

AN INSIGHT INTO QUANTITATIVE RESEARCH METHOD FROM THE ISLAMIC WORLDVIEW

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ABSTRACT

Research in social sciences (as well as other areas) is normally conducted by applying two types of research methods namely Quantitative Research method and Qualitative Research method. The study into the above two areas has advanced into two separate discipline of study and has been established as two of the core courses at Institute of Higher Education. The disciplines have also evolved and adopted in business research. Quantitative methods are employed by social sciences researches without realizing its handicapped hence result in questionable findings. This paper examines the underlying philosophical assumptions of quantitative research method and critically analyse the method using the lens of the Islamic worldview. The study exposes the limitation of the above research methods in social sciences research that social sciences researches must be aware. The evidence suggests that the choice of research method is dependent on the research questions. Quantitative research method can only be applied to certain type of research questions.

Keywords: Quantitative Research Method, Worldview, Western worldview, world view of Islam, knowledge.

1.0 INTRODUCTION

The meaning of “research” has seen fundamental changes from 15th century to 16th century. The term “research” was first used in 1570s to mean “act of searching closely”. By 1630s the growing importance of science and the changing human world of reality have transformed research into “a scientific inquiry” (etymonline.com, 2015). The changes have great implication to research approach hence the method of inquiry adopted by researches.

Research has also grown into an important agenda in the improvement of the economy. The development has added a new dimension to the world of research with commercialization aspect added on.

In conducting research, researchers would either employ quantitative research method or qualitative research method (Muijs, 2004) or both as method(s) of enquiry depending on what are the researchers looking for i.e. research questions (Collis & Hussey, 2009). The methods are being extensively employed in all type of research including social science research.

In this article the author is interested to examine the quantitative research method as employed in social science research from the Islamic worldview. Research in social sciences focuses on human as the research object. Quantitative research method being used as method of enquiry assumes human as mechanistic. This assumption on human contradicts with the model of man from the Islamic world.

2.0 PROBLEM STATEMENT

Most of social science researchers employed quantitative research method as their method of enquiry. Quantitative research method is based on certain underlying assumptions about reality and human which is suspect. My thesis would attempt to unravel the above assumptions from Islamic worldview.

Muijs (2004) documented Aliaga & Gunderson (2002)’s definition of quantitative research as:

“Quantitative research is “Explaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics)”

Aliaga et. al. (2002)’s definition of quantitative research supports Winter (2000)’s description of quantitative research as an attempt to fragment and delimit phenomena into measurable or 'common' categories that can be applied to all of the subjects or wider and similar situations.

Quantitative research approaches have roots in 20th century philosophical thinking. The quantitative is termed the traditional, the positivist, the experimental, or the empiricist paradigm (Creswell, 1994). Explaining the underlying philosophy and worldview of quantitative research, Muijs (2004) stated:

“The quantitative view is described as being ‘realist’ or sometimes ‘positivist’. Realists take the view that what research does is uncover an existing reality. ‘The truth is out there’ and it is the job of the researcher to use objective research methods to uncover that truth. This means that the researcher needs to be as detached from the research as possible, and use methods that maximize objectivity and minimize the involvement of the researcher in the research. Positivism is the most extreme form of this worldview. According to positivism, the world works according to fixed laws of cause and effect.”

The above underlying philosophy and worldview of quantitative research has been criticised by Muijs (2004). He clarified that the realists’ view that a true reality out there that we can measure completely objectively, is problematic. We are part of the world we are observing, and cannot completely detach ourselves from what we are researching. Historical research has shown that what is studied and what findings are produced are influenced by the beliefs of the people doing the research and political/social climate at the time the research is done.

Quantitative nomothetic research approach has also being criticised of being repetitious, trivial and isolated researches that produce contradictory and the kind of research to be

undertaken without due consideration of human values, behaviours and issues (Gaffikin, 2006 & Rich, 2008).

The above are some of the characteristics of quantitative research method. I will deliberate further on other characteristics of quantitative research method in the preceding paragraph. I would also critically analyse the above underlying philosophy and worldview according to the Islamic worldview.

3.0 CONTENT OF THE ARTICLE

This article focuses on quantitative research method and tries to understand the philosophical and worldview underlying behind it. To understand the worldview being employed for such method is of vital. As the subject matter originates from the Western academia, I need to examine the Western worldview and compare it with the Islamic worldview. I will first start with deliberating on the characteristics of quantitative research method.

4.0 CHARACTERISTICS QUANTITATIVE RESEARCH METHOD

One of characteristics of quantitative research approach is generalizability (Maxwell, 1992). Generalizability means the finding(s) of a particular research can be generalized to an identical sampling of the research as well as similar circumstances. Generalizability is one of the most common tests for 'validity' hence results in 'validity' is another feature of quantitative research method (Winter, 2000). So, generalizability or external validity involves the extent to which the results of a study can be generalized (applied) beyond the sample to the larger population. Winter (2000), also wrote within the quantitative definition, an account may be judged 'valid', 'replicable' and 'stable' on the merits of its generalizability.

Research on 'generalizability' feature of quantitative method has led a German philosopher Wilhelm Wildenband (1894) and Stern (1911) and much later Allport (1960, 1962 & 1966) to coin the term nomothetic quantitative research method. Dangulbi et. al.,

(2012), citing Hermans (1988), wrote "nomothetic" to characterize the search for general laws. These authors further asserted that nomothetic approaches use 'dimension approach' (abstracting and formulating variables as general and from outside).

Validity, reliability and generalizability are the three key concepts in quantitative methods (Muijs, 2004). Muijs (2004), further elaborate validity asks the question: are we measuring what we want to measure? Certain concepts such as self-concept, attitudes, self-esteem, and satisfaction cannot be measured directly. Hence instruments need to be developed to indirectly measure these concepts, by using questionnaire for example (Muijs, 2004).

To ensure that the instruments ask the correct questions (hence valid), quantitative researchers would disassociate themselves as much as possible from the research process. For quantitative researchers this involvement would greatly reduce the validity of a test (Winter, 2000). This is the reason why in reporting the research finding, the researchers used the term "the researchers" or "the authors" or "the articles" instead of "I" or "We". Hence, when the researcher writes the study, the language should be not only impersonal and formal but also based on accepted words such as 'relationship', 'comparison', and 'within-group'. (Creswell, 1994; p.6)

The traditional criteria for 'validity' find their roots in a positivist tradition, and to an extent, positivism has been defined by and bolstered along by a systematic theory of 'validity' (Winter, 2000). According to the positivists' worldview, 'validity' existed amongst, and was the result and culmination of other empirical conceptions: universal laws, evidence, objectivity, truth, actuality, deduction, reason, fact and mathematical data to name just a few (Winter, 2000).

Another feature of quantitative research is hypothesis testing. The tradition of hypothesis testing, often used today in our scientific research, was initiated by positivist philosophers of the nineteenth century such as August Comte and John Stuart Mill and became standard procedure within positivist research in the twentieth century (Tacq, 2011). The latter will be further examined the following paragraph.

5.0 POSITIVISTS WORLDVIEW

Positivism refers to names from nineteenth century, such as August Comte and also Emile Durkheim in France and John Stuart Mill in England, also Bentham and Spencer. In fact it goes back to philosopher David Hume in eighteenth century (Tacq, 2011). In twentieth century it refers to logical positivism—or also logical empiricism or in general neo-positivism—of the Vienna Circle, with names such as Moritz Schlick, Otto Neurath, Rudolf Carnap and many others, and in their wake Karl Popper and Carl Gustav Hempel (Tacq, 2011). Ludwig Wittgenstein’s “*Tractatus Logico-Philosophicus*” and his “*Philosophische Untersuchungen*” (Philosophical Investigations) have given rise to school formation, “*Tractatus*” to logical positivism with the emphasis on observable natural events and the use of the aforementioned deductive nomological scheme of thought with particular attention to regularities and general laws, and “*Philosophische Untersuchungen*” to a totally different position, in which a pluralism of “language games” is presented which gives room for the linguistic usage and in which the emphasis is now on human actions, meanings, intentions, grounds, goals, rules, norms, maxims and contexts (Wittgenstein 1981, 1999).

The term “positivism” implies: rejection of metaphysics and focus only on what is observable to the five senses. The basic principle of positivism is: start from that which is given, which is factual, which is positive” and eliminate all questions and elaborations that go beyond it as useless. And that which is given, factual, positive, that is simply the phenomena. Consequently, positivism restricts science (and philosophy) to the domain of the phenomena. We must accept these phenomena (the research subject matter) as such and we must try to order them and come to scientific laws—laws of similarity and laws of order—and from these discovered scientific laws we must try to prophecy future events and make necessary arrangement to intervene in the world. In other words, we must “*Savoir pour prévoir*” (to know in order to foresee), statement of Francis Bacon, to which Comte adds: “*et prévoir pour pouvoir*” (to foresee in order to control). It can be concluded that in Comte’s view it makes no sense to ask for the ‘essence’ of something

or for the ‘deep’ or ‘true’ causes. Positivism relies solely on facts and concrete experiences, on phenomena which can be observed by the senses.

Citing Mart-Jan De Jong, Tacq (2011), surmised that Comte seems to refer to three things: (1) That which is real is positive; that which is not real, is negative. (2) That which is meaningful and useful, is positive; the senseless and useless is negative. (3) That which is sure and can be determined exactly, is positive; that which is unsure and cannot be determined exactly, is negative (such as in positive law, which is the entirety of laws in force, as opposed to ‘natural’ law). Comte himself has pointed out that all three meanings apply to positivism. Therefore, he restricts himself to the real thing, to the social useful thing and to that which can be determined exactly, in contrast with the endless quarrels of earlier metaphysics.

5.1 Defining Worldview – Western Perspective

Several definitions have been given to worldview. Worldview (*livsanskuelse* in Danish and *weltanschauung* in German) is the comprehensive framework of one’s basic beliefs about things and their relationships. It is the basic perspective we use to understand the world around us and our experience of it. A worldview is an everyday, ordinary-language description of the world, that shapes and guides our lives, helping us to understand, explain and explore the world around us and everything in it, and how these are all related to each other, by giving us a way in which we can see them. In this sense then, it is

"the comprehensive framework of one's basic beliefs about things and their relationships."

A worldview is also the system by which we view life events. Over time and by experience we develop our own sense of how things work in our life. The Oxford English Dictionary (1989), defines the term worldview as “a particular philosophy or view of life; a concept of the world held by an individual or a group.”

5.2 Defining Worldview – Islamic Perspective

Al Attas (1998), a renowned Islamic scholar and thinker, defined worldview as:

“The vision of reality and truth that appears before our mind’s eye revealing what existence is all about; for it is the world of existence in its totality that Islam is projecting. The Islamic view of reality and truth, which is a: metaphysical survey of the visible and invisible worlds including the perspective of life as a whole, is not a worldview that is formed merely by the gathering together of various cultural objects, values and phenomena into artificial coherence. Nor is it one that is formed gradually through a historical process of philosophical speculation and scientific discovery, which must of necessity be left vague and open-ended for future change and alteration in line with paradigms that change in correspondence with changing circumstances. It is not a worldview that undergoes a dialectical process of transformation repeated through the ages, from thesis to anti-thesis synthesis.”

Another Islamic scholar, Choudhury (2000), defined worldview as “an Islamic design of reality relating it, on the one hand, to the epistemology of the Divine Unity and, on the other hand, to the world reality and system”.

5.3 Western Worldview

The worldview of the west, which is rooted during the Renaissance era, emphasises on human life in this world and has removed the focus on an afterworldly spiritual destiny. Man no longer appeared so inconsequential relative to God, the church, or nature (Tarnas, 1991). The period also saw the ascent of nationalism. As for the modern scientific thinking, the fundamental principles are empiricism, mathematics and mechanics (Tarnas, 1991). This is in agreement with the worldview of Comte’s positivism as documented by Creswell (1994), Muijs (2004) and Tacq (2011) as explained in the above.

The Western Worldview is founded upon three distinct and dialectically (relating to the logical discussion of ideas and opinions) related forms of the Renaissance, the Reformation and the Scientific Revolution. The above have ended the cultural hegemony/dominant of the Catholic Church in Europe and have established the more individualistic, skeptical and secular spirit of the modern age and science emerged as the West's new faith.

Science contributed to mankind's liberation and attributed to:

- Empirical, rational, appealing to common sense and to a concrete reality that every person could touch and weigh for himself.
- Verifiable facts and theories tested and discussed among equals replaced dogmatic revelation hierarchically imposed by an institutional Church.

According to Tarnas (1991), the West has taken out God from their equation of life and overly committed to this life and this world.

5.4 Islamic Worldview

Islamic Worldview, also known as vicegerental world view, is a world view that revolves around the issues of vicegerency in its comprehensive meaning that requires a belief system, a *Shariah* system, an ethical system and a civilization vision of reality and progress. It is a world view which is laid upon and constructed in the light of the revealed Qur'anic text. It offers a more comprehensive and rationalistic vision of life. It constitutes the collective *Ummatic* vision of existence through which the Muslim interprets and offers answers to ultimate questions pertaining to the Creator, existence of the seen and unseen, universe, life, man, prophethood, vicegerency, society and the life hereafter (Berghout, 2009).

Islamic worldview consists of the vision that offers a consistent and all-inclusive explanation of creation, reality, universe, life and human experience. It defines man's responsibilities in the world and the necessary knowledge and guidance available. It explains the relationship between man and other worlds of the seen and the unseen.

The focus is on the collective *ummah*. In another word, it is not an individual oriented world view i.e. neither each and every Muslim has his own world view that differs from other fellow Muslims nor does he have the absolute right to change his world view or abandon it as in cases of personal properties. It is based on the agreement, throughout the course of history, to abide by the Qur'an, *Sunnah* and the consensus of the scholars to uphold this vision of life and pass it to all its generations and people. It is shared by all Muslims regardless of their races, cultures, languages and doctrinal alienations as long as they are within the accepted parameters of Islam.

Islamic worldview projects and deals with existence in its entirety that includes the seen and the unseen worlds. It examines issues pertaining to this life and the hereafter, past, present and future, intellectual, spiritual, moral, ethical, social, political, economic, cultural and civilizational spheres. This worldview comes as a result of the Muslim interaction with life and reality in the light of and in accordance with the teachings of Islam. It provides the necessary guidance for the Muslim to excel in his endeavor as a vicegerent of Allah and achieve his objectives in this world and in the hereafter.

6.0 WESTERN WORLDVIEW, SCIENCE AND SCIENTISM

I have put forward my argument in the above the main fundamental element of Western Worldview is the removal of God in the Western equation of life and replaced by science as the religion hence the birth of the term scientism. Thus, the issue of science and scientism as embraced by the Western worldview needs further deliberation and has significance bearing on our discussion.

Salleh and Ahmad (2009a) questioned the appropriateness of the classical mechanistic Newtonian-Cartesian science. They clarified that physical laws of the Western-based Newtonian-Cartesian science assumed a fragmented universe of separate parts. They acknowledge that since the times of Descartes, Galileo and Newton, the dominant worldview of the Western science has been that the universe is like a huge physical

(material) machine working on a clockwork mechanism with the human in it also viewed as a machine. Under the Newtonian-Cartesian regime classical science, human was degraded to a machine. This mechanistic model dismissed any non-material aspect of a human. Consciousness too was removed from science. These classical science fundamentals are devoid of human and humanness traits.

The above generally accepted classical science foundations of the Western Worldview contradict significantly with the Islamic Worldview. Unlike the Western-based Newtonian-Cartesian science physical laws which assumed a fragmented universe of separate parts, Islam views i.e. according to the Islamic worldview the same universe is integral.

Oh Mankind! We created you from a Single Soul, male and female, and made you into nations and tribes, so that you may come to know one and another. Truly, the most honored in God's sight is the greatest of you in piety. God is All knowing All Aware.” (Quran 49:13).

The above verse implies that the entire mankind is created from a Single Soul. Each soul being a "whole within a whole" and thus being connected to every soul that has ever existed or exists. In brief, in this universe everything is interconnected.

Islam also categorically rejects the dominant worldview of the Western science that this mechanistic soulless universe is working on a clockwork mechanism. As the above scripture indicated the whole cosmos is an interconnected soul.

Newtonian-Cartesian regime classical science's view of mechanistic human provides the most fundamental transgression with Islam's worldview of human. According to the vicegerent worldview of Islam, human body was created from clay. In one verse the Quran says, "God created the human being from dry clay, like pottery" (55:14). God then gave life to Adam's clay by blowing something of His own spirit into it: "He originated the creation of the human being out of clay, ... then He proportioned him and blew into him of His spirit" (32:7-9). Human bodies are alive because the divine spirit animates them. Without the spirit, they would be water and earth (Murata & Chittick, 1994).

The above disparities between the dominant Western worldview underlying foundations and with that of Islamic worldview have great consequences on those that originate from the Western civilisation especially education.

Following the above, does science has its place in Islam? Does the above means that Islam opposes science? The main contention here is that which version of science?

It is suffice for me to note that in the West, science has evolved and the fundamentals that discussed earlier have changed drastically. Despite the deep-rooted materialism, objectivity and atomistic dogmas being synonymous with the thinking of science for three centuries physical scientists were willing to abandon them in favor of a more realistic and complete representation of the universe (Salleh et. al., 2009a). Hence, the evolved science parallel religion.

Having said that, the mainstream classical Newtonian-Cartesian sciences remains the dominant worldview of the Western mainstream science.

7.0 EPISTEMOLOGY: WESTERN WORLDVIEW AND ISLAMIC WORLDVIEW

Following the above accounts, epistemologically the Western worldview only recognises one source of knowledge namely observed knowledge i.e. all events that can be analysed physically with five senses such as sight, taste, smell touch and hearing. Anything beyond the physical domain is rejected (Salleh et. al., 2009a). Salleh et. al. (2009a) documented that since Western epistemology was restricted to solely observed knowledge and devoid of revealed knowledge, the method on knowing was limited to the devices of the sense perception with intellection less relied upon, while the contemplation of heart, hardly listened to. Observable knowledge also translates to empiricist, objectivity, positivist, measurable and validity.

Islamic epistemology recognizes two sources of knowledge, observed knowledge and revealed knowledge. Al Zeera (2001), cites a well-known Islamic philosopher Al-

Ghazali's theory of knowledge that Islamic epistemology is both religious and other-worldly, and materially oriented and this worldly. It is divided into theoretical and practical knowledge. It includes religious and spiritual issues dealing with God, the soul, the unseen world, the angels, *ilm al-mukashafah*, and other metaphysical subjects, as well as material or worldly issues (*ilm al-mu'amalah*). Islamic epistemology is both wholeness and holiness.

Commenting on Western epistemology which Al Zeera (2001), refers to as secular epistemology; he concluded that Western secular epistemology cannot and would not tolerate such wholeness. Wholeness, complexity, and contradictions represent chaos and uncertainty from a Western positivist perspective. Islamic epistemology embodies wholeness and holiness for it embraces both the religious and material as one whole. It is holy because of the religious component, especially the theory of virtue, containing all of the virtues that can transform any knowledge to holiness.

Al Attas, a well-known contemporary Islamic Philosopher and thinker, also wrote in detail regarding Islamic epistemology. As quoted by Setia (2003):

“Al-Attas' epistemology is essentially a theory of rational psychology or human cognition. He affirms the traditional view that it is the rational faculty of human beings that marks them off from other creatures, and, Al-Attas makes clear that epistemology reflects ontology, for the “very essence” of man as the “epitome of Creation” is his “rationality which is the connecting link between him and Reality,” and hence the noumenon can be known, in contrast to Kant, for whom knowledge can only be of phenomena. In short, “the operational powers and capacities of the cognitive faculties and senses” extend to both the domains of physical and of metaphysical realities.

8.0 MAINSTREAM WORLDVIEW ABOUT REALITY AND ANALYSIS

“Reality is merely an illusion, albeit a very persistent one” – Albert Einstein, Quora

In my attempt to gain an insight into research methods, understanding mainstream worldview of reality is of important element. The failure to understand this would not give the insight hence I could not establish my conclusion critically. This is in line with Salleh and Ahmad (2009)'s insight of the need to understand the properties of the real world. These include the correct understanding of model of human and worldview of reality.

The current worldview about reality is based on Democritus's world of reductionism (Gray, 2010). Salleh and Ahmad (2008), explained reductionism originates from atomistic (divided into separate and often disparate elements) mindset. Briefly, reductionism posits that a phenomenon can be reduced to individual parts so that the behavior of the whole can be learned by reconstituting the parts. The idea with reductionism, i.e. non-interconnectedness universe, was based on Newton's view of the material reality of the universe where its operation could be understood by taking matter apart and studying its bit and pieces (Salleh et. al., 2009a and 2012). This reductionist reality of the world is a legacy of the long-held positivist paradigm in social science (Salleh et. al., 2012). This is in congruent with Verschuren (2001), who cited Easterby-Smith et. al. (1991)'s remarks that reductionism makes part of the positivist paradigm in the social and technical sciences.

Positivism, founded by Auguste Comte (1798–1857), is based on the Newtonian and Cartesian science (Salleh et. al., 2009a). To Comte, Salleh et. al. (2009a) wrote, citing Rosenblum and Kuttner (2006), knowledge is limited to only the observable and human or people were "social atoms" motivated by forces analogous to Newtonian physics, following on Comte's argument, it means that any non-observable and non-measurable attribute do not have a place in social science. More importantly, Comte rejected revelations and human spirituality with his positivist ideology. While Comte argued that man should be central, his man was founded on the positive power of reasoning only and limited to the sense perception occupying a mechanical universe. Under the Newtonian-Cartesian regime, the human was degraded to a machine.

Comte also instituted "positivism" as a doctrine towards enshrining the substance of the

Enlightenment about the positive role of human in understanding the world phenomenon. Positivism was intended as a human-based religion where the role of spirituality and consciousness was removed. Humans subsequently became social atoms or social animals within the fabric of society (Salleh and Ahmad, 2010).

Diverting from the above model of reality, 20th century physicists have discovered quantum physics, a branch of physics that concerns itself with the study of the subatomic realm which is founded upon the interconnectedness model of the universe (Salleh et. al., 2009a). Stapp (1997), for example, as quoted by Salleh et. al. (2009a), stated that classical mechanics which is based upon a mechanical picture of nature is fundamentally incorrect. Bohm and Hiley (1975) assert that, as quoted by Salleh and Ahmad (2009), “the inseparable quantum interconnectedness of the whole universe is the fundamental reality. To Capra, “the universe is thus experienced as a dynamic, inseparable whole” where “the traditional concepts of space and time, of isolated objects, and of cause and effect, lose their meaning’ (Capra, 1975). Hollick (2006), explained that spiritual knowing and intuition arise from the inner world of the subconscious minds, our relationships with what is known and our connection with spiritual reality including cosmic consciousness (Salleh et. al., 2009a).

Unlike classical science, Salleh et. al., (2009a) further argued, the underlying foundation in quantum physics is unbroken wholeness or non-separability that transcends space-time that views parts of a whole as separate individual entities. This discovery could lead to a world view or paradigm that will help us better understand how we perceive "reality" Gough & Shacklett (1993). The discovery also proved that the above worldview of objective reality and other assumptions of classical science were inadequate (Salleh et. al., 2009a). To surmise, the existing mainstream worldview about reality based on positivist-reductionism-non-interconnectedness universe has been debunked.

Comte’s model of soulless and mechanistic man has also been criticized by certain and emerging scientists. Salleh et. al., (2012) recorded Tiller (2008)’s description of man as a sentient being with a spiritual existence, embedded in the physical form only for locomotive purposes.

W. Tiller, a material scientist from Stanford University, has redefined human as soul and spirit in the physical bio-body suit. He stated that human being consists of three layers: the outer personality; the middle soul; and the core spirit or God-self (Salleh et. al., 2012). The model of human with inner soul has also been documented in the work of Matsuda in Japan in 1985 (Salleh et. al., 2012). Human being is seen to consist of both the external layer observable through conduct and the internal non-visible heart layer. Salleh et. al. (2012) also cited Ioi's work in 1994 who expanded the model where the internal layer is further defined into i) the internal and invisible layer with logic; ii) internal and invisible layer with emotion; and iii) the deep psychological layer belonging to one's view of human nature expanded.

Rejecting Comte's view of man as machine and objectivity, Salleh et. al., (2012) quoted Stapp (2008), as stating human beings as value-laden and some of characteristics of being human are subjectivity, having conscience and consciousness. Human as defined by Salleh et. al., (2009c) is at the core, soul but embodied in a physical form for locomotion. With the non- material spirit being central, human has emergent qualities. It is this characteristic that distinguishes human from machines. While the behaviour of machine can be predicted with consequences that may be independent of each other, the same does not apply to human (Salleh et. al., 2009c). Salleh et. al., (2009c) also accounted human as blessed with the three devices: the physical sense perception (eye of the flesh), intellection (eye of the mind), and contemplation (eye of the heart).

وَإِذْ أَخَذَ رَبُّكَ مِنْ بَنِي آدَمَ مِنْ ظُهُورِهِمْ ذُرِّيَّتَهُمْ وَأَشْهَدَهُمْ عَلَىٰ
 أَنفُسِهِمْ أَلَسْتُ بِرَبِّكُمْ قَالُوا بَلَىٰ شَهِدْنَا أَن تَقُولُوا يَوْمَ الْقِيَامَةِ إِنَّا
 كُنَّا عَنْ هَذَا غَافِلِينَ



And [mention] when your Lord took from the children of Adam - from their loins - their descendants and made them testify of themselves, [saying to them], "Am I not your Lord?" They said, "Yes, we have testified." [This] - lest you should say on the day of Resurrection, "Indeed, we were of this unaware." (7:172).

A *Muslim*, hence, is one who has submitted to God's will, or one who follows the religion of Islam (Murata and Chittick, 1994). To be a *Muslim* in its true sense, he must strive so that his total submission to God is of sincere and willing submission which does not entail loss of 'freedom' for him. Only then, he fulfills the purpose for his creation and existence (Al Attas, 1995).

The above model of universe and human which is based on the generally accepted classical science foundations of the Western Worldview contradict significantly with the Islamic Worldview. Unlike the Western-based Newtonian-Cartesian science physical laws which assumed a fragmented universe of separate parts, Islam views i.e. according to the Islamic worldview the same universe is integral.

يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ
 لِتَعَارَفُوا إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَتْقَاكُمْ إِنَّ اللَّهَ عَلِيمٌ خَبِيرٌ

Oh Mankind! We created you from a Single Soul, male and female, and made you into nations and tribes, so that you may come to know one and another. Truly, the most honored in God's sight is the greatest of you in piety. God is All knowing All Aware." (Quran 49:13).

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9.0 CONCLUSION

Based on the above discussion, I conclude that researchers should employ method(s) that suitable to the research questions they are attempting to answer. Employing quantitative research method to examine anything regarding human would not give a true findings and so inconclusive answers and suspect. This is due to the incorrect underlying assumptions made by the proponents of quantitative research method on human and cosmos. Having said that quantitative research method is appropriate if statistical answers are required or the phenomenon is inanimate objects.

"What we observe is not nature itself, but nature exposed to our method of questioning." – Werner Heisenberg, Brainy Quote

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