An Islamic Epistemological Critique of the Project of Islamization of Knowledge

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ABSTRACT

Aims/objectives: To derive and formalize the methodology of unity of knowledge and its application to the organic unity of generalized and specific issues of the world-system from the basis of the epistemic origin of the monotheistic law (tawhid) in the Qur'an. The theory of Islamization of knowledge is thereby constructed on the basis of the evolutionary learning model that ensues and is formalized. Such an approach brings out the system and cybernetic nature of the knowledge-induced world-system with epistemic unity.

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Studydesign: conceptual, historical and review of the literature.

Methodology: A formal model of monotheistic unity of knowledge is derived from the Qur'an and the Prophetic guidance (sunnah) along with enlightened human discourse. The emergent model is used to bring out the dynamic understanding of the concept of Islamization of knowledge and education. The formal model is then made to address potentially applied issues and problems of the generalized and specific types.

Results: A critical study of the classical and modern literature in the field of Islamization of knowledge against the evolutionary learning perspective of Islamization of knowledge derived in this paper establishes an altogether new and universal methodological orientation of this paper. This is true both conceptually and in terms of potential application as pointed out in the paper.

Conclusion: The epistemological methodology of monotheistic unity of knowledge and its relationship in the moral-social reconstruction of the organically unified world-system with its generalized and specific issues is found to be a universal theory. It is applicable to the entire socio-scientific domain. This point is established by logical argumentation and formalism.

Keywords: epistemology; phenomenology; unity of knowledge; Islamization of knowledge.

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I. INTRODUCTION

Every scientific theory and development of scientific thought depends intrinsically on its abstraction of the world as the scientists see it. This means to premise scientific inquiry on its epistemology as primordial as this can be. On this point Einstein (1954, p. 473) wrote: "Scientific thought is a development of pre-scientific thought. As the concept of space was already fundamental in the latter, we must begin with the concept of space in pre-scientific thought."

By this same argument, the Islamic scholastics have established the centerpiece of all worldly inquiries to be premised on the epistemology of unity of knowledge (Al-Attas, 1989). This epistemic unity has been explained in terms of the cardinal value of the Islamic socio-scientific worldview. This is termed as *tawhid*, Oneness of God in the sense of the ontological primordial existence of God. But it also includes the organic symbiosis of oneness presented by the

monotheistic law in the scheme of things. These two aspects of epistemic unity together comprise the epistemological premise of unity of knowledge in Islamic monotheism, *tawhid*. Thus the complete intellection of *tawhid* as monotheistic oneness relates to the integration of God's oneness (*tawhid* in its ontological primacy) in the understanding of details of the world-system, even in the minutest of details. [1]

Tawhid as the comprehensive worldview is the primal axiom as the basis of its epistemology premised on unity of knowledge that is used in this paper. The *Qur'an* says in this regard (96:1-5): "Read: In the name of your Lord Who created, created man from a clot. Read: And your Lord is the Most Bounteous. Who taught by the pen, taught man that which he knew not."[2]

The early thinkers on the *Qur'anic* worldview delved deeply into the *Qur'an* and the conveyance of the meaning of its verses through the practices and sayings of the Prophet Muhammad (the *sunnah)*. The *Qur'an* and the *sunnah* are followed in the Islamic epistemological practice by learned

discourse (the *shura*) on the issues at hand (*ijtihad*).[3]

In this regard, the principal thought of the great scholastic thinkers that we will examine in this paper is by Abdul Hamed Al-Ghazali. His works in this area are too many to mention here. See Ghazanfar & Islahi (1990, pp. 381-403) for a comprehensive review.

Ijtihad and *shura* as the medium of discourse on issues in the light of *tawhid* and the world-system are established in and by the Islamic learned community. Discourse relating to *tawhid* and the issues of the organically related world-system[4] are launched by the learned Islamic community to derive and establish meanings out of the *Qur'anic* verses on the epistemological understanding of the issues under investigation. *Tawhid* as the moral and functional law of monotheism conveys and structures the organic unification of the world-systems being premised on the moral law. This is a fact that overarches the entire Islamic community irrespective of *Sunnis* and *Shias* as two sects of Muslims.

The debates and disagreements that lay in the discursive practices of *shura*, *ijtihad* and *fiqh* (interpretation) on socio-scientific issues, which is the matter that interest us in this paper, is a sign of the discursive practice that the *Qur'an* and the *sunnah* have endowed on the participants from all sides.[5] Qadir (1990, p.73) writes well on this

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[1] Why is *tawhid* the logical and scientific episteme as also the worldview of both ontological and phenomenological consequences in explaining the socio-scientific 'everything'? That is because *tawhid* offers a formalism that explains in details *both* truth and falsehood. *Tawhid* is thus the ontological combined with the functional understanding of total reality comprising both truth and falsehood. Metaphysical happenings of belief and faith are abandoned in this comprehensive conception of unity of knowledge overarching 'everything', i.e. truth and falsehood. See a further footnote later on regarding this substantive issue.

[2] The comprehensive meaning of *tawhid* presented in the *Qur'an* is conveyed by the passage of knowledge emanating from the monotheistic law and carried from the ontological level of belief and faith in the oneness of God to the functional level of divine oneness presented by the impact of monotheism as law on the unity of the world-system and its details. The comprehension of this total episteme is by knowledge. The verses of the *qur'anic* Chapter entitled, *Read* (*Iqra, Qur'an,* Chapter 96) conveys the functional role of the medium of knowledge in the understanding of the comprehensive meaning of *tawhid* and the unified or otherwise of the world-system. Note also that the verses of the chapter *Read* (*Iqra*) must never be limited to reading and writing as casual acts. Rather, the meaning is all encompassing in the realm of knowledge, its epistemology, phenomenology and extension across 'everything'. On this point Yusuf Ali (1946) writes: "The object understood being God's Message." This is *tawhid*.

[3] The traditional meaning of *shura* as consultation is extended here to discourse. That is because the purpose of the *shura* (likewise *ijtihad*) as knowledge-generating process involves the understanding of the deeper meanings of the processes inherent in the socio-scientific discourse induced by elements of the monotheistic law. These implications of the discursive meaning of the *shura* as process of epistemological learning can be read off the *qur'anic* verses (42:49-53).

[4] The unified world-system is referred to in the *Qur'an* as *Alameen* whose creator and sustainer is God. The *Alameen* presents unity of being in everything by the functioning of the monotheistic law. The *Qur'an* (1:1) declares: "Praise be to God, the Lord of the *Alameen*."

[5] *Qur'an* (4:50): "O you who believe, Obey God, and obey the Apostle and those charged in with authority among you. If you differ in anything among yourselves, refer it to God and His Apostle, if you do believe in God and the Last Day: That is best, and most suitable for final determination." This is a

point: "According to Amir Ali, the great object of the Muslim philosophers was 'to furnish the world with a complete theory of the unity of the cosmos which would satisfy not the mind only, but also the religious sense. And accordingly they endeavoured to reconcile the ethical and spiritual with the philosophical side of science'."

Such an exercise on the functional relationship between the *Qur'an*, the *sunnah*, and learned discourse on diversities and details of the world-system is an extensive one invoking the domain of incessant learning. Such learning invokes the knowledge of organic oneness conveyed by the law of *tawhid* in relation to details of issues of the world-system.

Organic learning of and by the organic relational understanding cannot be completed in temporal experience; and it is present in 'everything' and everywhere incessantly.[6] The *Qur'an* establishes this openness of the immanent search, discovery and evolution of knowledge in and of the learning world-system by relational unity without end. The *Qur'an* thus builds and explains the openness of evolutionary learning within and across the diversity of systemic oneness in 'everything' in terms of epistemic knowledge and its induction of the world-system in generality and in specifics.

The study of the learning world-system in and by the *tawhidi* law thus explains reality in the dimensions of knowledge, space, and time.

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command adhered to both by Sunni and Shia sects of Muslims.

[6] The *Qur'an* mentions of the continuous reorigination in learning and knowledge, which is its cardinal attribute derived from the *tawhidi* worldview. This phenomenology is expressed by the *qur'anic* terms like 'pairing (*jauz al-karim*) in everything (signifying organic relational orders); reoriginative socio-scientific orders (*khalq in-jadid*); continuums (*Alameen*); and the Great Event of completion of learning towards *tawhid* in the Hereafter (*Naba ul Azim*). With these and many similar verses of the *Qur'an*, the scientists of all persuasions can now interactively integrate these precepts into an interconnected generalized worldview of being and becoming. Such is the nature of knowledge-induced system and cybernetics network. It is the generalized system perspective of the knowledge-induced entirety.

Knowledge, space, and time together occupy the formal precinct of conception, explanation and application in and according to the *tawhidi* law of monotheistic oneness. This is now taken in its organic learning perspective of relational unification. The emergent phenomenology is a vastly scientific endeavor and establishes the scientific core of the *tawhidi* evolutionary learning worldview. See Choudhury (2011c) for details in the mathematical formalism of evolutionary learning equilibriums explained by the inherent models and dynamics.

The system and cybernetic universe of *tawhid* is thus summarized as the realm of unity of knowledge as the episteme. In it, knowledge of relational oneness by the monotheistic law proceeds in processes of organic oneness across the entirety of knowledge, space and time dimensions incessantly. Such a universe transcends the universe of sheer space-time. Space-time is a limited dimensional view of the universe. Rather, such a limited conception of the universe is embedded, but in the substantive sense of *tawhid*, within the overarching universe of knowledge, space, and time dimensions. The understanding and configuration, significance and application of the knowledge, space and time dimensional intellection substantially changes the systemic and cybernetic formalism of the universe. In this paper we have focused on the socio-scientific world-system of the overarching universe. We refer to such a unified sub-universe by the *tawhidi* law as the *tawhidi world-system*.

II. OBJECTIVE

This paper is an original contribution to the theme of the *tawhidi* (monotheistic) Scientific Research Program that is conceptually formalized in terms of the evolutionary theory of Islamization of knowledge. Such an evolutionary learning theory that interactively integrates the epistemology of monotheism (*tawhid*) found in the *Qur'an* to the general and specific issues and problems of the world-system is an original field of intellection. It has not been taken up in any leading understanding of the theme of

Islamization of knowledge. Such an intellectual void is true of both the Islamic classical and modern literature on the theme. Consequently, a system and cybernetic worldview of *tawhid* in action in the unity of the world-system as an interactive, integrative and evolutionary process of relational unity has not been invoked. The functioning of the *tawhidi* law in the generalized system and the cybernetic worldview of unity of knowledge as its episteme has remained absent. The true nature of relationship between knowledge and the socio-scientific worldview could not be understood and derived from the *tawhidi* praxis.

The objective of this paper is to formalize the *tawhidi* meaning of knowledge and present its intellection on how the monotheistic law is transmitted to the world-system in formalizing relations that explain organic unification and the emergent applications. The paper presents a methodological worldview as the phenomenology of integrative mind and matter relations in evolutionary epistemology. Hence, while the derivation of the methodology is purely *Qur'anic* in essence taking along with this the Prophetic guidance (*sunnah*), it is also formal and analytical in nature. Hence the epistemological and the formal precepts together establish the explanation and application of the resulting formal model of monotheistic unity of knowledge. It is applied to the generalized and specific issues of various unified and socially embedded world-systems. Such is the phenomenological representation of the system and cybernetic formalism that *tawhidi* unity of knowledge establishes.

III.   NATURE OF KNOWLEDGE IN THE *QUR'AN*

To understand the nature of knowledge endowed by the *Qur'an* to the world-system, the meaning of knowledge as an ontological essence must be first understood. This initial quest for knowledge in the phenomenological sphere of the *Qur'an* is from and of the oneness of God. Following the many peripatetic Islamic philosophers including significantly Abu Hamed Muhammad Ibn

Muhammad Al-Ghazali (1058 CE-1111CE), the functional meaning of the oneness of God is taken as the manifestation of the organic *pairing* of the universe and its details by the medium of the monotheistic law. *Tawhid* comprehends the oneness of God in belief and its implication on the oneness of the sphere of its universal functioning.[7]

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[7] The concept of 'universal functioning' here means well-definition of the *tawhidi* monotheistic explanation. It is valid for both 'truth' and 'falsehood'. How do we establish this fact on the basis of the *tawhidi* law?

On the matter of truth and falsehood as functional ontological conditions in the light of the *tawhidi* monotheistic worldview, here is a topological formalism:

We prove here the following theorem.

The episteme of unity of knowledge represented by pervasive systemic complementarities is both unique and universal in explaining the nature of systemic unity (truth) and methodological individualism, and rationalism (falsehood). Contrarily, the model of methodological individualism cannot explain the worldview of unity of knowledge

Let $\{\theta\} \in (\Omega^T,S^T) \subset (\Omega,S)$ for systems, s = 1,2,..,N. Ω denotes the knowledge domain of the *Qur'an* as of super-topology of Ω. S denotes mapping of a bit from Ω on to the generality and particulars of issues investigated in the world-system. S denotes the Prophetic guidance (*sunnah*). T (truth) denotes the system of wellbeing entities. But both, complementarities of variables in the wellbeing function and methodological individualism in mainstream socio-scientific theory, are both comprised in (Ω,S). (Ω^T,S^T) is the truth domain of the *tawhidi* super-topology. $\mathbf{x}(\theta)$ denotes knowledge-induced variables of the wellbeing function of the issues under consideration.

The implications are: $\cup_{interaction}\{\mathbf{x}(\theta),\theta\} \subset (\Omega^T,S^T)$; the interactive or diversity condition;

$\cap_{integration}\{\mathbf{x}(\theta),\theta\} \neq \varphi \subset (\Omega^T,S^T)$, the integrative condition,

$\cup_{interaction}\cap_{integration}\{\mathbf{x}(\theta),\theta\} \neq \varphi \subset (\Omega^T,S^T)$, interactive and integrative condition

These are the properties of subsets belonging to the totality, (Ω,S), which is denumerable and non-dimensional. It forms a super-topology (Rucker, 1983).

Because of methodological individualism in falsehood domain the following result holds. Note that the curly notation is for the 'de-knowledge' (falsehood) space of methodological individualism and its origin, rationalism.

$\cup_{interaction}\cap_{integration}\{x\sim(\theta\sim),\theta\sim\} = \varphi \subset (\Omega\sim,S\sim) \subset (\Omega,S)$ as falsehood facts.

(Ω^T,S^T) and $(\Omega\sim,S\sim)$ have the following properties:

$(\Omega\sim,S\sim)\cap(\Omega^T,S^T) = \varphi$; and $(\Omega\sim,S\sim)\cup(\Omega^T,S^T) = (\Omega,S)$.

Because $\{\mathbf{x}\sim(\theta\sim),\theta\sim\} \in (\Omega\sim,S\sim)$ and $\{\mathbf{x}(\theta),\theta\}\in (\Omega,S)$, therefore,

$\{\mathbf{x}(\theta),\theta\}\cup\{\mathbf{x}\sim(\theta\sim),\theta\sim\} \in (\Omega^T,S^T)\cup(\Omega\sim,S\sim) = (\Omega,S)$

Therefore, (Ω,S) explains both truth and falsehood facts.

Contrarily, starting from $(\Omega\sim,S\sim)$ primordially yields the conditions,

$\cup_{interaction}\cap_{integration}\{x\sim(\theta\sim),\theta\sim\} = \varphi \nsubseteq (\Omega^T,S^T)$ but $\varphi \in (\Omega\sim,S\sim)$.

Therefore, neither (Ω^T,S^T) nor $(\Omega\sim,S\sim)$ can explain total reality. Only (Ω,S) explains total reality.

Consequently, (Ω,S) is universal in explaining 'everything'. (Ω,S) is unique because neither (Ω^T,S^T) nor $(\Omega\sim,S\sim)$ by themselves can explain total reality.

Yet in this paper *tawhid* in its functional category is represented *not* in terms of the *ontological being* of God. God by ontological belief and intellection is incommensurate in shape, form, conception, attribute and functionality. Therefore such an understanding of primordial existence of God cannot be used in formal analysis. Rather, the meaning of monotheistic oneness as the completion of absolute and perfect knowledge without partnership (duality and multiplicity), yet remaining incommensurate in any dimension, is manifested in the organic form of unity of becoming in mundane beings (Heidegger, trans. Hofstadter, 1988). The organic process of becoming into cognitive beings invokes the relational and evidential (ontic) states of learning in the experiential world-system by its generality and specifics of issues and problems. Indeed, 'Being' in any ontological concept cannot convey the Purity (*Iqhlas*) of God. Rather, being is a property of the becoming world-system realized by the induction of the monotheistic law of unity, which is the *tawhidi* law.

Thus the cardinal principle of Islamic belief, namely the consciousness, meaning understanding and embracing of the oneness of God is manifested in the organic becoming of beings in worldly experience. *Tawhid* is thus manifested through and learnt by the universe in its attribute of consciousness of understanding by the learning process in unity of knowledge. The *Qur'an* refers to this learning process in terms of the interminable capacity to comprehend the organic unity of knowledge of *tawhid* as monotheistic law functioning in the order and scheme of creation. Such attributes of knowledge and knowing are conveyed by the expanded meaning of the *Qur'anic* terms such as *khalq in-jadid*, meaning reoriginated creations taken over continua of experiences (17:49). The reoriginative positivism that alerts consciousness to understand the functioning of *tawhid* in the beings of the world-system is pointed out in verse (29: 19-22). The created universal state of continuous worship, which man endeavors to

know by searching, is indicated in verse (17:44). The *Qur'an* introduces the idea of the learning universe in terms of its *paired* ontology of being and becoming in 'everything' and everywhere of the dimensions of the knowledge, space and time, as in verse (36:36).

IV. THE PHENOMENOLOGICAL MODEL OF KNOWLEDGE AND ITS INDUCTION OF THE WORLD-SYSTEM ACCORDING TO THE QUR'AN

The *Qur'an* classifies the elements of the knowledge concept and its relationship with the world-system. This comprises the *Qur'anic* phenomenological model of knowledge and the world-system. Figure 1 presents this model:

The sequences (1-5) in expression (1) comprise the continuity of the learning process across 'everything' and everywhere in a world-system comprising many world-systems as unified orders. Each of these has the common episteme of learning by the episteme of unity of knowledge. Yet even as the embodiment of knowledge is through unity, the experiential facts may reveal the contrary in terms of relations of differentiation between the representative variables, their relations, and the entities of the specific world-system under study. Therefore, learning processes axiomatically unravel the knowledge and world-system of epistemic unity. At the same time, they also lead to the correction of the differentiated world-systems, bringing them to better states of relational unification in degrees of unity of being by becoming. Such a transformational correction of differentiated world-systems by specifics and totality characterizes the moral-social reconstruction. It then characterizes the basis of two integral functions that lead to the meaning of consciousness in the *Qur'an*.
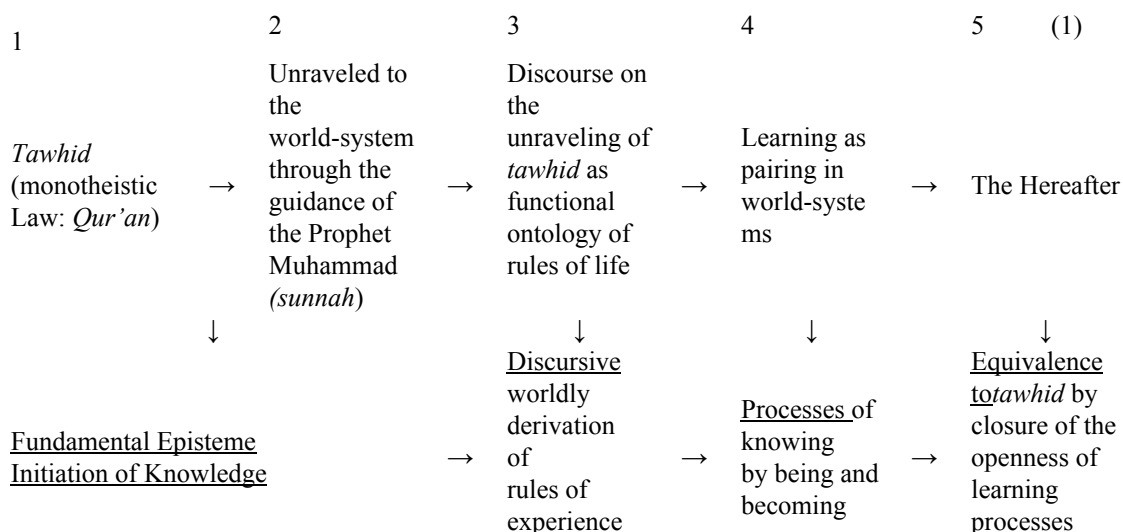
1		2		3		4		5	(1)
Tawhid (monotheistic Law: *Qur'an*)	→	Unraveled to the world-system through the guidance of the Prophet Muhammad *(sunnah)*	→	Discourse on the unraveling of *tawhid* as functional ontology of rules of life	→	Learning as pairing in world-systems	→	The Hereafter	
↓				↓		↓			↓
Fundamental Episteme Initiation of Knowledge	→			Discursive worldly derivation of rules of experience	→	Processes of knowing by being and becoming	→		Equivalence to *tawhid* by closure of the openness of learning processes

Figure 1: Structure of the *Qur'anic* phenomenological model of the learning world-system premised in the episteme of unity of knowledge

Firstly, there is the discursive medium that engages in extracting rules in the light of the *Qur'anic* law through the *sunnah*. This is the stage of deriving rules from the monotheistic law of *tawhid*. The institution engaging in such a derivation of rules from the *tawhidi* law is called the *shura*. Its investigative pursuit is called *ijtihad*, meaning the deriving of rules from the fundamental epistemic sources.

The second fundamental element of knowledge derivation through the discursive process in the *shura* discourse exercising *ijtihad* is called *tasbih* (60:24). *Tasbih* represents the worshipping nature of unification of knowledge and the functional ontological forms in the *Qur'anic* principle of 'pairing' (uniting, symbiosis, and synergy by organic complementarities and participation by entities) between representing variables by their relations the issues and problems under investigation.

In this paper we will combine this *paired* nature of the knowledge-forming process of the *Qur'an* and refer to it as *tasbih-shura* (TS). It marks the intrinsic experience of learning in unity of knowledge and the unified world-system. TS forms the basis of *Qur'anic* consciousness in its active functioning in the world-system.

The Islamic phenomenology of unity of knowledge and its impact on the moral-social reconstruction of the unified world-system is thus cast in the framework of a logical, consistent, and *functionally* ontological (Gruber, 1993) model of being and becoming in reference to the axiomatic episteme of unity of knowledge (*tawhid*). All properties of the emergent learning process-oriented general-system model erected upon the *Qur'anic* phenomenological worldview generate dynamics of synergistic relations. Yet the ultimate exogenous axiom is solely *tawhid* as monotheistic oneness of God, the moral law, and the world-system in the *tawhid-* world-system-Hereafter completeness of the universal learning processes. *Tawhid* forms the irreducible and ultimate axiom to hold on to in the description of the unified mind-matter
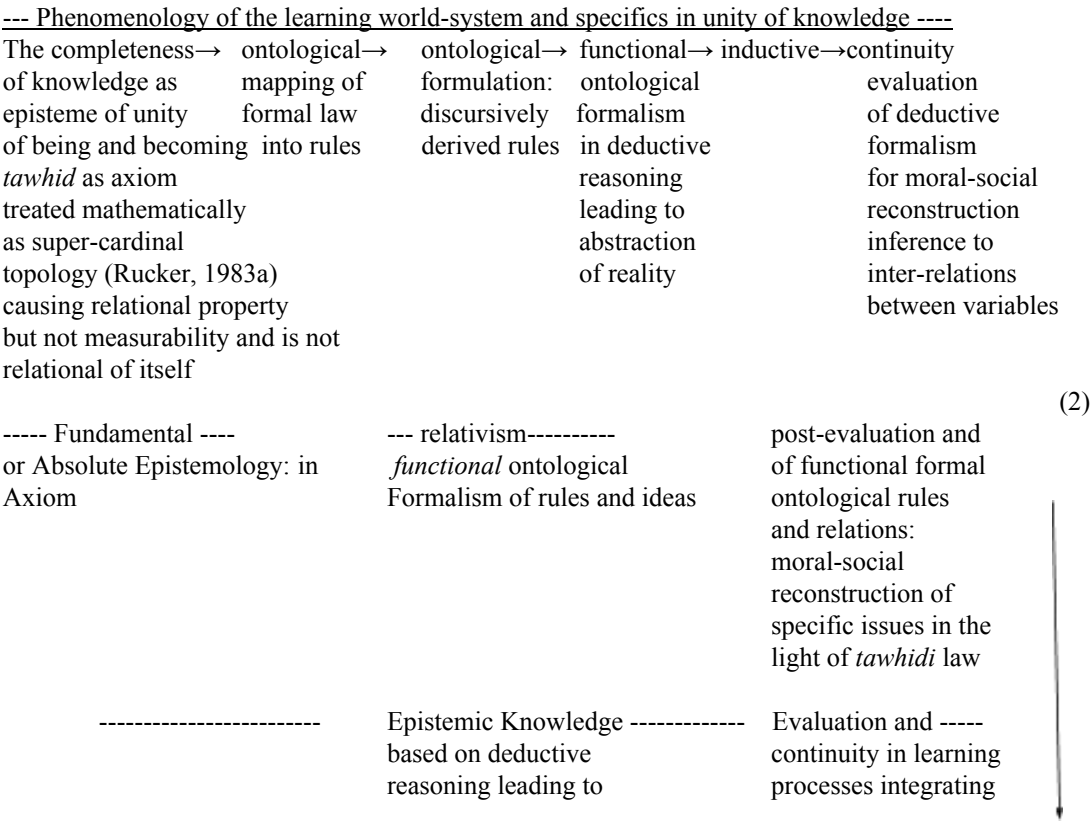
world-system generality and its specifics by *Qur'anic* consciousness.

V. MEANING OF KNOWLEDGE IN THE CONTEXT OF *TAWHIDI* PHENOMENOLOGY

We therefore inquire: What is the substantive meaning of knowledge in the context of such a phenomenological system and cybernetic worldview? The meaning can be best unraveled by way of the *tawhidi* functionalism in the *Qur'anic* phenomenological model. This is now explained by Figure 2.

--- Phenomenology of the learning world-system and specifics in unity of knowledge ----

The completeness→ ontological→ ontological→ functional→ inductive→continuity
of knowledge as   mapping of   formulation: ontological   evaluation
episteme of unity   formal law   discursively formalism   of deductive
of being and becoming into rules   derived rules in deductive   formalism
tawhid as axiom   reasoning   for moral-social
treated mathematically   leading to   reconstruction
as super-cardinal   abstraction   inference to
topology (Rucker, 1983a)   of reality   inter-relations
causing relational property   between variables
but not measurability and is not
relational of itself

$$(2)$$

----- Fundamental ----   --- relativism----------   post-evaluation and
or Absolute Epistemology: in *functional* ontological   of functional formal
Axiom   Formalism of rules and ideas ontological rules
                                                            and relations:
                                                            moral-social
                                                            reconstruction of
                                                            specific issues in the
                                                            light of *tawhidi* law

------------------------   Epistemic Knowledge ------------ Evaluation and -----
                            based on deductive   continuity in learning
                            reasoning leading to   processes integrating

10

Figure 2: The meaning of knowledge in the framework of *tawhidi* phenomenology

VI. A REVIEW OF THE LITERATURE ON THE ISLAMIC CHARACTERIZATION OF KNOWLEDGE: THE PROJECT ON ISLAMIZATION OF KNOWLEDGE

In the aforementioned schematic explanation of the idea of knowledge, I have left out the deeply mathematical details that embody the entire phenomenological model of unity of knowledge and the emergent unified world-system and its specifics that arise on particular problems under

study in the light of the mind-matter complementarities. That is relational unification. However, the learning processes depicted in Figures 1 and 2 present the author's formal characterization of the Islamization-of-knowledge project.

In the context of the epistemology of unity of knowledge in this paper (Choudhury, 1993), Islamization means an evolutionary epistemological explanation of junctures of moral-social change wherein mind and matter, i.e. thought and events, interact to establish new epistemological socio-scientific realities in reference to the *tawhidi* worldview. Islamization is characterized by such immanent processes of learning in unity of knowledge. These learning processes have a multi-universal nature (cybernetic systems), existing in the continuum of knowledge, space and time dimensions. They sustain the emergent Islamization of knowledge and education, knowledge and life by the substantive *tawhidi* evolutionary dynamics (Choudhury, 2011a).

Islamization of knowledge and education is an idea in which many have endeavored in the light of Islamic epistemology and human resource transformation. Such efforts have been less than effective in contributing any significant idea of advancement to scholarship as it presently stands. The main failure of the Islamization project has been its inability to understand the logical formalism and functioning of the *tawhidi* worldview of *tasbih-shura (TS)* relationship in the scheme and order of the worldly issues (specifics) and in the cosmological entirety (cybernetic generality). This totality comprises the multi-universal concept.

Instead, Islamization has remained a nominally Islamic appendix rather than an epistemologically original Islamic inquiry. Likewise, Islamization of education, which is a subset of the knowledge domain, which is phenomenological in entire socio-scientific thought, has produced non-substantive increment to the mainstream

books and paraphernalia of education with just an ostensibly Islamic garb.

On the other hand, those who aimed at an epistemological reconstruction of Islamic thought have dwelled only on the metaphysical aspects. This has yielded no fresh insight to the formalism of knowledge, thought, and designs of the world-system in which the fundamental episteme of unity of knowledge functions through its rich dynamics. In the end, the Islamic universities, Islamic institutions such as the Islamic Development Bank, the Islamic Research and Training Institute, and the many Islamic banks along with scholarly pursuits in recent times have simply impelled Muslims to return to the scientific crux of modernity – but not to the *tawhidi* epistemological origins in the *Qur'an*.

One may refer here to the following glimpses in regard to the criticism: In his defense of the thoughts of Al-Attas, Daud rather establishes an utterly metaphysical epistemic concept (Daud, 1998a). There is a total absence of the formal and analytical dynamics of the epistemological worldview of *tawhid* in the construction and working of the world-system and its specifics in the light of the *tawhidi* phenomenological methodology and worldview (Daud, 1998b). The same implications are found in Al-Attas' views on the contemporary education field with particular reference to Malaysia (Daud, 1998c).

Faruqi (1982a) failed in the same sort of project, leaving his book entitled *Tawhid* to speculative wishes rather than substantive analytics and foundational issues. Faruqi (1982b) also promoted Islamization of the mainstream textbooks in university educational programs. There was no epistemological originality to establish Islamization of knowledge. Rahman (1988) contested this approach of Islamization of knowledge.

Choudhury (2006) has pointed out that in the entire area of economic and social thought, contemporary Islamic scholars have failed to incorporate a substantive study of the *tawhidi*

methodological worldview in the form of epistemological analytics and it's functioning.

Like Rahman, Sardar (1984) too raised intellectual criticism against the idea of Islamization of knowledge and education. He objected to the way that this project has been carried out with clamor in the receiving circles. Such clamor has had no significant contribution to the world of learning and academia, which could be premised on the new epistemological birth of knowledge in a socio-scientific scope of the overarching worldview. The overarching is the *tawhidi* methodological worldview. Its multi-universal characteristics truly encompass the socio-scientific as the domain of systems and cybernetics.

Indeed, without epistemology there can be no science. Science without epistemology is no more than a muddled form of thinking. This message was conveyed by Einstein to his colleague Neils Bohr (1985). On the same theme in Islamic science and philosophy, Nasr (1968; see also Qadir, 1990) proceeds in the following way: Nasr like Husserl (1965) is indeed dismayed with the moral decadence of Occidental science. He attributes this moral decadence to the excessive secularization of science that has excluded the divine element from it. In a similar tone, Husserl thinks of the transcendental ego that remains absent in the secularization of science. Nasr premises Islamic science on metaphysics. Metaphysics in turn is an ontological meaning of *tawhid* understood only in one of its otherwise comprehensive holism. That ontological primordial part is the metaphysical attribute as laid down in the chapter of the *Qur'an* (Purity = *Iqhlas*, *Qur'an*, Chapter 112).

But the metaphysical approach leaving out the phenomenological methodology of *tawhid* connecting the ontological with the world-system through the monotheistic law of organic oneness of unity of knowledge is not cultivated by Nasr. In this regard Qadri (1988, p. 147) writes,"... metaphysics may be said to constitute the inner dimension of the *shariah*, which directs and

determines the activities and the goals of human life". But how is the socio-scientific world-system governed in the framework of a scientific methodology of *tawhid*? Nasr remains silent on this ground, except for the exercise of gnosis in metaphysical scientific speculation. Hence Nasr has not been successful in establishing the scientific functional methodology and methods for the epistemic and applied constructs of the *tawhidi* epistemological socio-scientific worldview.

In Guessoum's (p.111) words on Nasr's position in science, "Existence is one, and all phenomena are partial reflections of it. *Tawhid* then also implies the unity of truth and knowledge, the unity of creation, the unity of life and the humanity of humanity. Consequently, in Nasr's view, the goal of all Islamic sciences, from mathematics to medicine, is to reveal that unity and the 'interrelatedness of all that exists' (Nasr, 1987, p. 22). Such claims are similar to Choudhury's, which are presented in this paper in methodological substance, and elsewhere (Choudhury, 1983) through the stage of early inception as paradigm. Choudhury's paradigm was initiated earlier than Nasr's philosophical views. Yet since he wrote, Nasr could not give functional dimensions to his philosophy. Thus in Nasr's academe philosophy did not bear its scientific connection.

Our present paper progresses in this connective direction of ontology with the functioning of the world-system taken in its generality and details. This paper thereby, embarks and deepens into the theme of the *tawhidi* phenomenology and does not simply limit itself to the metaphysical ontology of epistemic oneness of God.

VII. IMAM GHAZALI'S PHENOMENOLOGY OF KNOWLEDGE

Next we reconstruct Figures 1 and 2 in Figure 3 to present Imam Ghazali's phenomenology in regards to knowledge and education in Islam. Ghazali sheds importance on the micro-level moral, social and ethical values of individual self

An Islamic Epistemological Critique of the Project of Islamization of Knowledge

towards forming a good society, market, economic system, and institutional order, all through the application of the Islamic law (*shari'ah*), considered as the best moral law. Still, the *methodology and dynamics* of the *tawhidi* epistemological worldview remained absent at this level. Ghazali's contribution despite pointing out the importance of *tawhid* and the *shari'ah* in human experiences remained focused on *tawhid* at the metaphysical level. The nature of holistic system and cybernetics in which the epistemological general-system model could have been formulated in Ghazali's peripatetic thought to represent the unification worldview of *tawhid* was left out.

We have argued in this paper that the ontological argument dealing with the topic of being and becoming cannot be attributed to God *per se* in terms of a process model. God as *being* can at best be an axiom of assumed existence without the possibility of commensurateness in any shape, form and representation. Hence it is impossible to assign process-driven attributes to God as being. In other words, there is no meaningful relation between say, the attribute of 'seeing' by God and the human act of seeing. Likewise, there is no such relationship between God as the Merciful and human beings as merciful. There is no relationship between the Absolute and Perfect knowledge of God and the created knowledge of the world and the human experience gained by it.

In the process model of *tawhidi* dynamics, God enters the scene of action and responses in models of circular causation of unity of knowledge and the worldly beings, only by way of the worldly functionality of the divine law of monotheism. Functionalism is realized by transmission of the *Qur'anic* knowledge by the *sunnah* of the Prophet Muhammad and the discourses of the learned society. Consequently, *tawhid* as fundamental epistemology (Figure 2) is translated into the completeness and absoluteness of the divine law of monotheism, which is relationally extracted by 'bits' through the medium of the *sunnah* and the discourse based on *TS*-dynamics across continuums of evolutionary epistemology. This is

the phenomenology of knowledge explained in Figures 1 and 2. Consequential models and inferences are thereby developed in the form of process model of organic learning.

The same is not possible in the metaphysical construction of God's Purity in its metaphysical meaning only, separated from its relationship with the world-system. For even the following two cases are impossible to interpret and use in the phenomenological process model of learning: (1) God is One. There cannot be any tenable interpretation of this invincible principle of monotheism by equating God to the number 'one'. God is One in terms of the absence of partnership with God in creation. This includes the embodiment of the divine law in 'everything' everywhere. (2) 'Neither slumber nor sleep overtake God'. This *Qur'anic* statement too is impossible to interpret in any ontological *being*-state of God, except to invoke the being and becoming of creation as it unfolds by the embodiment of the divine law in it.

The same ontological problem is cast in the following argument: If we hold God as metaphysical ontology and then take parts of this ontological God, inevitably metaphysics would drown in the One-Many question (Rucker, 1983b). The entire *Qur'anic* meaning of God is then negated.

Thus only the divine law can be understood in 'bits', not God as metaphysical being. God cannot be taken into 'bits'. The divine law of monotheism when so enabled by its transmission through 'bits', becomes useable in the learning-process. This phase marks the moral-social reconstruction of the world-system and its specifics through the *functional* ontology of the *sunnah* and the discursive intervention of the learned society. This intermediation carries the *tawhidi* law to the world-system. This transmission is pointed out in Figure 2.

The epistemological dynamics of *tawhid* is now set alive and creative in the learning world-system, which is washed by the law of

organic oneness (*tawhid* = monotheism as unraveled and explained). The *Qur'an* establishes such an understanding of God and the world-system explained by the monotheistic law, instead of submerging the mind in the impossibility of knowing the metaphysical ontology of God as One.

Therefore, when Imam Ghazali classifies knowledge into stages of its realization, he ascends from the heart and soul into the heights of unraveling of the heart to mind to knowing the world.[8] Ghazali's classification of knowledge is now explained in Figure 3. Ghazali's phenomenological model is premised on a perfect nature of the knowledge model towards which the heart, soul, and self rise to attain certainty. Ghazali envisions seventy veils of knowledge unraveling while coming closest to God, the Ultimate Certainty. The last of such stages is of *Fana'*. This stage means self-annihilation as moral

self-actualization in meeting the consciousness of God as One.

Ghazali explains the gaining of knowledge of *tawhid* by the unraveling heart, soul and mind to the kernel of a cocoanut (Karim, undated). A man who simply hails God as the One (*tawhid* in its initial expression) is a believer, yet is in the lowest rungs of true belief. This state of belief is like the outer kernel of the cocoanut. In the second stage, the believer sees the inside of the cocoanut. Subsequently, the believer continues on to see the oil of the cocoanut. This stage marks the growing consciousness moving into purity, and so on across seventy stages of evolutionary knowledge of *tawhid*.

In the delineation of knowledge formation, our *tawhidi* epistemological model resembles that of Ghazali. The difference is substantively on the origination and continuity of our *tawhidi* worldview through the passage of human imperfection and incompleteness that does not allow for knowing the divine law of monotheism in its perfection. Human knowledge in the learning process-oriented phenomenology will simply simulate an idea of embodiment of reality in *tawhid*. The emergent mind-matter unification in the *tawhidi* phenomenological model would then proceed on to worldly applications, and empirical and inferential evolutionary designs of the moral-social reconstruction of the world-system. Our *tawhidi* epistemological model thus explains and formalizes both of the opposite phenomenological models, namely of knowledge and 'de-knowledge' (rationalism). In the end, a process model of simulated learning replaces the metaphysical conception of the perfect state. The latter is characterized by the *optimum primus* of human craving for reaching Ghazali's devotional state of *Fana*. Yet attainment of such a sublime state of knowledge and self-actualization is impossible due to human limitation.

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[8] In this overarching domain of knowledge taken out of the *Qur'an*, Ghazali is a peripatetic thinker who has combined the ontological with the phenomenological consequences of the knowledge of unity of being and becoming. He thus extended the all-embracing domain of events of the world from the constricted space-time structure into the *res extensa* of the knowledge, space, and time structure. Ghazali thus extended the domain of phenomenology from rationalism (and not rationality as reason as incorrectly construed) to the all encompassing domain of belief and faith. This modern science cannot and does not want to embrace for a consistent study of the holistic entirety.

On this matter Ghazali confronted Ibn Rushd (Averroes) and Ibn Sina (Avicenna) on their mistakes to place God within a process order of causation. That is God, as if, does not have terminal attributes in the knowledge, space, time dimensions. Revelation supplements rational knowledge (reason). Rationalism on the other hand, conveys man's incomplete understanding of reality by separating *a priori* reasoning from *a posteriori* reasoning.

Being so different from reason, rationalism is classified with falsehood, and therefore abandoned as unacceptable in the grand design of knowledge *parri passu*. Fakhry (2004, p. 295) writes on this point of Ghazali: "Al-Ghazali was therefore right to argue that 'with respect to whatever lies outside the scope of human cognitions, it is necessary to resort to Scripture ... In all such cases, revelation necessarily supplements rational knowledge."

In his masterful argumentations in philosophy and belief, Ghazali simply held up *tawhid* as the axiomatic basis of argumentation. This is surely of the spirit of scientific analysis. It is therefore incorrect to interpret that Ghazali was against rational processes of understanding reality. Ghazali simply emphasized the meaning of complementarities between revelation and reason.

VIII. CONTRASTING GHAZALI'S PHENOMENOLOGY AND THE TAWHIDI EVOLUTIONARY LEARNING MODEL OF ISLAMIZATION OF KNOWLEDGE

Despite a striking similarity in the epistemological sense between Ghazali and our model, the two phenomenological perspectives lead to different mechanisms explaining the process of knowing existents. For Ghazali, the process towards knowing existents is based on the five stages of knowing (Ismail, 1989, p. 21). These are "namely, the sensory, imaginative, intelligential, cogitative (or ratiocinative) and prophetic faculties". These are attributes of knowledge formation embodied in the stage I within the bracketed term [.] in Figure 3. Yet the progress of knowledge from the stage I to its impact on the design of stage II in Figure 3 is not within the domain of Ghazali's phenomenology. For instance, the interaction between the world-system and its specific issues are not explained to regenerate new rounds of knowledge-flows, once the fundamental epistemology continues to impact upon the continuity of the learning processes recursively between knowledge derivation and its impact on the world-system specifics.

Ghazali's phenomenological worldview explains the creation of knowledge in its original stages by the divine will. The divine will as law continues on to be present in the world-system. Our model shows that, knowledge-flows and their impact on the states of the world-system are always primordially created by the recalling of the fundamental epistemology of *tawhid*. Yet in the initiation of learning processes, the world-system regenerates fresh rounds of knowledge.

While Ghazali's phenomenology relies on deductive reasoning *per se*, our model has a unifying continuity between deductive and inductive reasoning, inasmuch as each learning process evolves out of the previous one by recalling the fundamental epistemology of *tawhid*. This thereafter reoriginates the next learning process between newly generated knowledge-flows and the consequential emergent states of the world-system in specific issues and problems, and so on in the continua of knowledge, space and time dimensions.

This difference between the two phenomenological models of knowledge-induced reality also results in another consequence. Ghazali's knowledge-domain only appertains to the human cogitation of knowing and its sensory attributes. Our knowledge-model extends learning to *all* worlds – 'everything' (Barrow, 1991). Hence in our model, knowledge and its impact on the plethora of world-systems are intra- and inter-systemic across multi-universes. Consequently, the knowledge of *tawhid* is embodied in 'everything' everywhere. It is of human pursuit to know and benefit from knowledge-flows in epistemic unity to unravel the nature of unity ('*pairing*') of generality and details in the world-system. In our model, the *tawhidi* worldview is axiomatically premised on organic form of relational unity between all good things of life, be these animate or inanimate. In our model, the fallen world that is not so unified due to its departure from knowledge induction is capable of reconstruction towards unity of being and becoming.

Ghazali's systemic model of learning rising towards *Fana* is an optimal model of knowledge-induced worldly situations. Our model being a continuously learning model across continua denies optimality. It replaces the impossibility of optimal states by the objectivity of simulation across simulacra of possibilities resulting in moral-social reconstructions towards attaining *tawhidi* unity of being and becoming. Such is the perspective inherent in *tasbih-shura (TS)* evolutionary learning in unity of knowledge.
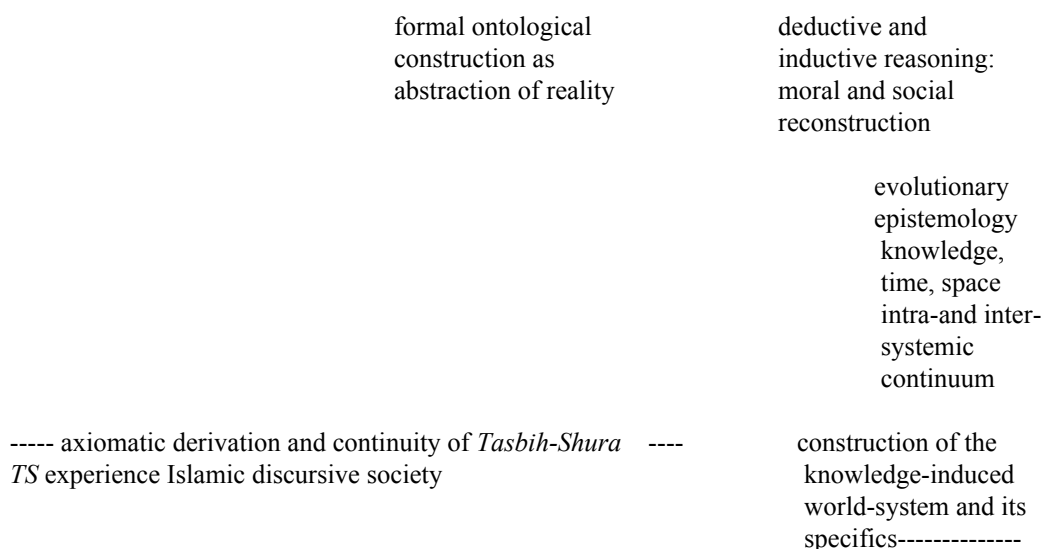
formal ontological construction as abstraction of reality

deductive and inductive reasoning: moral and social reconstruction

evolutionary epistemology knowledge, time, space intra-and inter-systemic continuum

----- axiomatic derivation and continuity of *Tasbih-Shura* TS experience Islamic discursive society ----

construction of the knowledge-induced world-system and its specifics-------------

Figure 3: Imam Ghazali's classification of knowledge

Legend: The Fundamental Epistemology denotes the completeness and absoluteness of the monotheistic law (*tawhid*) as super-cardinal (non-commensurate, only relational) topology (Maddox, 1970). The *sunnah* as *functional* ontological mapping carries 'bits' (as understanding) of the monotheistic law as derived knowledge from fundamental episteme through the *sunnah* and learned discourse, generating ethical rule out of the law. Such rules combined with the world-system issues form the knowledge-induced '*paired*' variables, relations and entities of the world-systems (specific issues). The vector of variables is brought into simulation by their '*paired*' (complementary, symbiotic) interrelations in the wellbeing criterion in order to estimate the degree of unity of knowledge established by complementary interrelations between the knowledge-induced variables. The moral-social reconstruction towards the *tawhidi* worldview follows by the inherent learning processes in the relational concept of *tawhidi* unity of knowledge with the world-system.

X. AN INTERPRETATION OF OTHER CLASSICAL AND MODERN VIEWS ON ISLAMIZATION OF KNOWLEDGE IN THE *TAWHIDI* CONTEXT OF EVOLUTIONARY LEARNING WORLDVIEW

The focus of this paper is on the understanding of the concept of Islamization of knowledge in terms of the dynamics of evolutionary learning premised on the epistemology of *tawhid* and its unifying consequences in the world-system. This comprises the unified system and cybernetic world-system by systemic symbiosis on the premise of unity of knowledge. We will maintain this focus by considering some salient features of Ibn Khaldun and Mawdudi and other understanding of Islamization of knowledge.

Ibn Khaldun's *magnum opus*, the *Muqaddimah* (Rozenthal, 1968; Mahdi, 1964) comprising the sociology of history attempted to describe the rise and fall of civilization in terms of its passage that rises from the rudimentary stages of *asabiyya* (community) into evolution to *umran* (city state)

and onwards to *hadara* (civilization). Yet the solidarity to community and religion fades away along the path of this social transformation as politico-economic pressure to maintain an increasingly complex social order introduces conflicts between the urban and village organizations of the state – *asabiyya* and *umran*, respectively. In the end, the increasing politico-economic pressure of complexity spells out the decadence of the state, leading further to its distressed signal on civilization dynamics.

Ibn Khaldun limited his study of the historical process of social evolution to an observation of North Africa of his time. Thereby, Ibn Khaldun did not provide a universal theory of social evolution and of historical change in his *Muqaddimah*. The consequence of this limited outlook of historical and social change resulted in the inability of *Muqaddimah* to explain the fall and the rise of a social order along the advancing path of its creative evolution. A revolutionary contribution made to this path of creative evolution is knowledge. Knowledge remains undiminished. In the evolutionary learning path of social change its path is marked by incessant progress towards socio-scientific wellbeing. Thus by the theory of knowledge a decadent social order is capable of rising to its moral-social reconstruction. This cyclical nature of evolutionary learning was not explained in *Muqaddimah* and in the philosophy of history according to Ibn Khaldun. Consequently, the theme of Islamization of knowledge in terms of its evolutionary dynamics could not be explained by Ibn Khaldun.

XI. ISLAMIZATION IN MAWDUDI AND IQBAL

Turning to recent times, Maulana Mawdudi's Islamic ideas contributed to the field of Islamization of Knowledge (Wikipedia, http://en.wikipedia.org/wiki/Jamaat-e-Islami). Yet, in line with the political and social outlook of the Jamaat-e-Islami political movement in Pakistan established by Maulana Mawdudi and his colleagues, the originality in knowledge development based purely on the *Qur'an* remained paramount. Consequently, the nature and philosophy of knowledge and education in Occidentalism could not be the basis of Islamization of knowledge. In its pure state of the idea this was an honest manifestation of the philosophy underlying the political movement. However, the problem of such a purist outlook lies on its inability to establish a universal theory of the Islamization dynamics out of the *Qur'an* for the whole socio-scientific intellectual process, one that would be equally acceptable to Muslims and others. Yet the *Qur'an* bestows such a worldview that remains universal, just as it is possible to unite the rationalist classical Islamic school (*mutakallimun*) and the epistemologists (*kalam*) in the unique *tawhidi* mold of thought (Choudhury, 2006).

Sir Muhammad Iqbal (1934) was one such pioneer who molded the universal *Qur'anic* worldview into western philosophy and also invoked in it *Qur'anic* thought. In his cosmopolitanism, Iqbal upheld the potential of integrating some of the dialectical nature of historical change between the *Qur'an* and the western idea of historicism that became central to the explanation of social transformation in Hegel's philosophy of history. An important precept that Iqbal extracted from the *Qur'an* and used it to integrate with the dialectical theory of social and historical change was creative reorigination (*khalq in-jadid*). See Choudhury (2002) for a detailed development of the derived theory of historicism from the *Qur'an*.

In this paper this precept of evolutionary learning in unity of knowledge is a keynote for deriving and establishing the *Qur'anic* precepts of *pairing* (unification) and creative reorigination in the evolutionary learning process that is causally related to the dynamics of Islamization of knowledge. These are the essential attributes of a learning system and cybernetic unified worldview.

XII. SOME KNOWLEDGE-INDUCED SOCIO-SCIENTIFIC EXAMPLES

The objective of this section is to highlight the possible attention on specific issues that can be invoked to study the methodology and model of evolutionary learning in the context of Islamization of knowledge. As mentioned in this paper, such a methodological approach to the study and formalization of the general and specific problems of Islamization of knowledge addresses a socio-scientific perspective. That is to study general and specific problems in the light of the consciousness of *tawhid* applied to the rigorous formalization of scientific thought and its application vis-à-vis the unified system and cybernetic grand design.

XIII. SOCIAL JUSTICE BY THE WELLBEING FUNCTION (MASLAHA) IN THE INHERENT SYSTEM AND CYBERNETIC DESIGN OF ORGANIC INTERRELATIONS

An example here of the social order examined in the light of our phenomenological model of unity of knowledge is the theory of justice and freedom that must govern social preference formation in an Islamic social contract. Imam Shatibi looked into this important topic in his theory of *maslahawal-istihsan* (preference formation for the public purpose) (Shatibi trans. Draz, undated). *Maslaha* revealed the single most important function of the Islamic state as that of transforming and realizing social preference in accordance with the *maqasid ash-shari'ah* (purpose and objective of the Islamic Law pertaining to choices in economy, institutions, and society, and in the extensive domain of socio-scientific study.

Social contractarianism concerning human ecology is an example of social justice in its wide meaning. It encompasses the extensive domain of interaction between human communities and ethics, environment and the global order (Hawley, 1986). Since such interactive preferences are the result of the formation of knowledge out of participation between institutions, markets, individuals, households, businesses, communities and the environment, the overarching epistemology of monotheism governs this kind of knowledge formation and its induced variables, entities and relations. The very creatively dynamic feature of the learning process methodology makes the resulting preference formation dynamic. Such preferences form the extensive basis of Islamic social choice, and thus of the participatory worldview of *shura* institution and *tasbih-shura* heart-mind-matter praxis.

Such is the initiating premise of Islamic social contract in the theory of *maslaha* given by Imam Shatibi (Choudhury, 1993; Masud, 1984). To Imam Shatibi, *ijtihad* and *ijma* were premised on the uniqueness of the *tawhidi* worldview. But learning comprehension of the *tawhidi* worldview evolved dynamically through knowledge formation as flow (see Figure 3). The emergent learning process moving onwards in sequences of evolutionary epistemology could not therefore be static.

Syed Qutb's understanding of embodied knowledge in the cosmic order (Mousalli, 1990) is similar to our *tasbih-shura* dynamics of integrating the essence of knowledge between mind (*res cogitans*) and matter (*res extensa*). In other words, Syed Qutb explained that the systemic world of matter has embodied knowledge like human beings have. But such intrinsic knowledge appears as causation by variables-specific interrelations. Without such interactive extraction, knowledge would remain innate and inactive in the matter-world.

This paper has explained that the irrevocable premise of knowledge derivation being the *Qur'an* and the *sunnah,* its universality stretches across the dimensions of knowledge, space and time. Hence by the relational causality between heart, mind and matter, that is *shura* and *tasbih,* knowledge is activated for the purpose of a generalized universal explanation concerning the scheme of things. Thereby, Islamization of knowledge in its dynamic concept cannot be

independently realized without the dynamic evolutionary learning experience.

XIV. UNDERSTANDING ECONOMIC FUNDAMENTALS IN TAWHIDI EVOLUTIONARY EPISTEMOLOGY

The economy as an *independent* domain of human needs and actions and responses in mainstream theory is replaced in the learning world-system by the study of problems of the economic nature that can only be understood by interaction between multitude forces in the economy with their embedding in society, science, morality and ethics at given points of time under given attained knowledge-flows. Behavior is still the starting point of such an embedded economy as a social organism. Yet such behavior is manifest in the formation and aggregation of preferences of individuals interacting with institutional, government and all social domains. Such aggregations at any level cannot be linear. Contrarily, complex preferences are formed by the impact of dynamic forces that enter the learning processes at every stage of the social embedding.

Markets as ethical venues for realizing preferences that form consumer and market demand, and production menus that form supply, are not *wertfrei* systems of exchange of goods at revealed prices. Thereby, demand and supply are only nice concepts that are made to exist in mainstream economics; but only in the absence of the interactive dynamics causing embedding to occur and to continuously change in the embedded social magna of circular causes and effects.

XVI. THE SOCIO-SCIENTIFIC MULTIVERSE DESIGN IN THE KNOWLEDGE- INDUCED ENTIRETY

Interesting similarities also arise, albeit with substantively different meanings and interpretations, from specific socio-scientific phenomena. One of these is the nature of scientific inquiry. The outwardly but not with substantive similarity in this area is Hawking's

characterization of scientific theory. Hawking (1988, pp. 10-11) writes: "The eventual goal of science is to provide a single theory that describes the whole universe. However, the approach most scientists actually follow is to separate the problem into two parts. First, there are the laws that will tell us how the universe changes with time..... Second, there is the question of the initial state of the universe. Some people feel that science should be concerned with only the first part; they regard the question of the initial situation as a matter for metaphysics or religion. They would say that God, being omnipotent, could have started the universe off any way he wanted. That may be so, but in that case he also could have made it develop in a completely arbitrary way. Yet it appears that he chose to make it evolve in a very regular way according to certain laws. It therefore seems equally reasonable to suppose that there are also laws governing the initial state."

Socio-scientific reasoning in the *tawhidi* worldview starts by the sole axiom of the oneness of God and the divine law and its purposeful, explainable, and applicative consequences in the world-system taken up in both generality and specifics. Thus the substantive meaning of organic unity of the world-system explained by the fundamental episteme of unity is by the oneness of the divine law and its functional ontology spanning multi-universes of relational world-systems.

Hawking's initial condition and law are essentially and infallibly premised on the oneness of the divine law and its organic moral-social reconstruction of science and society taken together interactively. From such interactions arise knowledge-flows representing the *tawhidi* characterization of unity (integration) in all phenomena. That is in the domain of 'everything' (Barrow, 1991).

The *tawhidi* universe is thereby premised on the knowledge, space and time dimensions, with knowledge-flows emanating from the fundamental episteme of oneness (see Figure 3). Such knowledge-flows then induce the events in

the learning space through complexity. Yet such a knowledge-induced characterization of event is unlike Hawking's. The whole of scientific view that characterizes the universe is premised simply in space-time structure. The moral and ethical social construction of the socio-scientific order in the learning multi-universe comprises vastly interacting, integrating and evolving world-systems. These span science and society in the generalized model of system and cybernetic applying to complexly interrelated world-systems.

We then answer the question: 'How did we get here at a stately point of time in our existence?' *Tawhidi* worldview answers this question by its fundamental reference to the epistemic axiom firstly. It then analyzes, proves and explains the geometrical coordinate of existence in reference to a plethora of learning processes that are causally linked with interaction, integration and evolution of knowledge-induced events taken in their diversity. We have thereby evolutionary histories that brought us here across learning processes as defined here. The *Qur'an* mentions about such evolutionary universes formed by induced learning processes. The mind is invoked to comprehend, observe, and reflect on *tawhidi* epistemic oneness in such '*paired*' universes. This is the basis of the principle of pervasively complementary multi-universes.

Hawking & Mlodinow (2010, p 80) write about similar learning (probabilistic general system) histories: "...for a general system, the probability of any observation is constructed from all the possible histories that could have led to that observation. Because of that (t)his method is called the 'sum over histories' or alternative histories' formulation of quantum physics." For this profound assertion of Feynman's description of the probabilistic learning universe (Choudhury, 2011b), there cannot be linear aggregation of histories in the learning multi-universes. Instead, there are complexly interrelating and evolving learning geodesics (Kupka & Peixoto, 1993). These exist as subspaces of the multi-universal manifold and share the same universal and unique law of organic unity of being and becoming. The

multi-universe then forms a nexus of system and cybernetic learning histories.

XVII. CONCLUSION

This paper has presented knowledge as an epistemological category wherein 'everything' self-actualizes in *tawhid*, the monotheistic law of unity of knowledge in relation to the world-system and its Great Event of the Hereafter (*Qur'an*, 78:1-5). This is the perpetual evolutionary learning history of the heart, mind, and matter relations; likewise the *tasbih-shura* learning process. The paper has thereby interconnected knowledge, education, and the world-system by the generality and specifics of issues using the epistemic premise of oneness. The emergent epistemic and phenomenological model of unity of knowledge and of the unified world-system is found to have its holism in the *Qur'an* according to the Islamic worldview of monotheistic oneness. We called this phenomenological model of unity of knowledge and its induction of the unified world-system as comprising the *tawhidi* worldview. [9]

This paper has brought out the *tawhidi* worldview, its selected application in the real-world case, and has compared and contrasted it with several other scholarly contributions in Islamic epistemology and otherwise. The important ones of these cases were the phenomenology of Islamization of knowledge in contemporary times. In the end, the salient features of the *Tawhidi* Scientific Research Program (TSRP) have thus been introduced to reflect and build upon by others. In the end, the learning processes of systemic interaction, integration and evolution framed up the

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[9] Foucault (see Sheridan, p. 191, 1972) gives a succinct explanation of the terminology, 'episteme': "By *episteme* we mean ... the total set of relations that unite, at a given period, the discursive practices that give rise to epistemological figures, sciences, and possibly formalized systems ... The episteme is not a form of knowledge (*connaissance*) or type of rationality which, crossing the boundaries of the most varied sciences, manifests the sovereign unity of a subject, a spirit, or a period; it is the totality of relations that can be discovered, for a given period, between the sciences when one analyses them at the level of discursive regularities."

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multi-universal grand design of its system and cybernetic structure and formalism.

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An Islamic Epistemological Critique of the Project of Islamization of Knowledge