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RELIGION, SCIENCE AND CULTURE
An Integrated, Interconnected Paradigm of Science[1]

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Abstract

Discussing the paradigm of dialogue and integration in the Islamic science of religion is important since the practice of religious education still applies the paradigm of conflict and independence. These paradigms have a great influence on the formation of socio-religious and cultural ways of thinking. The relationship between Islamic religiousc and natural, social, as well as cultural sciences, needs patterns of integrated, interconnected relations and dialogues. Islamic Studies requires a multidisciplinary approach, that is, interdisciplinarity and transdisciplinarity. Scientific linearity, in which science is narrowly defined and mono-disciplinary, will lead to an understanding of religion and religious interpretations that has no contact with and relevance to the context in which it is studied. New types of religious thought that encourage independent discussion and dialogue on the subjective, objective and intersubjective aspects of science and religion will create the emergence of a new type of religiosity in the multicultural era. All of this requires more effort to undertake a serious reconstruction of scientific methodologies and the methodologies of scientific studies of religion.

[Penerapan paradigma dialog dan integrasi dalam ilmu-ilmu keislaman masih penting untuk didiskusikan mengingat praktik pendidikan agama masih menerapkan paradigm konflik dan independen. Paradigma-paradigma ini memiliki pengaruh yang besar dalam pembentukan cara pandang keagamaan,

[1] The first Indonesian version of this paper was delivered for membership inauguration of AIPI (Akademi Ilmu Pengetahuan Indonesia, Indonesian Academy of Sciences) on 3 September 2013.

baik sosial maupun kultural. Hubungan antara ilmu-ilmu keislaman di satu sisi dengan ilmu-ilmu alam, sosial, dan budaya di sisi lain, memerlukan pola hubungan dan dialog yang terintegrasi-interkoneksi. Studi Islam mensyaratkan pendekatan multi disiplin, baik interdisipliner maupun transdisipliner. Linearitas keilmuan yang membatasi bidang ilmu secara sempit dan mono-disiplin akan menggiring pemahaman agama dan tafsir keagamaan yang tidak terkait dan tidak relevan dengan konteks pengkajian. Model baru pemikiran keagamaan yang mendorong dialog dan diskusi yang independen mengenai aspek-aspek subjektif, objektif, dan intersubjektif ilmu dan agama akan menciptakan munculnya model baru keberagamaan di era multicultural. Semua ini memerlukan lebih banyak upaya serius dalam merekonstruksi metodologi keilmuan dan metode-metode studi agama.]

Keywords: paradigm of science, religious science, multidisciplinary approach, science integration.

A. Introduction: Contextualization of the Problem

There are at least, as Ian G. Barbour observes, four patterns of the relationship between religion and science: conflict (enemies), independence (strangers; everyone stands on their own), dialogue (partners; mutual communication) or integration (unity and synergy). To illustrate, in 2012 and 2013 there were four important events which more or less describe the relationship between religion and science in Indonesia.

Firstly, on February 17, 2012, the Constitutional Court (*Mahkamah Konstitusi*, MK) decided new provisions, to revise article 43, paragraph 1 of Marriage Act 1974, which states that "a child born outside marriage has a civil relation with her mother and her mother's family as well as with the man having been proven scientifically and technologically and/or other evidence under the law showing any blood relations, including civil relationship with his family". With this provision, the Court grants the civil rights to the child born in a *sirri* marriage[2] between the deceased Moerdiono (I quote the name the way it was reported in the mass media), former Minister of State Secretary, and Machica Mochtar. The Constitutional Court ruled that the deceased Moerdiono is the biological father of M. Iqbal Ramadan, the child in the his s*irri* marriage with

[2] *Sirri* marriage is widely known among Indonesians as informal marriage, which is allowed by Islam but not registered in the Office of Religious Affairs or the Office of Civil Registry (of Births, Deaths and Marriages).

Machica Mochtar based on scientific evidence (DNA).[3] In a lawsuit proposed by Machica Mochtar, the Religious Courts in Jakarta initially decided that a child born in a *sirri* marriage can only be ascribed to the mother, and not to the (biological) father.

In the pre-modern era, in accordance with the level of development of science at the time, it was technically difficult to prove who the real or biological father of a child was. Scholars of religion (*fuqaha*) in the classical or medieval period as well as in most of the muslim world today take it this pre-scientific reality for granted. However, the agreements and provisions which were previously assumed to be unproblematic suddenly became a problem as other evidence was able to be found through scientific research, especially that of biology and medicine, in modern times. Modern biology and medicine can now test one's DNA to determine his paternity.

When religious judges ignore scientific evidence, it is simply because they base their decisions on expertise and consensus of the religious scholar/Islamic jurisprudence as stipulated in an outdated, pre-scientific *fiqh* manuscript. It would therefore appear that the judges applied a paradigm of conflict, independence from modern sciences. Judges are said to have used the paradigm of conflict, if the middle century religious scholars' understanding, interpretation and scientific agreements are still used in the modern era and they are not willing to engage in dialogue, or are reluctant to make use of input derived from the findings of modern biological science. In the case of the paradigm of independence, the institutions of the Religious Court (PA) and the Constitutional Court (MK) would stand independently above the foundation of their own legality and authority, without dialogue or adjustment. Unfortunately, not all religious judges in the country agree that the decision of the Constitutional Court should be based on scientific evidence.[4]

Secondly, and still associated with the *sirri* marriage between a public

[3] "Pakar: Putusan MK Terkait Anak di Luar Nikah Dekati Aturan KUH Perdata", *dakwatuna.com* (18 Feb 2012), http://www.dakwatuna.com/2012/02/18/18766/pakar-putusan-mk-terkait-anak-di-luar-nikah-dekati-aturan-kuh-perdata/, accessed 1 Aug 2013.

[4] On the encounter between jurisprudence and the advancement of modern science, especially in medicine, see: Ebrahim Moosa, "Perjumpaan Sains dan Yurisprudensi: Pelbagai Pandangan tentang Tubuh dalam Etika Islam Modern", in *Tuhan, Alam, Manusia: Perspektif Sains dan Agama*, ed. by Ted Petters, Muzaffar Iqbal, and Syed Nomanul Haq, trans. by Ahsin Muhammad, Gunawan Admiranto, and Munir A. Muin (Bandung: Mizan, 2006).

official, an active regent, and a woman he married for only a few days. After the divorce through SMS, the mass media publically announced the divorce which became a national issue. The President, after receiving input from the Ministry of Home Affairs and members of the Regional Representative Council (DPRD) finally dismissed the regent from his position as District Head. The reason is simple and predictable: they still used the paradigm of conflict. The conflict between religion, normally referred to as the paradigm of jurisprudence (*fiqh*), and science, in this case, andreferred to in the social sciences and contemporary humanities, is clearly seen in this case. This case shows us that the paradigm of conflict remains strongly and deeply embedded in the culture of socio-religious thinking among the practical actors in the country. Not only a public official, but also a layman, is able to bring religious science, social science and contemporary humanities into dialogue, to combine and integrate into everyday life.

The applicability of the method of *qiyās* or analogy in religious *fiqhiyyah*-type thinking (read: not philosophical and scientific) still remains dominant in thought and argument presented in the public space.[5] When pushed by reporters in a press conference, the Regent implicated in the *sirri* case was accused not only of marrying by *sirri* marriage but also of breaching the Act for the Protection of Women and Children. He emphatically denied that what he did was unjust or unfair because, he reasoned, that he had given the woman money. It is like a purchasing process, in which he strongly held that he was entitled to return his purchased goods to the owner after he realized the goods were damaged or corrupted. To make an analogy of a woman with merchandise (*fiqhiyyah* type of religious understanding) is opposite and contrary to the new human consciousness (philosophy), which is supported by the contemporary social sciences and humanities, on non-derogability (the principle of degradation of human dignity with no reason) and human dignity/*al-karāmah al-insāniyyah* (upholding the dignity of humanity) of a person, both male or female. It means that the treatment of human beings (male or female; adult or child; able or disabled) cannot at all be

[5] Regarding the method of *qiyās* in Islamic religious thought which needs to be refined and developed into a "wide analogy" (*al-qiyās al-wāsi'*), see Jasser Auda, *Maqasid al-Shariah as Philosophy of Islamic Law: A Systems Approach* (London: The International Institute of Islamic Thought, 2008), p. 179.

equated with treating someone as goods, objects, animals or plants.[6]

Thirdly, the case of Sampang, Madura,[7] which involved the burning of homes and the denial of the right to life for certain individuals and groups in Indonesia. Religious leaders in the area and some in the central government, as well as local political leaders were suddenly caught up in the understanding of the past science of religion (*'ulūm al-dīn*) arguing that Shiites are heretics. This statement is contrary to the advice (*fatwa*) of al-Azhar religious scholars issued in 1959 which stated that the Shiite sect is legitimate in terms of jurisprudence in Islam. Not only that, in reality the religious leaders and politicians in the region still seem to equate the management of a constitution-based modern state with the management of conflict between religious sects and schools of thought as written and encountered in books they read in conventional Islamic educational institutions. The term, *tawbah naṣūḥa* (true repentance), is defined politically and unilaterally, that is, by leaving or ignoring Shiites and back to Sunnis again, and vice versa. Why didn't they try to implement mutual respect for the rights of individuals or groups within a modern country, one which upholds the constitution as its national guideline? What went wrong? What is wrong here?

Fourthly, as will continue to happen regularly every year, with the determination of the beginning of the month of Ramadan and *Id al-Fiṭr*. The struggle not to call it a paradigm of conflict, between religion and science, has always been played out in the public space and there are no signs of this ending any time soon. This conflict is in terms of the difference between the counting system of *rukyat* (Ar: *ru'ya*, seeing the beginning of the month empirically using the naked eye or assisted by using the telescope) to determine the beginning of Ramadan, and the *hisab* calculation system of computation (by rational calculation), that has long been practiced in the calculation of the lunar calendar. The problem

[6] Erick P. Hardi, "Aceng Fikri Akhirnya Jadi Tersangka", *Tempo News* (23 Apr 2013), http://www.tempo.co/read/news/2013/04/23/063475354/Aceng-Fikri-Akhirnya-Jadi-Tersangka, accessed 1 Aug 2013; Irwan Nugraha, "DPRD Garut Resmi Usulkan Agus Hamdani Jadi Bupati", *KOMPAS.com* (1 Mar 2013), http://regional.kompas.com/read/2013/03/01/17565127/DPRD.Garut.Resmi.Usulkan.Agus.Hamdani.Jadi.Bupati, accessed 1 Aug 2013; M. Amin Abdullah, "Agama dan Perempuan", *Kompas* (8 Feb 2013).

[7] Recent developments of Syi'ah-Sampang cases can be followed in "Pengungsi Syi'ah: Rekonsiliasi Warga Berjalan Positif", *Kompas* (8 Mar 2013), p. 1; "Pengungsi Tidak Diminta Bertaubat", *Kompas* (13 Aug 2013), p. 4; "Krisis Keberagamaan: Mereka Mendamba Toleransi", *Kompas* (8 Dec 2013), p. 3.

is that the conflict between religion and science in the middle of the century was triggered by different understandings and interpretations of the church and the astronomic computation of the planet's rotation, which was between geocentric and heliocentric schools, while the conflict in the modern era, at least in the homeland and in the Muslim world in general, is a preliminary determination of the beginning of Ramadan between the followers of *rukyat* experts and *hisab* experts. Consequently, though it is not as tragic as in the middle century era, it still creates social discomfort because it is associated with the social interests of the people nationally, both related to the internal affairs of the religion itself (the time of *takbir* is the end of fasting for Muslims in eastern part of Indonesia which is 2 hours earlier than for the people in the western part, or it is the preparation for *Id al-Fiṭr* prayer), and also in relation to transportation and the determination of the holiday period. In addition, there is a certain level of socio-psychological tension for followers of the council's annual meeting on *isbat* (Ar: *ithbāt*, initial determination of the beginnings of the Ramadan and Shawwal) which are held by the government one day before, so that management of the implications and consequences of the decision of the meeting cannot be anticipated.

It is not necessarily the case that those people or groups who have mastery of religious science will automatically be able to understand or recognize the development of science outside their particular field of expertise. Linearity in the fields of science, especially in the religious sciences, seems to be of high risk in the wider sphere of social life, especially in public spaces of cyber media, including social networks. Religious knowledge or jurisprudence that is not accompanied by sociological analysis tends to underestimate and minimize the position and dignity of individuals. The science of *Kalam*/*Aqidah*, when not accompanied by sociological and anthropological analyses, tends to make practicing one's faith uncomfortable, especially in a society made up of people of different beliefs and religions. So, experts in the fields of anthropology, sociology, and medicine who do not understand *fiqh* in relation to social issues related to women can also bring *madarat* (disadvantages) or unpredictable risks. Individual piety reflected in the ritual acts of worship, do not necessarily ensure the establishment of social piety, let alone public piety. Public piety, mutual respect for other people or different groups, equality before the law, respect for human rights, and inclusive dialogue cannot be integrated as singular way or exclusive way of thinking, but must be culturally integrated into socio-

religious thought as a whole. It is in this context that there should be ongoing academic discussion on how to develop the relationship between religion, science and culture in order to encourage a deeper understanding of their interrelated issues.

The four illustrations above of important events that occurred in Indonesia highlight that the relationship between religion and science is still not harmonious, and is at times conflictual. Not all areas of social life show such a relationship, for the problem lies in how to manage and resolve tensions that arise. This paper does not intend to ignore or solve existing problems, but proposes a philosophical and scientific clarification or solution as to why these things still happen. It suggests that a good scientific resolution through academic research and educational media in the future would help reduce the unnecessary tensions.

B. Integrated, Interconnected Science

As briefly described above, the conflicting or independent relationship between religion and science does not lead to a comfortable social situation in the context of our increasingly complex lives. There are many potential problems and risks if the relationship between religion and science is seen as one of either conflict and/or independence. Ideally, a relationship leading to dialogue and integration between the two is much better. Theoretically, by taking inspiration from Ian G. Barbour and Holmes Rolston III, there are 3 key words, characterized as having dialogical and integrative patterns, that describe the relationship between religion and science, namely semipermeable, intersubjective testability and creative imagination.

The semipermeable concept is derived from the biological sciences, where the issue of survival of the fittest is the most prominent. The relationship between "causality"-based science and religion is based on the notion that the "meaning" is semipermeably patterned, i.e. between the two are penetrating (conflicts between scientific and religious interpretations arise because the boundary between causality and meaning is semipermeable).[8] The relationship between science and religion is not separated by thick walls such that it is not possible to communicate, but is one of mutual penetratrability and permeability. They partially penetrate each other, rather than being free and isolated. There is still a

[8] Holmes Rolston III, *Science and Religion: A Critical Survey* (New York: Random House Inc., 1987), p. 1.

line demarcating the disciplines, but the scientists of different disciplines can communicate, be open with each other and accept input from disciplines outside their field. This mutually penetrating relationship can be clarificative, complementative, affirmative, corrective, verificative, and also transformative.

In describing the process of transformation of IAIN to UIN in 2003/2004 academic year, I pointed out a pattern of relationships between religious scientific disciplines and non-religious ones using the metaphor of the "spider's web of science", where among the various disciplines there is mutual interconnectedness; they interact actively and dynamically. That is to say that the types of relations between the various disciplines and the scientific methods have integrative, interconnective patterns.[9] The one that is rarely read or eluded from the metaphoric picture of the "spider's web of science" is the dashed line, resembling pores, attached to the dividing wall between the various scientific disciplines. The wall is not only interpreted in terms of the boundaries between disciplines, but also from the limits of space and time, modes of thinking (world view) or '*urf* in the terminology of Islamic science, namely, between thought culture and the patterns of the classical, medieval, modern and post-modern eras. The pores are like a ventilation hole on the wall that functions as a regulator of the incoming and outgoing air circulation and as an exchange of information between the various scientific disciplines. Each of these disciplines, and the worldview, cultural thought, tradition or 'urf that accompanies it, can freely communicate with each other, engage in dialogue, and break to send messages and fresh input findings in the field to other disciplines outside the field. There is a free, convenient and carefree exchange of scientific information.

Each of these disciplines can still maintain its own identity and existence, but there is always an open space for dialogue, communication and discussion with other disciplines, in which there is discussion not only between disciplines that clump internally, such as physics or mathematics, but that are also willing and able to discuss and receive input from external knowledge, such as the social sciences and humanities. Islamic religious sciences, or more popularly known as 'ulūm al-dīn are not an exception here. Scholars also cannot stand alone, apart or isolated from relationships and contact with others outside their own science. They must be willing to open up and engage in dialogue and communication,

[9] M. Amin Abdullah, *Islamic Studies di Perguruan Tinggi: Pendekatan Integratif-Interkonektif* (Yogyakarta: Pustaka Pelajar, 2006), p. 107.

to receive feedback and criticism, and also be in synergy with the natural sciences, social sciences and humanities.

There are no scientific disciplines that shut themselves down, or that are limited to the tight confines of their own discipline. The boundaries of each discipline are still there and obvious, but the limits are less that water tight or soundproof. There are small holes or pores in the walls attached to the boundaries of scientific disciplines that can be influenced and penetrated by other disciplines. The view of the present scientific community and community of researchers is no longer one of a scientific community and community of researchers that in the past only gathered expertise in one discipline. Rather, the scientific community and researchers are more open to collecting information from, and are more willing to listen to input from, a variety of disciplines. Here, the concept of the linearity of science-although fine when viewed from the administrative bureaucracy of science, but in the scientific world view, the concept has been questioned by many scientists. The following excerpt from the opinion of Holmes Rolston, III:

> The religion that is married to science today will be a widow tomorrow. The sciences in their multiple theories and forms come and go. Biology in the year 2050 may be as different from the biology of today as the religion of today is from the religion of 1850. ***But the religion that is divorced from science today will leave no offspring tomorrow.*** From here onward, no religion can reproduce itself in succeeding generations unless it has faced the operations of nature and the claims about human nature with which confronts us. The problem is somewhat like the one that confronts a living biological species fitting itself into its niche in the changing environment: ***There must be a good fit to survival, and yet overspecialization is an almost certain route to extinction.*** Religion that has too thoroughly accomodated to any science will soon be obsolete. ***It needs to keep its autonomous integrity and resilience. Yet religion cannot live without fitting into the intellectual world that is its environment.*** Here too the fittest survive.[10]

At first glance, there seems to be, from this quote, an answer to why many public figures, including prominent religious scientists, as well as non-religious figures, who were once popular in the mass media in their home country are now falling from their high positions. They are not, among others things, able or willing to dialogue, integrate or interconnect their religious science (perhaps they developed their understandings of the religion of science a long time ago and have not had time to update

[10] Holmes Rolston III, *Science and Religion*, p. vii. Italics and bold are my emphasis.

their files and data thereby expanding their existing religious knowledge) with the natural and social sciences and the humanities in the new intellectual environment.[11]

The second sign that marks the dialogical and integrative relationship between science and religion is intersubjective subjectivity. The term comes from Ian G. Barbour in the context of a discussion about the workings of natural science and the humanities,[12] but in this paper I will try to develop it by using illustrations drawn from the phenomenological approach to religion. To Barbour, each Object and Subject plays a major role in scientific activities. Data are not "independent of the observer" because the situation in the field of research has always been intervened in by the scientist as an experimental agent in his/her self. Therefore, concepts are not given away by nature, but are constructed by scientists as creative thinkers. Therefore, an understanding of what is called the objective must be refined or completed through intersubjective testability, i.e. when the scientific community comes together to test the level of truth of meaning and interpretation of data obtained by researchers and scientists from the field.[13]

In the logic of the world of science today, especially in relation to the discussion of science and religion, the technical terms are called subjective, objective and intersubjective.[14] In religious studies, especially studies on phenomenology of religion-through the help of anthropological research through grounded research (ethnography) – observers and researchers can record what is encountered in everyday life and that can be described objectively. The researchers of the anthropology of religion found and took careful notes on things that are assumed by religions include some of the basic elements that follow: 1) doctrine (believe in certain things); 2) ritual (perform certain activities); 3) leadership (invest authority in certain personalities); 4) *naṣṣ*/scripture text (hallow certain texts); 5) history (tell various stories); 6) morality

[11] Rolston has coined the term "blik" to define any scientific theory that has had enough of itself, or is not willing to accept the input, experience, or theories of other disciplines. Blik is a theory that has evolved which has become arrogant, and too hard to be softened by experience; *Ibid.*, p. 11.

[12] Ian G Barbour, *Issues in Science and Religion* (New York: Harper Torchbooks, 1966), pp. 182–85. His work has also been translated into Indonesian, Ian G. Barbour, *Juru Bicara Tuhan*, trans. by ER Muhammad (Bandung: Mizan, 2002).

[13] Ian G Barbour, *Issues in Science*, p. 183.

[14] Joseph A. Bracken, *Subjectivity, Objectivity, and Intersubjectivity: A New Paradigm for Religion and Science* (Pennsylvania: Templeton Press, 2009).

(morality legitimate); and 7) tools.[15] The seventh element generally exists objectively in public life and is entrusted to religious followers wherever they are. However, it is the function of observers, researchers and scientists (subjects) to construct and record the basic elements (fundamental structure) in the religion.

However, when the seven basic elements in religion, which according to the vision of the observers (researchers; religious scholars) are objective-universal-as they can be found everywhere-have been identified, interpreted, understood, practiced and carried out by individuals and groups in a particular cultural context and using a specific language (community of believers), then slowly but surely, what is considered to be objective by earlier observers will turn out to be subjective in the interpretations, understandings and experiences of the followers of the teachings of their respective religions. The community of believers often has difficulty understanding the objectivity of human religiosity, because certain interests have always been inherent in the world of subjects and actors in the field.

Any shifts from objectivity of researcher to subjectivity of actor, at least, can be characterized as what is believed, understood, interpreted and lived by individuals, groups and classes per group or community and are considered and believed to be something that cannot be blamed, is not inviolable, not debated at all (non-falsifiable) and not compared with others (incommensurable). When such a sociological process appears, then what was once looked at objectively by observers, researchers and scholars has shifted into subjective territory by the perpetrators and adherents of religions and beliefs in everyday life. Here lay the sharp turns, especially where groups of people lose direction and clues to the direction of their future journeys. If the observers, researchers, scientists and scholars of religion (religious scholars) see diversity and pluralism in the interpretation of religions (both externally among followers of religions, and internally, in a religious environment itself) as a sociologically reasonable thing, and then observers and scientists try to find the "essence" of diversity within diversity (Essences and Manifestations), then vice versa, for the actors in the fields of religion and belief (believers and confessionalist). For the believers, what they believe

[15] James Cox, *A Guide to the Phenomenology of Religion: Key Figures, Formative Influences and Subsequent Debates* (London: The Continuum International Publishing Group, 2006), p. 236. Cf. Ninian Smart, *Dimensions of the Sacred: An Anatomy of the World's Beliefs* (London: Fontana Press, 1977).

is the most correct and cannot be questioned, let alone be wronged by other groups holding different beliefs (non-falsifiable).

This is the crucial point here. From the scientific or scholarly perspective, in the midst of socio-religious diversity and pluralism (Manifestations), then what we need to look for are the "Essences" (*ḥaqīqa* and *ma'rifa* in the language of sufism) of the different religions. While from the view of the patterns in or type of religious thought-*fiqhiyyah* (Islamic/Christian/Buddhist perspective, or other religion and belief), then the only religion and belief adhered to by the individual and his group (manifestations; *shariah*) alone is the true one (non-falsifiable). The implications and consequences of the two models of thinking cannot be underestimated. Indonesia and the world religions everywhere are facing such problems and thorny issues as there is always tension between the two patterns or types of thought. Religious and community leaders need to obtain adequate support to be able to manage and bridge the different interpretations and tensions that arise from these.

So, are religion and religious life objective or subjective? The answer will determine how the pattern of religious life in a multiethnic, multilingual, multireligious, multiracial and multicultural society should be in Indonesia. Religious studies and understandings are really unique, *sui generis*. This cannot be equated with research in the social and natural sciences because there is an element in religion that cannot be abandoned: the "involvement" (full engagement) and "unreserved commitment" (an unbargained commitment).[16] Therefore, the religious studies and religious understandings are always objective-cum-subjective and/or objective-cum-subjective. Indeed, there is an element of objectivity in religion, but at the same time there is always an element of subjectivity attached in it and vice versa. Religion is essentially patterned subjectivism (fideistic subjectivism),[17] but will soon be absurd, if a person, or group of religious people, who, gathered in sects, denominations or organizations, follow blind fanaticism and reject their colleagues who interpret, embrace and believe in different religions and have different beliefs. To avoid being stuck in acute subjectivity, then the religious clergy need to recognize the existence of objective elements (Scientific objectivism) that exist within religions. By doing so, the existing tension of dire subjectivism can be mitigated or reduced by scientific enlightenment through the introduction

[16] Ian G Barbour, *Issues in Science*, pp. 218–19.

[17] Richard C. Martin (ed.), *Approaches to Islam in Religious Studies* (Tucson: University of Arizona Press, 1985), p. 2.

of objectivity in the area of religion through empirical research. Objective and subjective areas in the study of religion cannot be separated.

After identifying the struggle between the objective world and the subjective one in the study of religion, which can be formulated into *objective-cum-subjective* and or *subjective-cum objective*, then the next cluster of thought, which is "intersubjective" will be more easily understood. "Intersubjectivity" is the mental position of scientists (scientific mentality) that enables them to intelligently bring the subjective and the objective worlds into dialogue in the face of the complexities of life, in the spheres of science, religion, and culture. Intersubjectivity is not only be found in the area of religion, but also in the world of science in general. The community of researchers always works within the framework of intersubjective testability. Life is too complex to be analyzed by only one discipline. Overspecialization and linearity of science are hotly discussed and debated nowadays and collaboration between the various disciplines is necessary to solve a wide range of problems. Input and criticism from various disciplines (multidisciplinary approaches) and across-disciplines (transdisciplinary) are essential to be able to understand the complexities and bring about a better life. Linearity science, conceived in an *ad hoc* way, will narrow one's scientific insight when faced with scientific issues beyond the limited reach of a specific scientific field.

A creative imagination is essential to enhancing engagement between religion and science. Although the logic of inductive and deductive thinking has been able to accurately depict the specific aspects of the workings of science, unfortunately, in general, scientists have tended to abandon creativity and imagination in the work of science. Indeed, there is logic to test the theory, but there is no logic to create the theory. There is no effective recipe to make the original findings.

Generally, scientists aspire through their academic careers to find a new theory. Doctoral students are encouraged by their supervisors to present new findings as a contribution to the development of science (contribution to knowledge). How does a new theory come into form? A new theory often arises from a scientist / researcher's courage to combine various existing ideas, that were previously isolated from one another. Koesler and Ghiselin suggest that the creative imagination in science and literature is often related to efforts to coordinate two different concepts into one framework.[18] There is synthesis between two different things to form a new unity, a rearrangement of the elements of the old

[18] Ian G Barbour, *Issues in Science*, p. 143.

configuration into fresh new configurations. Often a new theory emerges from a genuine effort to connect the two unrelated things. Newton connected two widely known facts, namely, the fall of an apple and the moon's rotation, while Darwin saw an analogy between the pressure of population growth and survival of animal species. There are parallels between creativity in the fields of science (the scientist) and art (the artist). Campbell, as quoted by Barbour, wrote as follows:

> For it has been admitted that though discovery of laws depends ultimately not on the fixed rules but on the imagination of highly gifted individuals, this imaginative and personal element is much more prominent in the development of theories; the neglect of theories leads directly to the neglect of the imaginative and personal element in science. It leads to an utterly false contrast between "materialistic" science and the "humanistic" studies of literature, history and art.... What I want to impress on the reader is how purely personal was Newton's idea. His theory of universal gravitation, suggested to him by the trivial fall of an apple, was a product of his individual mind, just as much as the Fifth Symphony (said to have been suggested by another trivial incident, the knocking at a door) was a product of Beethoven's.[19]

What will happen if the above description is associated with a state of mind, legal education in contemporary Muslim culture? It is now the time to begin to dare to rethink the content and practice of Islamic religious education in view of the necessity of using the creative imagination in the process of learning and lecturing. Islamic religious sciences in the present era, for example, jurisprudence, worship, *kalām*/*'aqīdah*/*tawḥīd*, *tafsīr*, *ḥadīth*, history and morality, should no longer be sterile from encounters, intersections and struggles with other disciplines. Religious education in general, and Islam in particular, can no longer be delivered to students in isolation from other scientific disciplines and vice versa. Teachers and lecturers need to think creatively, and dare to associate with each other, to create dialogue in the field of science in relation to religion and other scientific disciplines. If this step is not done, then religious instruction in schools, let alone universities, will gradually lose its relevance.

The cases referred to in the introduction reflect a lack of creative imagination in the process of connecting and bring into dialogue the social sciences and contemporary jurisprudence, and, more specifically, between the science of fiqh of marriage and contemporary gender

[19] *Ibid.*, p. 144. Bold and italic are my emphasis.

issues. The inability to engage in dialogue and integrate the science of *kalīm*/'*aqīdah*/*tawḥīd* ('*ulūm al-dīn*) with new experience and knowledge in the nation-state in the frame of modern state constitution (the idea of constitution) is evident in the following examples in Indonesia. The Sampang-Shiite case, and that of Cikeusik-Ahmadiyya, and the situation in which followers of religions in various parts of the country become agitated and defensive; they can be easily trigged, fueled or exploited by various outside interests, and of varied motives and origins.

The absence of intersubjective testability processes between two or more disciplines (the absence of a multidiciplinary approach) makes the understanding and interpretation of religion which is generally only based and followed in accordance with available *naṣṣ* or religious texts disconnected from local culture and from regional, national and global contexts. It is easily deemed obsolete or outdated (not relevant; in a crisis of relevance; to have reached expiry), which can even lead to unnecessary social casualties. Scientific and religious lives are stuck in the old mind-set which was closed and unable to engage in honest and open dialogue with other scientific disciplines and experiences.[20] The criteria of a semipermeable scientific format of interconnection and integration does not work at all, but leads to a worsening of the situation and can lead to more problems than solutions in a multicultural era.

C. Religion and Science in Contemporary Muslim Thought

The final section of this paper describes how contemporary Muslim thinkers can think about and face the changing social situation and progression of history, without loss of religious and cultural identity. How can they use semipermeable criteria, intersubjective testability and creative imagination in building scientific concepts that enhance the development of Islamic religious disciplines in the contemporary era? How can they bridge the ever-present tension between "objectivity" and "subjectivity", between the "scientific" and the "religious"? Could subjective-cum-objective criteria and or objective-cum -subjective criteria be applied to the new Islamic science, to the new *'ulūm al-dīn*?

[20] Jasser Auda's statement, which I quote as follows: "Without incorporating relevant ideas from other diciplines, research in the fundamental theory of Islamic law will remain within the limits of traditional literature and its manuscripts, and Islamic law will continue to be largely 'outdated' in its theoretical basis and practical outcomes. The relevance and need for a multidiciplinary approach to the fundamentals of Islamic law is one of the arguments of this book; Jasser Auda, *Maqasid al-Shariah*, p. xxvi.

No one can deny that in the last two centuries the history of humankind has experienced tremendous changes in managing and improving the quality of life in relation to nature, man and God. There have been tremendous developments in science, social order, in socio-political-economies, energy, law, urban planning, the environment and so on. According to Abdullah Saeed, among others, the enormous changes related to globalization, migration, science and technological advances, space exploration, archaeological discoveries, evolution and genetics, education and literacy have brought about dramatic progress. Above all, there has been a growing understanding and awareness of the importance of human dignity, a closer encounter between religious communities (greater inter-faith interaction), the emergence of the concept of nation-states that have had an impact on equality and equal treatment of all citizens (equal citizenship), not to mention gender equality and so on. The tremendous social changes have had an incredible impact on modes of thinking and religious views (religious world views), both within the Muslim community and other religious communities.[21]

Although change is everywhere, and human knowledge has grown and developed, there is still a problem. There remains the understanding and belief that (knowledge) Islam is believed to be, and is regarded as, the absolute (absolute), that cannot be changed (is immutable) and is transcendental (always associated with a substance that is above/ holy/ grand). This understanding is now being criticized by scientists and scholars in the present era. As Algerian Muslim scientist, Nidhal Guessoum, states:

> The next important issue is the need to engage the Islamic scholars in a serious dialogue and convince them that Scientists have much to say on topics that have for too long remained the monopoly of the religious scholars and their discourse. While there is no doubt in people's minds that human knowledge evolves and grows, it is understood that often religions, especially Islam, are (is) absolute, immutable and transcendent principles, which are set in rigid frames of reference. But **we know today that religions-and Islam is no exception-cannot afford to adopt a stationary attitude, lest they find themselves clashing with and overrun by modern knowledge, and religious principles appear more quaint and obsolete**.[22]

[21] Abdullah Saeed, *Interpreting the Qur'ān Towards a Contemporary Approach* (New York: Routledge, 2006), p. 2.

[22] Nidhal Guessoum, *Islam's Quantum Question Reconciling Muslim Tradition and Modern Science* (London: I.B. Tauris, 2011), pp. 343–4. Bold is my emphasis.

In the treasury of Islamic religious thought, especially in the ***Uṣūl al-Fiqh*** approach, it is usually called *al-thawābit* (things believed or assumed to be "stagnant" or "remain to", "unchangeable") *wa'l-mutaghayyirāt* (things believed or assumed to be "fluctuating" or "changing"). It is also referred to as "*al-thābit*" wa "*al-mutaḥawwil*".[23] Both are more popularly known as *qaṭ'iy* (definite; sure) and *ẓanniy* (indefinite; not sure). While in the philosophical approach, since Aristotle scholars have also recognized what we call "Form" and "Matter", One-Many, Universal-Particular, Objective-Subjective.[24] Later, in the world of anthropology (of religion), especially in study of the phenomenology of religion, there developed the terms, General Pattern and Particular Pattern.[25]

The unresolved binary type of thinking, in which the *fiqhiyyah* type of religious thinking (subjective) is opposed to the *falsafiyyah* or scientific type of thinking (objective), if mapped more historico-anthropologically, actually includes and incorporates three layers of entities, namely: (1) Mentifact, which includes values , beliefs, thoughts, ideas and world view more generally; (2) Socifact, ie. when ideas, values and thoughts enter into the social world, and so form the groups, organizations, schools of thought, denominations, sects and communities following the accompanying social institutions and behavior, attitudes and patterns of relationships and social interactions; (3) Artifact, or relationship between the embodied and that symbolized in the physical world, such as a place of worship (mosque, church, synagogue, temple), institutions

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[23] Adūnīs, *al-Thābit wa'l-Mutaḥawwil: Baḥth fī'l-Ibdā' wa'l-Ittibā' 'inda'l-'Arab* (Beirut: Dār al-Sāqī, 2002).

[24] For Josep van Ess, it is here that the visible differences between the way of thinking followed by *mutakallimūn* and *fuqaha* on the one hand and philosophy on the other hand emerges. "Aristotelian definition, however, presupposes ontology of matter and form. Definition as used by the *mutakallimūn* usually does not intend to lift individual phenomena to a higher, generic category; it simply distinguishes them from other things *(tamyīẓ).* One was not primarily concerned with the problem how to find out the essence of a thing, but rather how to circumscribe it in the shortest way so that everybody could easily grasp what was mean". To get more details, see: Josep van Ess, "The Logical Structure of Islamic Theology", in *An Anthology of Islamic Studies*, ed. by Issa J Boullata (Montreal: McGill Indonesia IAIN Development Project, 1992). Jasser Auda says that, "…the jurists' method of *tamyīẓ* between concepts, whether essence-or description-based always resulted in defining every concept in relation to a 'binary opposite.' The popular Arabic saying goes: 'Things are distinguished based on their opposites' (*bidhiddiha tatamayyaz al-ashya*')"; seeJasser Auda, *Maqasid al-Shariah*, p. 212.

[25] Richard C. Martin considers the '*general pattern'* as '*common pattern'* or *the universals of human religiousness;* Richard C Martin (ed.), *Approaches to Islam*, p. 8.

(socio-religious, educational, economic, cultural), manuscripts, books, inscriptions, art objects, tools, worship, music, painting, laboratories, transportation tools, ritual objects, tombs and so on are the things that are inseparable from the entanglement between Mentifact and Sociofact.[26]

A difficult question to answer-but one which still can be pursued-is how can this type of logical thinking in religious matters, patterned in a triadic type of relationship involving three components at the same time, be operationalized in the field of thought in general and in religious education in particular? This question is especially pertinent in relation to Islamic education, especially when religious people in general and Muslims in particular are facing the powerful social change in a globalizing world? Values are constantly changing and dynamic. Keeping pace with the development of science, social and cultural beliefs *vis-à-vis* the system of belief is also still in the area mentifact, in which religious belief or world view cannot be changed anytime and anywhere. In practice, it is not easy to operationalize, and the braid linking all three into one unified whole, not rather than separately, must be considered in the fields of thought, education, preaching, law, bureaucracy and so on. The difficulty is partly because each person and group (Socifact) is often confined or trapped in a network of preunderstanding, *taqalid-taqalid*, in which habits of mind, manners (Mentifact) have become entrenched and are even considered binding. Therefore, there is a lot of doubt about whether to renew or improve of the concept of religious understanding and there are clashes here and there, at both the individual level, and especially among members of schools, sects, denominations, social organizations which are either internal or external to religious communities.[27]

As mentioned above, the entity analysis tools often derive from two different scientific traditions of this treasure, namely *Uṣūl al-Fiqh* (a type of Islamic religious thought) derived from the text or *naṣṣ* of the holy book, the Koran and Hadith, and *Falsafah* or Philosophy (philosophy

[26] Sartono Kartodirjo, *Pendekatan Ilmu Sosial dalam Metodologi Sejarah* (Jakarta: Gramedia Pustaka Utama, 1992), p. 2.

[27] Violence in the name of religion has always been involved mentifact, socifact, and artifact aspects. Banning the construction of places of worship and especially their destruction (artifact) cannot be separated and are always driven by religious thought patterns and understandings that are rigid and closed (mentifact), and patterns of social relations that are not harmonious (socifact). More complete data on the complexity of inter-religious relations in the country can be examined in *Laporan Tahunan Kehidupan Beragama di Indonesia 2011*, Annual Report (Yogyakarta: Center for Religious & Cross-cultural Studies, 2011).

and science) based on logic and scientific methods. These two types of thinking are often contradictory, conflicting and opposite. Consequently, this binary opposition is very difficult to resolve. There exists a forever contested territory between *uṣūl al-dīn* (the fundamental structure of the diversity of human values in general, universally applicable) on the one hand, and *uṣūl al-madhhab* (premises and the formation or establishment of sects, schools of thought, groups, religious organizations in the community) on the other.

Religious people in general, prefer to choose the either-or option, choosing one of the two options available (*fiqhiyyah* or *falsafiyyah)*. This type of binary thinking, namely choosing between two options available, is now being criticized by contemporary Muslim scholars and scientists because this choice or way of thinking leads to closed and antagonistic responses, and is less conducive to deliver to the order of the mindset of an open society, with many choices.[28] Rarely can both be chosen (although both are important for dialogue). Ad hoc methods of religious thought very it very difficult to accept the philosophical-scientific thought pattern (*falsafiyyah-ilmiyyah*) and are not able to negotiate and compromise between the two thinking patterns of *falsafiyyah* and *fiqhiyyah*. Thus, we are still far from being able to reach the step of dialogue, let alone integrate the two.[29]

Sharp distinction between the two traditions and patterns of scientific thinking in analysing and mapping the socio-religious issues at hand, and the way to resolve this difficult probem, is the central theme in the effort to reconstruct and build the contemporary horizon of Islamic science, including the *'ulūm al-dīn*, namely through the trilogy of science education in public schools (Islamic religious doctrine/*'aqīdah*,

[28] Jasser Auda, *Maqasid al-Shariah*, pp. 50, 212, 214, 216, 218, 226–7.

[29] Serious discussions on the relation between religion and science in Indonesia, if I am not mistaken, are very rarely held well but are sporadically, non-programmable and unplanned. If Ian Barbour assumes there are four patterns of relation between science and religion, there are in fact only conflict and independent; see further: Ian G Barbour, *Issues in Science*. also Holmes Rolston III, *Science and Religion*. In Islamic thought in Indonesia there has been little effort from scholars. Initial effort has been made by Muḥammad 'Abid al-Jābiry, *Madkhal ilā Falsafah al-'Ulūm: al-'Aqlāniyyah al-Mu'aṣirah wa Taṭawwur al-Fikr al-'Ilmy*, 5th ed. (Beirut: Markaz Dirāsāt al-Wihādah al-'Arabiyyah, 2002). Also by Muḥammad Shaḥrūr, *Naḥwa Uṣūl Jadīdah li'l-Fiqh al-Islāmī: Fiqh al-Mar'ah; al-Waṣīyah, al-Irth, al-iwāmah, al-Ta'addudīyah, al-Libās* (Damaskus: al-Ahālī li'l-Ṭibā'ah wa'l-Nashr wa'l-Tawzī', 2000); and Nasr Hamid Abu Zayd, *Naqd al-Khiṭāb al-Dīnī* (Cairo: Sīnā li'l-Nashr, 1992). There are still few accessible sources, some of which have been denied to exist among various religious scholars in religious colleges, especially in the non-university community.

worship/*'ibādah*, and morals/*akhlāq*) is being tried. Approaches to the study of science in Islamic educational institutions has been seriously reformulated by the reformers of Islamic thought such as Muhammad Abduh, Fazlur Rahman, Mohammad Iqbal, and by contemporary Muslim theologians and thinkers, some of whom I alluded to in this paper, namely Abdullah Saeed (Australia), Jasser Auda (Qatr and Dublin), and M. Fethullah Gulen (Turkey and Pensylvania). These contemporary Muslim thinkers provide us with examples of how to respond to the changing times and social changes in the present, and to consider the implications of these changes for the design of new methods of Islamic education.

What type of rapprochement do we need? In adopting a new way of thinking or rapprochement, in which religion, science and culture are closely intertwinned and encountered, it is necessary for those dealing with religious matters to discuss the basic structure of thinking that underlies human thinking (humanities) in general, and at the same time the basic structure of the Islamic religious thinking in particular (*'ulūm al-dīn*). When entering into the domain of religious or scientific epistemology or *'ulūm al-dīn*, experts, researchers and users of scientific religious services in practice must be willing to be in touch and familiar with the basic structure of scientific or scholarly approach of *Fiqh* with its various branches of science (Fiqh, Kalam, Tafsir, Hadith), while entering into the domain of the social changes in the era of nation-states and globalization inevitably involving human experience in general. Human experience involving the scope of human thinking in more general terms (Rationality), the scientific thinking method (Method) and the new values (Value) arising from the encounter between the three.[30]

From such a perspective, I will explain the world of the contemporary epistemology of Islamic studies and its implications for building a new educational philosophy and practice of Islam in the face of huge of social change. My analysis usually encompasses the work of three contemporary Muslim thinkers, namely Abdullah Saeed, Jasser Auda, and Fethullah Gulen.[31] However, due to limitations of time

[30] Compared with Jasser Auda, *Maqasid al-Shariah*, pp. 155–6, 160.

[31] Of course, there are many other contemporary Muslim thinkers who have similar concern, such as Mohammad Shahrur (Syria), Abdul Karim sorus (Iran), Fatima Mernissi, Riffat Hassan, Hasan Hanafi (Egypt), Nasr Hamid Abu Zayd (Egypt), Farid Esack (South Africa), Ebrahim Moosa (South Africa), Abdullahi Ahmed al-Naim (Sudan), Tariq Ramadan, Omit Safi, Aboe Khaled el-Fadl, Mohammad Arkoun, Muhammad Abid al-Jabiry (Morocco). My experience teaching at the undergraduate and postgraduate level in Indonesia indicates that it is rare for students to be well versed

and place in this paper, I will focus on Abdullah Saeed, the *mujtahid* models/contemporary scientific thinker, who strove to understand how Islamic scientific developments can now be in line with other scientific developments, and will only briefly mention Jasser Auda.[32]

Thinkers, writers, scholars and researchers of contemporary Islam have the ability to build a dialogue and intertwine the paradigms of *'ulūm al-dīn* (religious knowledge of Islam), *al-Fikr al-Islāmy* (Islamic Thought) and *Dirāsāt Islāmiyya* (Islamic Studies) in productive ways. *'Ulūm al-dīn* or Islamic theology in general is reconciled and enters into earnest, integrated, and interconnected dialogue with contemporary *Dirāsāt Islāmiyya* (Islamic Studies), seriously considering the input, ways of thinking and methods of modern science, the social sciences and humanities, in the contemporary analysis of religious thinking.[33] In the study of contemporary Islam, they no longer use the linear model in approaching the problem, and instead the study of *fiqh, kalam*, or *tafsir* is integrated and interconnected with the natural science disciplines (biology, medicine), social sciences, such as history, sociology, anthropology, and the humanities, as well as the contemporary methods of science in general.

D. Abdullah Saeed's Development of Methods of Quranic Interpretation

Abdullah Saeed has an educational background in Arabic language and literature and Middle Eastern studies. His study in Saudi Arabia and his academic career in Melbourne show that he is competent in assessing the Western and Eastern worlds objectively. Saeed is very concerned with the contemporary Islamic world, in particular in relation to how Islamic teachings can be applied anywhere at any time, as well as in the real context of living as a Muslim (minority) in a Western country, a notion he refers to as Progressive Islam, in which the subjects are progressive Muslims. Progressive Islam is an attempt to reactivate the progressive dimension of

on the methods and ideas of contemporary muslim thinkers.

[32] Reference to Jasser Auda can be found in my paper, M. Amin Abdullah, "Bangunan Baru Epistemologi Keilmuan Studi Hukum Islam dalam Merespon Globalisasi", *Asy-Syir'ah: Jurnal Ilmu Syari'ah dan Hukum*, vol. 47, no. 1 (2013), pp. 315–68.

[33] I have elaborated the relationship between the three clusters of Islamic scholarship: *Ulum al-Din*, *al-Fikr al-Islamiyya*, and *Dirasat Islamy* in M. Amin Abdullah, "Mempertautkan Ulum al-Din, Al-Fikr al-Islamy dan Dirasat al-Isalimyyah: Sumbangan Keilmuan Islam untuk Peradaban Global Civilization", in *They Talk of Islamic Education: A Flower Bridges with Africa*, ed. by Marwan Saridjo (Jakarta: Raja Grafindo Persada, 2009), pp. 261–98.

Islam which has undergone in a fairly long period of torpor in which the dynamism of Islam in everyday life was suppressed by the dominance of the text. This textual domination is referred to by Mohammad Abid al-Jabiry as the dominance of rational type of *Bayani* epistemology in Islamic thought.[34] Methods of thinking used by progressive Muslims are called progressive-*ijtihadi*. Before describing how the framework and Islamic religious mindset of Progressive-*ijtihadi* is patterned, it is important to first discuss the progressive trend of thought in Islam that exists today.

To Saeed, there are six groups of Muslim thinkers nowadays, whose patterns of religious thought and epistemology differ: (1) *the Legalist-traditionalist*, emphasizing laws interpreted and developed by muslim scholars of the pre-Modern period; (2) *the Theological Puritans*, focusing on ethical dimensions and Islamic doctrines; (3) *the Political Islamist*, having the tendency towards the political aspect of founding an Islamic state; (4) *the Islamist Extremists*, having the tendency to fight every individual and group assumed as their enemy, Muslims as well as non-Muslims; (5*) the Secular Muslims*, having an opinion that religion is a private matter; and (6*) the Progressive Ijtihadists*, the modern thinkers on religion attempting to reinterpret religious teachings to meet the needs of modern society. The category of progressive muslims, are positioned in the latter.[35]

The characteristics of *the Progressive Ijtihadist* Muslim thought as explained by Saeed in his *Islamic Thought* are as follows: (1) they adopt the view that some areas of the traditional Islamic law need the change and substantially reform in order to correspond to the needs of Muslim society in this time; (2) they tend to support the importance of new fresh *ijtihad* and methodology in their *ijtihad*s to anticipate contemporary problems; (3) some of them also try to combine traditional Islamic scholarship

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[34] Muḥammad ʿĀbid al-Jābirī, *Buṇya al-ʿAql al-ʿArabī: Dirāsah Taḥlīlīyah Naqdīyah li-Nuẓum al-Maʿrifah fī al-Thaqāfah al-ʿArabīyah* (al-Markaz al-Thaqāfī al-ʿArabī, 1993).

[35] Abdullah Saeed, *Islamic Thought: An Introduction* (London and New York: Routledge, 2006), pp. 142–50. See also: Omid Safi, *Progressive Muslims: on Justice, Gender and Pluralism* (Oxford: Oneworld Publications, 2003). Tariq Ramadan assumes there are six tendencies of Islamic thought in the end of 20th and 21st centuries; those are *Scholastic Traditionalism, Salafi Literalism, Salafi Reformism, Political Literalist Salafism, Liberal* or *Rational Reformism,* and *Sufism;* see Tariq Ramadan, *Western Muslims and the Future of Islam* (Oxford University Press, 2004), pp. 24–8. The categories and classification of Islamic thought launched by Saeed and Tariq Ramadan are really different from the common ones in the world of Islam in the 1980s when scholars tended to elaborate more the differences between *Traditionalism* and *Modernism*, which later emerge as courses such as Modern Trends in Islam.

with modern Western education; (4) they believe that social change in the intellectual, moral, legal, economic or technological domains, must be reflected in Islamic law; (5) they are not involved in dogmatism or *madhhab* of law and avoid certain theology in their approaches; and (6) they emphasize their thoughts on social justice, gender equity, human rights and harmonious relationships between Muslim and non-Muslims.[36]

At a glance, it seems that patterns of contemporary epistemology in Islamic science, in the eyes of Saeed, differ from patterns of traditional epistemology in Islamic science. The use of scientific method and traditional epistemology scholarship is visible where *naṣṣ* of al-Qur'an becomes the central departure point, but its interpretational method has been dialogued, combined and integrated with the new usage of epistemology, entangling contemporary social sciences and humanities and critical philosophy.

Abdullah Saeed's opinion above can be compared with that of Jasser Auda as follows:

> [T]he second impact of the proposed condition of a 'competent worldview' is 'opening' the system of Islamic law to advances in natural and social sciences. Judgements about some status quo or 'reality' can no longer be claimed without proper research that is based on sound and competent' physical or social sciences methodology. We have seen how issues related to legal capacity, such as 'the sign of death,' 'maximum period of pregnancy,' 'age of differentiation,' or 'age of puberty,' were traditionally judged based on 'asking people.' Since 'methods of scientific investigation' are part of one's worldview, ... I would say that 'asking people' cannot be claimed today without some statistical proof!! This takes us to the realm of science (natural and social), and defines a mechanism of interaction between Islamic Law and other branches of knowledge.[37]

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[36] Abdullah Saeed, *Islamic Thought: An Introduction* (Routledge, 22 Nov 2006), pp. 145–54. This can be compared with M. Abu-Rabi's view criticizing traditional and literalist Islamic education in this era, which discusses *sociology, anthropology* and *critical philosophy* as heresies in Islamic education. "The core of the field revolves around Shari'ah and Fiqh studies that have, very often, been emptied of any critical or political content or relevance to the present situation… Furthermore, the perspective of the social sciences or critical philosophy is regrettably absent…..The discipline of the sociology of religion is looked upon as *bid'ah*, or innovation, that does not convey the real essence of Islam"; see: Ibrahim M. Abu-Rabi and Ian S. Markham, "A Post-September 11 Critical Assessment of Modern Islamic History", in *A Post-September 11 Critical Assessment of Modern Islamic History* (London: Oneworld, 2002), pp. 34–6. I have emphasised some words here.

[37] Jasser Auda, *Maqasid al-Shariah*, pp. 203–4.

Abdullah Saeed does not mention the use of methods and approaches explicitly-Jasser Auda was firmer in his approach-but the inclusion and use of the term 'modern western education' is one indication of the important step in introducing lovers of Islamic studies and the new *'ulūm al-dīn* in the direction of the contemporary. This does not just mean education in western countries, but emphasizes experience and scientific development in the region. Also, concern for the issues and problems of contemporary humanity evident in what Saeed called social justice, especially gender equity, human rights and harmonious relations between Muslims and non-Muslims. Issues pertinent to the contemporary humanities in the context of a particular place or space cannot be pondered, understood, or concluded well, if the Islamic scientific epistemology continues to use *'ulūm al-dīn* methods and approaches.

Abdullah Saeed, in the Epilogue of his book (Chapter 12), explains his critical views on the study of *'ulūm al-dīn* and Sharia Sciences (old), which consist of the *hadith, usul al-fiqh* and *tafsir*, and the problems that occur if you remain satisfied with using the methods and ways of working of the old paradigm.[38] Then, in terms of interpretation (Qur'anic exegesis), he proposes an alternative method to understand the scriptural texts in accordance with the demands of development and the level of education and literacy today. It seems clear that Abdullah Saeed continues to further develop methods of interpretation of the Qur'an, which are more nuanced and hermeneutical than those of the past.[39]

The social issues and social approaches commonly studied in the social sciences and contemporary humanities and examined in a critical-transformative contemporary philosophy, need to be redefined and reformulated in the study of Islamic sciences, especially the science of *kalam* and science sharia, *fiqh, tafsir, hadith* science to bring about major transformation in Islamic religious education in the Islamic world in general, and Indonesia in particular. Contemporary humanities issues, which have shaped a new religious mindset, cannot be sidelined in courses at the university level, whether undergradute, masters or doctorate, for these students are the future leaders in the multicultural, multireligious era. Reconstruction and development of the paradigm of the scientific epistemology of Islamic education should also be reflected in the curriculum and activities, and the syllabus and literature used by lecturers and students.

[38] Abdullah Saeed, *Islamic Thought*, pp. 145–9.

[39] *Ibid.*, pp. 145–54.

E. Concluding Remarks

An interconnected integrated paradigm of scientific knowledge (*takāmul al-'ulūm; izdiwāj al-ma'ārif*) is necessary for the study of religion and especially the study of *'ulūm al-dīn* in the present, let alone in the future. If not, then the implications and consequences will be much more complicated both in the social order, in culture, and in the spheres of local, regional, national and global politics. Linearity of religious knowledge will only result in learners having a myopic view of life despite the reality of an increasingly religious society, one which is not simple as before, but rather is incredibly complex, as complex as life itself.

What if this conversation was related to debate in the level of higher education in universities in the country? I will end this paper by quoting the statement of Umar Kayam, a snippet from his inaugural speech at Gadjah Mada University:

> My hope is also now you also begin to realize that modern science can no longer stand alone. Modern science, social sciences or humanities or sciences whatever, will not be able to go forward when he was squaring himself. Maybe you will immediately say aloud to us the fact that the course faculty on campus are still fragmented. Forgive! Your teachers, including those that now stand before you, are the product of a compartmentalized curriculum. And our teachers are also the result of the product, as well compartmentalized. So the great-grandparent boxes, boxes birth grandparent, grandparent boxes boxes childbearing, and child birth box grandchildren box. Box, box, box, box, box. Precisely because you are in this situation and condition and boldly speak out I would like to advise from the lectern so that you begin to free ourselves from the prison to release the boxes of the sciences. Begin to greet your comrades who are compartmentalized near you. Have you spoken to those who study political science and sociology and history of Indonesian literature or any literature? Have talked to many students of English literature or Indonesian literature, sociology and anthropology, and psychology…? Many years ago, C.P. Snow so warned us of the dangers of narrow categorisations in *the Two Cultures*. In fact, he proposed that the social sciences and humanities engage in dialogue and communication with the natural sciences.[40]

How, then, does this relate to the religious sciences? It is much more complex for in religion there is the idea of the sacred, the holy, and of *qaṭ'iy* (that which cannot be changed), the latter associated with

[40] Umar Kayam, "Transformasi Budaya Kita", Inaugural Speech for Professorship at the Faculty of Letters, Gadjah Mada University Yogyakarta (19 May 1989), p. 37.

human understanding and subjective interpretation of God (fideistic subjectivism). Mutual dialogue between religion and science, of course, will be much more difficult, but with the advent of new thinkers, who bring new insights and attempts to explore it, such difficulties may be overcome. The description above may bring hope in paving the way towards more productive discussions in the days to come.

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