talks in terms of science globally, not science in a limited sense of scientific nature and its scientific method. Those three sources are an integral unity in attaining the integral truth about reality. This is because the Muslims scientists perceive the reality as

[7]According to Mulyadhi Kartenegara, in Islamic tradition there are three basic methods, namely *tajriibi, 'Irfani, burhani*. But in another occasion he added *bayani* method. All of them are in accordance with the ontological status of the object of study.Kartanegara, Mulyadhi, *Menyibak Tirai,* p.52. *Integrasi Ilmu,* p.132-147.

a complex thing with various dimensions and ontological levels[8]. In Islamic tradition, the senses are famed as *mahsūsāt* and associated with empirical object. For instance, a telescope can help people to reach out natural objects which are very far. However, in abstract territory, the senses cannot be used. The abstract territory can be understood using reason, in Islam mentioned as *ma'qūlāt*. The mind can capture the substance by removing accidentals from which captured by the senses. Another instrument is intuition or *'irfan*, capable of presenting an object directly into the soul of its subject. It is pointed out from mystical experience gained by the Sufi who gets knowledge without going through the process of mind and senses. Intuition becomes complement of limited senses which can only attain empirical discipline and the mind relating to the non-empirical discipline, but must go through the representation[9].

In the context of natural sciences, mind and senses become major instruments in forming of scientific theory. The recognition of intuition as an instrument to acquire knowledge is the form of extended religious teachings into science. Indeed intuition will never be recognized in the view of Western science because it cannot be accounted for. However, we should keep in mind that al-Attas talks about intuition in the context of knowledge generally and not in the sense of science narrowly. Intuition is often associated with non-empirical things as a form of knowledge by *aqcuaintance*, whereas science is a form of knowledge by description associated with empirical data[10]. Basically, al-Attas was not initiated new scientific epistemology models or different for contemporary science. He only made changes to several parts considered deviant like a philosophical view without entering the methodological territory. If al-Attas discusses methods, its nature is very general and philosophical, not concrete so they do not remodel methods in science.

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[8]Mulyadhi Kartanegara, *Integrasi Ilmu*, h.132-147; *Menyingkap Tirai*, p.51-63.
[9]Mulyadhi Kartanegara, *Integrasi Ilmu*, h. 100-115; *Menyingkap Tirai*, p.59-62
[10]Harold H. Titus, dkk, *Persoalan-persoalan Filsafat,* trans. H.M. Rasyidi, Jakarta:Bulan Bintang, 1984, p.249

The aim of al-Attas to remodel them is to save the faith of the Muslims who have been struggling in the field of science and put science proportionally without entering the territory of philosophy and religion irregularly. Al-Attas in his resolute statement said that on methodological aspects including the theoretical aspect is irrelevant to talk Islamic science or Islamization of knowledge. But on the other hand, his view indicates that Islamization does not merely adjust the verse with scientific findings as embraced by Bucailisme, but also must enter in philosophical grounds behind scientific findings. Actually al-Attas did not discuss per disciplines as practiced by al-Faruqi, in reshuffling the discipline of epistemology. He was just talk about science universally wrapping up all science nature. Other disciplines are not mentioned by him because they have their own distinct character. The conclusion is that al-Attas not create a new epistemology which is different from principle with the epistemology of modern science related to the method.

According to al-Attas, the basic goal of knowledge in Islam is to make mankind as the perfect human. Furthermore, he explained that the purpose of science is to nurture, cultivate, and embody the kindness for human justice themselves. The perfect man is the useful one, creating goodness not only in secular life but also social, also can position their selves in reality levels in the world and hereafter impartially. To attain a perfect man, they need to study. The meaning of studying here is look for knowledge based on appropriate meaning with reality (*ḥaqīqah*).

Al-Attas analogizes that nature is a harbinger (*āyat*) such verses of the Qur'an. As the signs, nature cannot be separated from the meaning beyond as its reason to exist (its existence) and the physical universe is not an independent reality. And the true reality according to him is actually composed of the hierarchy of the One, God (*aḥadiyyah*) until empirical reality (*'ālam al-shahādah*)[11]. Thus, the knowledge of nature is the

[11]Syed M. Naquib Al-Attas, *The Concept of Education in Islam:A Framework for an Islamic Philosophy of Education*, (Kuala Lumpur:ABIM, 1980), trans. Haidar Bagir, *Konsep*

knowledge of some realities. Al-Attas was not refused the truth of science and its variant methods. The problem is when its relativity is capricious and partial. It cannot be a single guideline to obtain the truth as aspired in the knowledge searching process in Islam. Due to the truth in Islamic knowledge is related to complex and eternal reality. Knowledge always changes and partial will mislead if it is not directed to the knowledge of truth, ie the knowledge of right ontology and epistemology[12].

As explained earlier about the interpretation and *ta'wil*, al-Attas said that this method can be used to read the "book of nature natures" or universe. The purpose of this method is to capture the meaning beyond the verses or symbols of empirical discipline. Because the goal of epistemic science in Islam by al-Attas is the meaning beyond all relationship of empirical discipline so that each position in the structure of reality can be known and can indicate the position of God as the absolute reality and highest truth.

So that in nature studies, everything, every object of knowledge in the creation, sought to gain knowledge of it. If the phrase "essentially" is meant as the independency of truth... then such assessment is devoid of any real purpose, and searching for knowledge becomes a deviation from the truth, which makes the validity of such knowledge is unquestionable[13].

C. Islamization of Knowledge in Axiology

Axiology is a part of the science philosophy which questions about how humans use their knowledge. The word “axiology” comes from Greek; *Axios* means value and *logos* means theory or knowledge. Thus, axiology is a theory of value in variety of forms. Not only that, but it also

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Pendidikan dalam Islam, Bandung:Mizan, 1996, p.44. Equating the empirical nature with Qur’anic verses as words or symbols which exist because of the content of the meaning beyond them.

[12]Syed M. Naquib Al-Attas, *Islam dan the Philosophy of Science*, terj. Saiful Muzani, *Islam dan Filsafat Sains*, Bandung:Mizan, 1995, p.87-88

[13]Syed M. Naquib Al-Attas, *The Concept of Education in Islam:A Framework for an Islamic Philosophy of Education*, (Kuala Lumpur:ABIM, 1980), terj. Haidar Bagir, *Konsep Pendidikan dalam Islam*, Bandung :Mizan, 1996, p.44

discusses the case of utility value of science. As often expressed by al-Attas that science is not value-free, means that at some stage, science must be adapted to the cultural values and morals of society, with the result that the value of knowledge can be perceived by society in order to improve the common welfare and not to lead to disaster[14].

Practical interest is quite dominant in the development of modern science. In general, the development of science has aim to mend the quality of human life with many of natural ability to predict and control accurately. However, this goal has not been fully achieved. Even in particular level, many people doubt it after seeing the phenomenon of World War I and World War II as well as various crises in the world. Knowledge is power, F. Bacon caveat becomes real because of the orientation of its application leads to mastery and exploitation. This also a line with Bacon critics, who said that the progress of Greek philosophy did not deliver technology because knowledge is not used to master the nature, but rather the satisfaction of intellectual needs[15]. The development of modern science can be seen from the rapid development of technology up to mastering human life. It seems there is a symbiotic mutualism between science and technology. Science develops by technology such instrument and equipment research, while technologies develop by benefiting science.

Technology in the sense of Berkner and Kranzberg is the application of science improving human lifestyle and solving practical problems of life[16]. However, the application of science, in this case is natural science and technology, also has negative impacts. Various ecological crises are regarded as the impact of technology which did not pay care to environment. This negative impact is what ultimately inspired

[14]Abdul Muhayya, *Konsep Wahdat al-Ulum Menurut Imam Al-Ghazali (w.1111 M)*, Laporan Penelitian Individual, Semarang:IAIN, 2014, p.109

[15]Verhaak C. dan Haryono Imam, *Filsafat Ilmu:Telaah atas Cara Kerja Ilmu-ilmu*, Jakarta:Gramedia, 1997, p.140,144-145

[16]Quoted from The Liang Gie in*The Interrelationship of Science and Technology* (Jakarta: Pustaka Sinar Harapan, 1982), p.83. Clearly technology is the application of scientific knowledge in the form of equipment helping people to solve a wide range of human problems which is practical.

scientists to discuss ethics in science. In some developed countries, this awareness also has been emerged how critical it is. There are several institutions, they are, The Institute of Society, Ethics and Life in Hastings, New York[17]. Thus, it appears that science cannot be separated from ethics. This is because in the application always considering value. As an example, science application cannot be separated from consideration for the interests of to what and to whom a finding will be applied.

Talking about science ethics is value problem which cannot be separated from science. This problem has been broadly discussed by religious scholars and scientists for several decades, but in Islamic science thought, al-Attas barely discussed about the ethic of science application. For al-Attas, this value problem related to science is contained in the keyword, namely metaphysical or worldview. Moreover, science as a product of culture cannot be separated from particular worldview embraced by people. This worldview will affect language, understanding of concepts, and science orientation established. This is what al-Attas want to show that science is not value-free, instead of value-laden.These values meant by al-Attas are a worldview behind the science itself. The values in Western science are secularistic metaphysics and materialistic. This view will remove sources of divine from everything and make material as the only reality and deny other realities[18].

Metaphysics also becomes difference between Western science and Islam, so much so that al-Attas insists that Western science has not completely rejected, but can be taken for granted. What should be done is to be critical, prominently in metaphysics as the value along with. Al-Attas has always stressed to Islamize in the sense of liberating mankind from mythological view opposing to Islam and secularistic view, then replace it with Islamic metaphysics. Because according to him, the view of Islam which mentioned as Islamic metaphysics has its truth including

[17]Jalaludin Rakhmat, *Islam Alternatif*, Bandun:Mzan, 1986, p.156

[18]Syed M. Naquib Al-Attas, *Islam dan Filsafat Sains*, trans. Saiful Muzani, Bandung:Mizan, 1995, h.28; *Islam and Secularism*, Kuala Lumpur:ISTAC, 1978, p.17

ontological, epistemological and axiological aspects. Besides, Islamic metaphysics has also confirmed the boundaries and position of a reality called wisdom. This wisdom will escort people to be fair, meant to put things in the right place, which also includes the attitudes and behavior to reality[19]. In brief, people who use Islamic metaphysics will treat nature scientifically, well, without abusing.

Furthermore, al-Attas always emphasizes the transcendental functions in the study of nature, not its practical function. No explanations of how to use natural science fair in social life. With the function of transcendence study of nature as verses, science itself will has a positive effect both socially and ecologically. The most important thing for al-Attas is an Islam metaphysical usage as a worldview in studying nature. On the other hand, nature studies serve as a subordinate of the entire understanding of realities which created in Islamic metaphysics. This metaphysical knowledge is obtained through *tanzīl* methods, wheather revelation or intuitive. It can be conclude that al-Attas does not reconstruct (*reconstruction*), but he simply restates (*restatement*) statements and Islamic metaphysics conclusions are in accordance with the intellectual perspective of the present and development of knowledge.

This explanation ultimately places the knowledge of Islamic metaphysics as *farḍu 'ain* knowledge, which is upper then other natural sciences, mentioned by al-Attas as *farḍu kifāyah* knowledge, becoming a collective obligation as needed. In al-Attas' thought, metaphysics should be direction of science, including implementation of science in human life, although it is not discussed in detail by him. Islamic metaphysics guidance may be deemed to affect the accuracy of sciences implementation in life. But, the science implementation aspects are not the ultimate goal. They are only a bridge of transcendent function returning human beings to their

[19]Syed M. Naquib Al-Attas, *Islam and the Philosophy of Science,* (Kuala Lumpur: ISTAC, 1989), terj. Saiful Muzani, *Islam dan Filsafat Sains*, Bandung:Mizan, 1995, p.45

nature, as before created like what is aspired by religion[20]. In conclusion, science cannot be separated from metaphysics or its implementation in life in order to run which is proper to purpose of knowledge generally.

Al-Attas does not totally discuss about the implementation of the values on his thought as a whole. However, the researcher concludes that there are some possibilities to see. First, al-Attas does not consider the dimensions of implementation or application as a part of science, so that it is not needed to be discussed or talked within Islamic sciences. Second, the dimensions of implementation in science will exist by itself if the science worldview appropriate with Islamic worldview. It can be concluded that the role of Islamic worldview is very dominant in the work of science. This role is important, because the worldview will affect other dimensions, such as epistemology and axiology. In connection with the implementation of science in real life, as a form of technology, it is understood that science is still a part of worldviews. Thus, the science implementation or natural sciences will be in accordance with what is aspired by Islam when guided by the Islamic worldview.

There is no explanation totally about morals or science implementation ethics. It shows that al-Attas sticks to principle that transcendent function is more important than the practical function or application. This is not separated from his background as a capable scholar under mystical science, so that he is better to see the theological impact of secular science than the ecological impact. Clearly his view is different from other thinkers such as Nasr, Sardar or Golshani. Golshani for example, he made the theory of Islamic ethics in the implementation of science. He also explains that Islamic scholar thoughts clearly contrast to Neo-Darwinists thoughts who said that nature or reality the whole

` [20] Syed M. Naquib Al-Attas, Naquib, *Islam and the Philosophy of Science*, trans. Saiful Muzani, *Islam dan Filsafat Sains* Bandung:Mizan, 1995, h.18 dan 91; see also *Prolegomena*, p.111

occurred by chance without purpose[21]. The basic view of reality has a relationship with mankind as trailblazer on earth. This relationship also means that the science orientation developed by human beings has a purpose for humanity and at the same time carry out the mandate as caliph and thank for what God has given. This metaphysics is used as an ethical guidance in the practice of scientific development, whether in researching process or practice implementation results.

Implementation as part of a science can be grouped into two sciences; pure science and applied science. Pure science like mathematics is still possible not to talk about science unrelated to application. Applied Science is a kind of science created to be implemented and for technical necessity, for examples the existence of various medical and pharmacological research. This study is aimed be implemented or applied because of certain interests. No wonder if the implementation or application is the core of this science.

[21]Neo-Darwinists community is Darwinism whose scope is extended by certain scholars, such as Richard Dawkins, Edward O. Wilson and Peter Atkin. This doctrine adheres to the idea that selection occurred in many levels and not just the organisms on population, such as genes (Dawkins argues), or relative (according to Wilson). However, natural selection is still believed to be a major factor in the evolutional alteration. See Ian. G. Barbour, *Menemukan Tuhan dalam Sains Kontemporer dan Agama*, trans. Fransiskus Borgias M, Bandung:Mizan, 2005, p.52