
ON BEING AND NATURE IN MULLĀ ṢADRĀ AND WHITEHEAD

Husain Heriyanto¹ and Hairunnisa²

ABSTRACT

One of important philosophical problems in environmental philosophy is the existential relation between man and nature. This mirrors the earlier relationship between man and nature as God's creation. The core principle here is relationality. Man and nature in modern thought are considered as separate substances with an abstract relation between the two. These divisions which emerge with Modern thought operate on the basis of rational distinctions and the attempt to substantiate and verify. Such an approach often isolates Nature as a distinct region of being, where nature is divided into parts and analyzed in isolation. With such analysis and reduction, the interrelationships and interconnectedness among beings as well as among parts of the whole disappear. As a result, nature is considered as a big machine, and being is treated as a static substance. Many modern Western philosophers consider being as merely as a nominal concept. Contrary to this mainstream modern thought, the philosophers Mullā Ṣadrā and Whitehead hold that nature as well as the entire corporeal world is a substance in a continuous process of change and becoming. For Mullā Ṣadrā, nature in essence is a process of 'trans-substantial motion' (*al-ḥarakat al-jawhariyyah*). This principle is derived from his reflection on the univocal meaning of being that brings about his

fundamental doctrines, i.e, the principiality of being (*aṣalat al-wujūd*) and the gradation of being (*tashkīk al- wujūd*). For Whitehead, the actual world is a process of becoming of actual entities. In accordance with his philosophical system, to explicate his thought, Whitehead coins the term of ‘actual occasions’ to denote all beings in the corporeal world. He rejects critically the mechanistic viewpoint of modern thought. This paper attempts to introduce several basic principles from Mullā Ṣadrā and Whitehead to provide an alternative philosophical foundation for the environmental movement.

Keywords: Being; nNature; Mullā Ṣadrā; Whitehead; trans-substantial motion; environmental crisis

Introduction

Environmental destruction is one of the most serious problems facing the world today. From resource depletion and species extinction to pollution, the planet is struggling against manmade assaults which are unprecedented. This is aggravated by population explosion, industrial growth, technological manipulation, and military proliferation. Global warming and climate change, demonstrate that we are changing our planet in such a way that the basic elements which sustain life – fresh water, air, food, energy, land – are at risk. Accordingly, *The Earth Charter*³ states that we stand at a critical moment in Earth’s history, a time when humanity must choose its future.

Over the past four decades, there has been a growing awareness as more scholars from a variety of disciplines have focused their attention on the environmental crisis. They signal a potential paradigm shift from human history’s dis-enchantment of nature to a new re-enchantment of nature. Writers and researchers from many disciplines; scientists, philosophers, and humanists are attempting to construct values which reconnect us with nature. Many of these values can be seen as religious or spiritual. Contrary to the modernist idea of a secularized, disenchanted, mechanistic, and meaningless world, contemporary environmentalists have found in nature an ultimate value and meaning. Gregory Bateson

voiced, “*We should now think as nature thinks*”⁴

Morris Berman criticized deeply the mechanistic world-view, which is embedded in modern science and thought, and described it variously as dis-enchantment, or non-participation because it insists on a rigid distinction between observer and observed. He wrote,

Scientific consciousness is alienated consciousness; there is no ecstatic merger with nature, but rather total separation from it. Subject and object are always seen in opposition to each other. I am not my experiences, and thus not really a part of the world around me. The logical end point of this worldview is a feeling of total reification: everything is an object, alien, not-me; and I am ultimately an object too, an alienated “thing” in a world of other, equally meaningless things. This world is not of my own making; the cosmos cares nothing for me, and I do not really feel a sense of belonging to it.⁵

R.D. Laing as quoted by Fritjof Capra⁶ pointed out that we destroy the world in theory before we destroy it in practice. This underlines the dangers of inappropriate paradigms, the crisis of perception, and the importance of moving toward a new worldview. According to Martin Palmer and Victoria Finlay⁷, if the environmental crises facing the world today were simply a matter of information, knowledge, and skills, then we would be able to escape these dangers. But this is not enough. He came to conclude that “...Ultimately, the environmental crisis is a crisis of the mind... We see, do, and are what we think, and what we think is shaped by our cultures, faiths, and beliefs.”

It is Seyyed Hossein Nasr, the eminent and prolific Iranian thinker, clearly advocated the need for a spiritual view for overcoming the environmental crisis. Since 1960’s, long before the term ‘ecology’ became fashionable word today, Nasr analyzed the ecological crisis according to his understanding of perennial philosophy or *philosophia perennis*, which he related to a more traditional and spiritual cosmological perspective. He points out that the ecological crisis is a symptomatic of a spiritual and existential crisis of modern man. He emphasizes the importance of re-sacralization of nature, and is critical of the way modern humanity

merely uses nature – as one might ‘use’ a prostitute – benefiting from it without any sense of obligation and responsibility.⁸ He suggests that the modernist view of nature as a machine or mechanical order was based on the thesis that nature was devoid of intelligence and life.⁹

This paper is presented to promote an understanding of nature which is relevant to the efforts of overcoming environmental crisis and problems created by mechanistic paradigms. By the term of nature, it means everything that there is in the corporeal world of experience. Nature refers to all things, matters, bodies, and parts of the universe surrounding human being with whom it enjoys interrelationship and interconnection.

The world of nature is part of the world of being. Consequently, once we are to grasp and understand the meaning of the existence of nature in connection with being, we are in need of understanding of the meaning of being. This can lead to a better understanding of nature that we dwell in, and the improvement of the environmental conditions we live in.

Just like reality, environmental issues and problems are multidimensional, interrelated, dynamic, and having different levels of complexity. We are required to propose a school of thought which is able to accommodate different levels and realms of reality in integrated and proportional way such that it provides a more adequate solution to address ecological problem.

This paper is aimed at exposing Mullā Ṣadrā’s systematic ontology and Whitehead’s cosmology. Before we investigate these thoughts however, we need to explore in brief the mechanistic picture of the world of nature in modern thought.

The Mechanistic World View

Up until the Renaissance, religion and science were often considered to have a connection and conformity. But during the sixteenth century, skepticism appeared and influenced European scholars and philosophers to replace religious truth with a new secular foundation for this new science. In this Renaissance era, the interest in natural and empirical sciences intensified, and the discoveries of Copernicus, Kepler, and Galileo shook the foundations of Ptolemaic astronomy and Aristotelian natural philosophy, which had been accepted by the Church as certain and sacred. Consequently, Christian thinkers turned away from serious concern with a metaphysics and theology of nature; some of them

adopted whatever happened to be the prevalent scientific view and interpret it theologically. Others, failing to support their religious doctrines through an appeal to nature, began to defend their religious doctrines by moving away from nature and science through an emphasis on faith.

Facing this serious challenging for philosophy, René Descartes, who is called “the father of modern philosophy”, set out to provide foundations for science, metaphysics, and religion to overcome skepticism. He formulated a way, in his opinion, by which we can overcome the strongest possible skeptical arguments through the certainty of the primary truth, namely, his famous principle: “*cogito ergo sum*” (I think, therefore I am). Descartes explained that although one can doubt the existence of anything, one can never doubt their own thinking, and therefore their existence. In his own words, “Thinking is an attribute of the soul; and here I discover what properly belongs to myself. This alone is inseparable from me. I am – I exist. This is certain.”¹⁰

In fact, Descartes’ solution to skepticism resulted in the idea that our knowledge of the contents of our minds is more certain than our knowledge of things outside the mind.

It also resulted in his principle of clarity and distinctness of ideas. Our certainty of the contents of our own thought are the basis of all other truths. He claimed that any idea is false unless it is clear and distinct. He said,

We shall never err if we give our assent only to what we clearly and distinctly perceive. What constitutes clear and distinct perception? I call that “clear” which is present and manifest to the mind giving attention to it, just as we are said clearly to see objects when, being present to the eye looking on, they stimulate it with sufficient force, and it is disposed to regard them; but *the distinct is that which is so precise and different from all other objects as to comprehend in itself only what is clear.*¹¹

The application of the principle of clarity and distinctness led Descartes to have the complete demarcation mind as ‘thinking substance’ (*res cogitans*) and matter as ‘corporeal substance’ (*res extensa*). Matter was extended, divisible, spatial; mind was unextended, indivisible, and

non-spatial. The result is the theory known as Cartesian dualism. This theory also views that ‘the soul is entirely distinct from the body and would not fail to be what is even if the body did not exist’.¹² The core idea of dualism in essence is total separation between two things, entire distinction between two entities, and complete disconnection between incorporeal things and corporeal substances.

The principle of the clarity and distinctness of ideas was applied to extension as well. The extended world becomes a multiplicity in essence. Reality is a collection of discrete and concrete entities without existential relation and continuity. There is no interrelation and interconnection among entities. All things are separated from one another by essential demarcations.

For Descartes, each substance is conceived in isolation from others. Water is water; it is not milk. Water and milk are essentially separate from one another. Substances for him are the solid entities, the self-subsistent things. In his words, “Really the notion of substance is just this – that which can exist by itself, without the aid of any other substance.”¹³ Substance is ultimate building block of things. The trees, stones, houses, and cats are the ultimate reality of things. In Cartesian system, we do not find the difference between existence of water and ‘whatness’ of water. Later, Kant even held that existence is only nominal concept that our mind impose on reality.

According to Thomas Reid, the impact of Descartes has been enormous. He said Malebranche, Locke, Berkeley, and Hume shared “a common system of the human understanding” that may still be called the Cartesian system. This statement actually could be extended through the history of philosophy into modern times. Kant’s philosophy could be conceived as an elaborate Cartesian thought in deeper, broader, and more systematic manner. In addition, Reid observed that Descartes’ influence worked as much on empiricist philosophers as on those of his own rationalist temper. The influence on empiricism was perhaps the deeper of the two. It is because in the particular form of starting with the supposedly indubitable data of the individual consciousness, we see the effects of Descartes’ enterprise of making epistemology the starting point of philosophy.¹⁴ We can see that Locke came to divide physical objects into primary qualities (mass, volume) and secondary qualities (colour, odour) in which he said that the first is real and the later is not. Hume’s

atomistic thought was a radical form of building block of things that Descartes suggested. Using Seyyed Hossein Nasr's words:

Although modern science did declare its dependence from a certain type of philosophy, it itself remains based upon a particular philosophical understanding of both the nature of the world and our knowledge of it, and that even an important element of Cartesianism has survived as part and parcel of the modern scientific worldview.¹⁵

The Implications of Cartesian Thought on Nature

As we see in the above-mentioned account, Cartesian thought that dominated the mainstream of modern philosophy can be summarized into some following characteristics:

- (1) Dualism between mind and external reality; between subject and object; between mind and matter; between soul and body; between man and nature
- (2) Reality is multiple in one horizontal plane (a 'flat' ontology)
- (3) Flat reality is disconnected and segmented
- (4) Solid and self-subsistent substance in isolation from others; there is no interrelation and interconnection between substances, things, entities.
- (5) No clear distinction between existence and 'whatness' (quiddity)

These assumptions of Cartesian thought are the ontological root causes of mechanistic picture on nature. This dualistic view had created a paradigm of the mechanization of nature in both theory and practice. Descartes' conception of matter as an inert, dead substance, which undergoes mechanically explainable changes, makes the sharp contrast between the physical universe and the human mind. Descartes claimed that all physical phenomena can be explained in terms of the mechanical motion of matter. Descartes denied that animals have minds, and this belief led him to state that "all suffering is the result of Adam's sin, so animal cannot suffer". It was a justification for killing and abusing animals. Since

human mind was conscious, rational, and free, then human being is the sole subject in the universe; it was man's task to make himself master and possessor of nature.

Nasr points out that Cartesian dualism remained the prime occupation of later Western philosophers such as Hume, Kant, Berkeley, and Hegel, all of whom, despite their many differences, came to the same conclusion.¹⁶ For Kant, nature is nothing but disordered bits and pieces of material substances on which human mind imposed the order and regularity. For Hegel, nature in itself is 'negativity'. It exists simply in order to be overcome, humanized. Hegel said "Nature deserves appreciation only when it has been transformed into a farm, a garden, and so has lost its wildness."

As a result, we are faced with what Berman coins 'dis-enchantment of the world'. Collingwood writes, "In every case their answer (Western philosophers) was at bottom the same: namely, that mind makes nature; nature is, so to speak, a by-product of the autonomous and self-existing activity of the mind."¹⁷ Nasr writes that this even influenced the study of nature. He writes: "Reduced to a machine by the new mental conception of what constituted physical reality, nature was to be studied by the human mind through laws that it was in the nature of the mind to understand, and God was reduced to the role of a millwright or a clockmaker, a role that also came to be considered as redundant by many of the later Newtonians."¹⁸

The implications and consequences of Cartesian thought toward understanding of nature are as follows:

1. Nature is a big machine
2. Nature is flat, dull, and dead
3. Nature has no intrinsic value
4. Nature has no order, pattern and regularity unless human mind impose them on it

Mullā Ṣadrā Philosophy of Being

We can turn to the medieval philosopher Mullā Ṣadrā¹⁹ and the special place he grants nature in his philosophical system. Unlike Cartesian system of philosophy that starts dealing with nature from parts to the whole and then tries to explain it based on quantitative approach

of nature, Mullā Ṣadrā's philosophy considers nature as the whole and moves then to the parts. In contrast to Cartesian philosophy that conceives nature as a sum of its disassociated parts, Mullā Ṣadrā regards nature as the whole which is greater than the sum of its parts.

Ṣadrā's cosmology in which the notion of movement occupies a central place is based on the principle of trans-substantial motion that every change in the world of nature, whether it is positional, spatial or temporal, is the outcome of an existential transformation in the very substance of things. Instead of seeing the physical world in a mechanistic way based upon quantitative equations, Ṣadrā puts emphasis on the qualitative dimension of nature,

Nature, in Mullā Ṣadrā's philosophy, is considered as a kind of being whose essential characteristic (*differentia*) is the power of all beings in their combined motion. Nature is a changing substance in a continuous process of becoming. Therefore, it is important to notice that the non-mechanistic picture of nature espoused by Ṣadrā's cosmology is highly relevant to the current environmental crisis, which is – according to environmentalist thinkers – is the catastrophic consequence of the mechanistic world-view.

Unlike Cartesian thought and even Aristotelean metaphysics, substance for Mullā Ṣadrā belongs to secondary philosophical intelligibles (*al-ma'qulat al-thaniyyah al-falsafiyah*). This means that substance (*jawhar*) not included in “whatish” category, which is attained through abstraction of sense perception. Rather, it is obtained through comparison and rational analysis. For Ṣadrā, substance is a “structure of events” and a “process of change” rather than a building block of things. It is not a “thing” or “entity” that exists in state of constancy; rather, it is continuously influx of change.

In this regard, it is important to underline that Ṣadrā's conceptions on substance, motion, and nature are ontological implications derived necessarily from his investigation of the meaning of being, which is a new chapter in the development of Islamic philosophy and more particularly ontology. Henry Corbin²⁰ said that Mullā Ṣadrā did a revolution in metaphysics, and he called it ‘existential metaphysics’ that differs from Aristotelian system. It is also unlike Platonic metaphysical view that nothing exists but ideas or essence. Mullā Ṣadrā asserts that nothing is real but existence.

Being, Motion, Nature

On the basis of his doctrine of being, Mullā Ṣadrā puts forward an original idea, i.e., the doctrine of trans-substantial motion (*al-harakat al-jawhariyyah*). He asserts that not only accidents (quantity, quality, space, position) but also substance is continuously in a state of motion (gradual change). Accidental changes themselves imply the necessity of substantive motion. In addition, all corporeal beings are in time; hence, they have a temporal dimension meaning that they have gradual existence.²¹ Each corporeal being is always in flux.

The idea of motion-in-substance, in fact, is derived from Mullā Ṣadrā's reflection on the univocal meaning of being (existence; *wujūd*)²² that brings about his fundamental doctrines, i.e, the principality of being (*aṣālat al-wujūd*)²³ and the gradation of being (*tashkīk al-wujūd*). The principality of being/existence means the primacy of existence (*wujūd*) over essence (*māhiyah*). What is meant by essence (*māhiyah*) is the particular sense or "quiddity."²⁴

The 'principality of existence,' which is one of the central themes of Ṣadrā's ontology, is based on three basic characteristic of existence; they are 'the self-evident concept of existence (*badīhī*),' 'the univocal meaning of existence,' and 'the distinction between the concept and reality of existence.' By intuition, Ṣadrā insists, there is nothing outside existence, and the meaning of existence cannot be based on anything other than itself. This is because, Ṣadrā explains, existence is the most general and inclusive of all things, it has no genus, no differentia and no definition.²⁵

Inner reality of existence (*inniyyah al-wujūd*) in its presence and inner revelation is most evident of all entities, whereas its essence (*māhiyah*) is the most hidden in concept and in its inner-being. Its notion (*mafhūm*) is the richest of all entities in description in its manifestation and clarity. It is the most general of all entities with respect to its existence. It cannot be described (defined) because description is due to either a definition or a (distinguishing) mark. Thus, it cannot be described by definition. Since it has neither a genus nor differentia, it does not have a definition.²⁶

Ṣadrā's distinction between the concept (*mafḥūm*) and reality (*ḥaqīqah*) of existence can be depicted as an extension of the distinction between the order of thought and the order of being. Ṣadrā writes, "Existence as a concept is a generic term predicated of concrete existents univocally, not equivocally."²⁷ What the mind perceives of the reality of existence is only its mental representation, and this further removes us from the actual reality of things as they are.

Every external existent represented in the mind with its reality ought to maintain its quiddity despite the change in its modality of existence. The reality of existence is such that it is in the extra-mental world. Everything whose reality is such that it is in the extra-mental world cannot be found in the mind as it is; otherwise this would lead to the alteration of something from its own reality into something else. Therefore the reality of existence cannot be found in any mind. What is represented of existence in the soul whereby it takes on universality and generality is not the reality of existence but one aspect of its constitution and one of its names.²⁸

On the basis of discerning the concept and reality of existence, Ṣadrā states that existence is not a property of things by which we define them; rather it is the very reality by virtue of which things exist.²⁹ He clarifies further as follows,

Existence, insofar as it is existence, has no agent from which it emanates, no matter into which it transforms, no subject in which it is found, no form by which it is clothed, no goal for which it is established. Rather, it itself is the agent of all agents, the form of all forms, and the goal of all goals.³⁰

The reality of anything is its existence, which ranks with its effect and implications. Existence, therefore, must be the most real of all things for it is the possessor of reality, because whatever possesses reality, possesses reality only due to it. It (existence) is the reality of anything possessing

reality. For its ontic status as the possessor of reality is not in need of any other reality. It is determined due to its inner-reality (*fi-l a 'yan*). Other entities – namely essences (*māhiyāt*) – are determined due to it and not due to their own inner-natures.³¹

Thus Ṣadrā's principality of being contends that flux is a mode of being in which each corporeal being comes gradually into existence and lapse out of existence. Since the being of an object involves the object itself, and the object itself is a mutable existent, it follows that motion is a mode of being. It means that the object is *something-with-motion*, not something in motion.

For Mullā Ṣadrā, therefore, motion is an ontological concept. Motion is related to existence as an analytic accident, and the relating of it to the 'whatness' of a substance or accident is an accidental relation. Analytic accidents do not require independent subjects; rather their existence is identical with the existence of their subjects. In other words, motion originates from the object itself, not from external factors. For Ṣadrā, motion is a mode of existence. Reality of existence is dynamic, flux, and always continuously renewal and change (*al-tajaddud wa'l-inqidhā'*).³²

As for his main idea on the trans-substantial motion (*al-ḥarakat al-jawhariyyah*), Ṣadrā says,

Motion is the renewal of event, not a renewed event. The permanence of motion is not like the occurrence of an accident for a subject; rather, it is like the relationship of differentia to genus. Motion is not the changed and renewal thing but the change and renewal itself just like immobility is not the immobile thing but the immobility of thing. The meaning of motion being in a category is that the subject (the substance) is bound to change gradually, and not suddenly, from one species to another or from one class to another.³³

In Fazlur Raḥman words, Mullā Ṣadrā's theory of motion rests on the concept of a continuous structure of spatio-temporal events. Solid

bodies are liquidated and analyzed into a factor of pure potentiality of movement called matter and an actualizing factor variously called “physical realm” or “bodily nature” which is continuously changing and giving rise to a continuum of movement. A “thing” for Mullā Ṣadrā is, therefore, a particular “structure of events” thanks to the continuity of movement. In reality, there is nothing but the flow of forms.³⁴

Implications of Ṣadrā’s Thought

Accordingly, the notion of motion (*al-ḥarakat*) occupies a central place in Mullā Ṣadrā’s philosophy of nature. Every change in the world of nature is the outcome of an existential transformation in the very substance of things. Motion, like the flux of nature, is not an accident of the body; rather, it is one of the principles of it, because the existence of nature is changeable and nature is differentia of the body and prior to it.

The entire corporeal world, both the celestial spheres and the world of the elements, constantly renews itself. The ‘matter’ of corporeal things has the power to become a new form at every instant; and the resulting matter-form complex is at every instant a new matter ready for moving toward another form, which is more perfect. Ṣadrā writes,

The universe, including everything in it, is a temporal occurrence since everything in it existentially preceded by temporal non-existence; which means that for each individual identity its state of non-existence precede its existence, and the existence of a state of non-existence (for each individual) is prior in time (to its state of existence). In general, every material object, whether it is the material of the stars or the elements, whether soul or body, constantly acquires new identity and its personality and its existence is never fixed.³⁵

Murtaḍa Muṭaḥhari, an Iranian contemporary philosopher whose thought is mainly influenced by Ṣadrā, points out that

Through the principle of substantial motion, the visage of the Aristotelian universe is wholly transformed. According to the principle of substantial motion, nature or matter

equals motion. Time consists in the measure or tensile force of this substantial motion, and constancy equals supernatural being (Supreme Being). What exists consists of, on the one hand, absolute change (nature), and, on the other, absolute constancy (Supreme Being). The constancy of nature is the constancy of order, not the constancy of being (existents), and the contents of the system are all mutable.³⁶

In line with Mullā Ṣadrā's cosmology, nature cannot be reduced to pure quantity because there is no such thing as pure quantity given the fact every change in the world of nature is the outcome of an existential transformation in the very substance of things. Each existent and entity in the universe is essentially transformable, and all parts are continuously in the process of creation and annihilation. Ibrahim Kalin, a Turkish contemporary philosopher studying Ṣadrā's thought, summarizes Ṣadrā's cosmology as follows:

Ṣadrā's highly complex and original theory of nature yields a number of important results. First of all, Ṣadrā does away with Aristotelian notion of a solid substratum as the basis of change and renewal in the world of nature. Instead, he resolves the realm of physical bodies into "a process of change" by introducing the notion of change-in-substance. Construed as such, the world of nature becomes a play of contingencies while preserving its 'substantial' unity and integrity. Anticipating the quantum view of the physical world, Ṣadrā offers a new interpretation of the world of nature without necessarily upholding any solid or gross material substratum as the basis of physical entities.³⁷

This is the first implication of Mullā Ṣadrā's thought on nature, i.e., he proposes the holistic view that the whole world is the basis for existence and understanding of its parts. The universe as a whole system defines the entity and identity all of its parts. The nature of the whole is different from and beyond the mere sum of its parts. This way of understanding of nature is espoused by modern physics after relativity theory and quantum

physics appeared in the early 20th century. One important implication of quantum physics is the holistic view on nature and the wholeness of reality.³⁸ Quantum physics treats the world as a dynamic and ever-changing system. Particles are pattern of vibration that are continually being created and destroyed. Matter appears as energy, and vice versa. All existence is impermanent and in ceaseless motion.

The next implication is that Mullā Ṣadrā suggests that all parts in nature are interconnected and interrelated. All natural systems are wholes whose specific structures arise from interactions and interdependence of their parts. It is not the case that time and space are independent of each other; rather, they are interdependent on the basis of timeless and placeless the whole world. Given that motion in substance takes place with the change of an existent from one condition to another one, which is more perfect, then there will be no fixed and isolated substance. Substance, in its gradual increase in perfection, is a temporal unique being which is continual in one sense, and is connected gradually in another sense. It means there is interconnectedness in different levels of existence (plurality in unity; non-flat ontology). Consequently, nature in essence is the very movement.

Other implications of Mullā Ṣadrā's philosophy of being on nature is that the universe is alive. Contrary to Descartes who holds the universe as a big machine, Mullā Ṣadrā respects the universe as a living being having a kind of awareness. Based on trans-substantial motion, the constant and perpetual movement in the world of 'material' entities, the demarcation line between the living and the dead is eliminated. Because it is motion, which is a mode of being, that defines and identifies all entities and identities.

Given that the doctrines of the principality of being and the gradation of being, then the only principal reality is being, which permeates all particles and parts of the world, and the specific existents are distinguished from each other by their levels of perfection and imperfection. In other words, the terms of living and dead beings are not the static categories; rather, they indicate the level of perfections in terms of ontology. Awareness and life are not only among ontological perfections but are also the same as existence. Accordingly, like existence, they permeate all particles of the world. Even inanimate bodies are alive and aware existents.³⁹ In this regard, Mullā Ṣadrā quotes a Qur'ānic verse:

We have made of water everything living” (Şūra Al-Anbiyā: 30).

Similar to the Proclus’ doctrine of *sympatheia*, Mullā Şadrā adopts an essential relation between ‘love’ and ‘life.’ The love of perfection has been assigned to the essence of all existents of the world and the innermost particles of existence. The love of reaching the final perfection permeates all constituents and parts of the world. All the restlessness and motion existing in all the particles of the world originates from the power of love of pure perfection. Because of this power of love to permeate all things, then life and awareness is meaningless and inconceivable without it. Therefore, the power of life and awareness flows in all existents and particles of existents. Mullā Şadrā says explicitly, *al-’ishq fī kulli al-’ashyā* (love exists in everything).⁴⁰

The last implication of Mullā Şadrā’s thought that we can discuss here is that the approach to the qualitative dimension of nature discovers the order and the pattern subsisting the whole system. In contrast to mechanistic viewpoint, in Mullā Şadrā’s system of philosophy, nature has such intrinsic value as being alive, having awareness, having pattern and the order. Gregory Bateson espouses enthusiastically this way of understanding nature; he says, “*The pattern and order are immanent in the world. It is the pattern which connects all things in the world. Breaking the pattern destroys all quality of the world*”.⁴¹

We may summarize the above discussion. The implications and consequences of Mullā Şadrā’s thought toward understanding of nature are as follows:

1. Nature is a living and dynamic system
2. Nature is continuously changeable, and even the very motion in essence
3. Nature is characterized with interrelation and interconnection among its parts
4. Nature has order, pattern, and regularity

Whitehead’s Process Philosophy

There are interesting resonances between this thought of Mullā Şadrā and the thought of Alfred North Whitehead. Whitehead wrote in the era of new scientific findings and theories such as relativity theory

and quantum physics. He is a philosopher with a familiarity with contemporary scientific development. His book entitled *Science and the Modern World* criticized the philosophical assumptions of modern science such as scientific materialism, positivism, and mechanistic viewpoint. He says, “*In the scheme of early modern scientific thought, nature is a dull affair, soundless, scentless, colourless; merely the hurrying of material, endlessly, meaninglessly*”.⁴²

Whitehead’s critique of philosophical basis of modern science starts from the examination of the meaning of substance. He explains that modern science occupies the unquestioned acceptance of the Aristotelian meaning of substance as ‘the ultimate substratum which is no longer predicated of anything else’.⁴³ Based on this simplistic meaning, the modern scientific basic concepts were established such as matter, space, time, and motion in the efforts of grasping nature.

Whitehead rejects the meaning of substance Descartes defines as ‘the notion of substance is just this – that which can exist by itself’ because it is not compatible with the interrelationship and interconnectedness prevailing among entities and elements in the universe. Also he refutes John Locke’s description of substance as ‘something I know not what’ given that it is not congruent with reality which is always in flux and continuous process of change.

To disprove materialistic mechanism view, Whitehead introduces the idea what he calls the ‘fallacy of misplaced concreteness’.⁴⁴ He explains that there has been a general tendency in modern thought to make a fatal fallacy which mistakes the abstract for the concrete realities. This fallacy is the occasion of great confusion in philosophy. Empiricists hold that matter is something fixed, clear, and distinct that has a simple location in definite space and time; in fact, according to Whitehead, it is the outcome of abstraction. The universe is characterized as something complex, dynamic, and interrelated among its parts. For Whitehead, the concept of matter as the substance whose attributes we perceive is a simplification and, in turn, a failure to comprehend the universe as a changeable system.

Process Philosophy of the Organism

Whitehead’s fierce refutation toward the concept of substance as the fixed substratum leads him to establish a school of philosophy which promotes the primacy of change and process rather than stability

and solid structure. He writes his masterpiece, *Process and Philosophy*, to introduce a new cosmology; he calls his school ‘the philosophy of organism’. He delineates,

The aim of the philosophy of organism is to express a coherent cosmology based upon the notions of ‘system’, ‘process’, ‘creative advance into novelty’, ‘stubborn fact’, ‘individual unity of experience’, ‘feeling’, ‘time as perpetual perishing’, ‘endurance as re-creation’, ‘purpose’, ‘universals as forms of definiteness’, ‘particulars as ultimate agents of stubborn fact’. The notion of ‘organism’ has two interconnected meanings, namely the microscopic meaning and the macroscopic meaning. The microscopic meaning is concerned with the formal constitution of an actual occasion considered as a process of realizing an individual unity of experience. The macroscopic meaning is concerned with the givenness of the actual world, considered as the stubborn fact which at once limits and provides opportunity for the actual occasion.⁴⁵

He exposes the cosmological implications of mechanistic worldview that characterized modern thought since the seventeenth centuries. Rather than describing the nature in an atomic, mechanic, and quantitative way, he puts forward the description of the nature, which is alive, organic, and full of qualitative meaning. He suggests considering the universe as “an organism” and rejects the Cartesian-Newtonian-Kantian thought in describing the universe as “a big machine”. In order to introduce his school of thought in cosmology, he coins a few key terms (new words or new meaning terms) particularly in *Process and Philosophy* such as ‘actual entities’, ‘actual occasions’, ‘creativity’, ‘principle of relativity’, ‘organic process’, ‘becoming of continuity’, ‘nexus’, ‘prehension’, ‘feeling’, ‘concrescence’, ‘transition’, ‘extensive connection’.

In Whitehead’s system of philosophy, ‘actual entities’ is the most fundamental existential category. He describes,

Actual entities are the final real things of which the world is made up. There is no going behind actual entities to find anything more real. They differ among themselves: God is an actual entity, and so is the most trivial puff of existence in far-off empty space. Though there are gradations of importance, and diversities of function, yet in the principles which actuality exemplifies all are on the same level. The final facts are, all alike, actual entities; and these actual entities are drops of experience, complex, and interdependent.⁴⁶

Actual entities sometimes are called ‘actual occasions’ in order to emphasize the process. Whitehead says, “*That the actual world is a process, and that the process is the becoming of actual entities. Thus actual entities are creatures; they are also termed ‘actual occasions.’*”⁴⁷

As an ontological principle, actual entities serve as an explanatory principle on reality. One of universal principles which is pertinent to all actual entities is the principle of process. This principle states that any being is determined by how it creates itself in the process being itself. Whitehead says, “*That how an actual entity becomes constitutes what that actual entity is. Its ‘being’ is constituted by its ‘becoming’.* This is the ‘principle of process.’”⁴⁸ By this principle, Whitehead maintains the primacy of becoming rather than ‘being’ as something fixed and stable. He points out that ‘becoming’ is the primary reality and ‘being’ is the secondary one. For this reason, Whitehead’s thought is also called ‘process philosophy.’

Based on the principle of process, Whitehead introduces another fundamental principle, namely, the principle of creativity. He elucidates,

‘Creativity’ is the universal of universals characterizing ultimate matter of fact. It is that ultimate principle by which the many, which are the universe disjunctively, become the one actual occasion, which is the universe conjunctively. It lies in the nature of things that the many enter into complex unity. ‘Creativity’ is the principle of novelty. An actual occasion is a novel entity diverse from any entity in the ‘many’ which it unifies.⁴⁹

Implication of Whitehead's Thought on Nature

In relation to our discussion on the way of understanding of nature, Whitehead holds that the process takes place in an organic way, what is called the organic process. This process implies the interconnected activities in the creation and embodiment of any entity. The whole is not equivalent to the sum of its parts. Each part in the whole system constitutes all activities of the system as the unit. In this creation, he introduces three ideas, i.e., the principle of relativity, the doctrine of nexus, and the principle of pan-subjectivity. The principle of relativity asserts that there is internal interdependence and interrelationship among entities in the world; an actual entity is present for others. Whitehead explains,

The principle of universal relativity directly traverses Aristotle's dictum, 'A substance is not present in a subject'. On the contrary, according to this principle an actual entity is present in other actual entities. In fact if we allow for degrees of relevance, and for negligible relevance, we must say that every actual entity is present in every other actual entity. The philosophy of organism is mainly devote to the task of making clear the notion of 'being present in another entity'⁵⁰

The doctrine of nexus is related to the characteristic of organism. Whitehead believes that the world is an organism in which all actual entities are interconnected in a nexus (web). He articulates,

An actual world is a nexus.⁵¹ The community of actual things is an organism; but it is not a static organism. The expansion of the universe in respect to actual things is the first meaning of 'process'; and the universe in any stage of its expansion is the first meaning of 'organism.' In this sense, an organism is a nexus.⁵²

It is interesting that, for Whitehead, the principle of organism is applicable for any system, not only living creatures. He elucidates,

The concrete enduring entities are organisms, so that the plan of the *whole* influences the very characters of the various subordinate organisms which enter into it. In the case of an animal, the mental states enter into the plan of the total organism and thus modify the plans of the successive subordinate organisms until the ultimate smallest organisms, such as electrons, are reached. Thus an electron within a living body is different from an electron outside it, by reason of the plan of the body. The electron blindly runs either within or without the body; but it runs within the body in accordance with its character within the body; that is to say, in accordance with the general plan of the body, and this plan includes the mental state. But the principle of modification is perfectly general throughout nature, and represents no property peculiar to living bodies.⁵³

The above explanation reveals the holistic view that Whitehead advocates. He also underlines the internal relation between mental faculty and body, between living and inanimate beings. In this regard, he proposes the doctrine of pan-subjectivity, namely, each actual entity whether living being or un-living one must be considered and respected as a subject; all are the subjects. According to Whitehead, 'subjectivity' is a character of any actual entity. Each actual entity is a specific occasion that has a unique experience in the history of creation and embodiment. For him, nothing exists without meaning; rather, all actual entities have intrinsic value. He explores,

This principle (the principle of subjectivity) states that it belongs to the nature of 'being' that it is a potential for every becoming. Thus all things are to be conceived as qualifications of actual occasions. That *how* an actual entity becomes constitutes *what* that actual entity is. This principle states that the *being* is constituted by its *becoming*. The way in which one actual entity is qualified by other actual entity is the 'experience' of the actual world enjoyed by that actual entity, as subject. The subjectivist principle is

that the whole universe consists of elements disclosed in the analysis of the experience of subjects. Process is the becoming of experience.⁵⁴

Based on the above discussion, we can list the implications and consequences of Whitehead's thought toward understanding of nature as follows:

1. Nature is an organism
2. Nature is always in the process of becoming
3. Nature is a nexus of interrelationship and interconnectedness
4. Nature is subject that has intrinsic value and meaning

Conclusion

Mullā Ṣadrā and Whitehead holistic and process philosophy shares ideas for understanding nature in deeper and more adequate way. It sees nature as a process of which we are a part, rather than a machine or substance to be used and manipulated. This approach resonates with many contemporary thinkers who wish to employ insights of recent scientific theories – for instance, the theory of relativity, quantum physics, theory of dissipative structure, Gaia theory, complexity theory chaos theory, and fuzzy logic – but search for a philosophical foundation upon which to employ them.

ENDNOTES

¹ Husain Heriyanto is a faculty member of Master Program of Islamic Studies at Paramadina University, Jakarta. He is in charge of teaching the course of Environmental Philosophy at Postgraduate Program of Environmental Sciences, University of Indonesia in Jakarta. Email: husain_heri@yahoo.com

² Hairunnisa is a faculty member of Communication Science at Mulawarman University, Samarinda, East Kalimantan. She has been involved with research at the Conservation Communication for 'orangutan' in Kalimantan island.

³ *The Earth Charter* is an international declaration of fundamental principles for building a just, sustainable and peaceful world; please, see <http://www.earthcharter.org>.

⁴ Bateson, Gregory. *Mind and Nature* (London: Wildwood House, Books, 1979), 17.

⁵ Berman, Morris Berman. *The Re-enchantment of the World* (New York: Bantam Books, 1984), 3.

⁶ Capra, Fritjof. *The Web of Life* (London: HarperCollins, 1996), 19.

⁷ Palmer, Martin and Finlay, Victoria. *Faith in Conservation: New Approaches to Religions and the Environment* (Washington DC: The World Bank, 2003), 11

⁸ See Nasr, Seyyed Hossein, *Man and Nature: The Spiritual Crisis of Modern Man* (London: George Allen & Unwin Ltd., 1976), 18

⁹ See Nasr, Seyyed Hossein, *Religion and the Order of Nature* (Oxford: Oxford University Press, 1996), 131

¹⁰ See Descartes's work, *Meditation Part 2* translated by John Veitch (London: J.M. Dent & Sons, 1960), 88.

¹¹ René Descartes, *The Principles of Philosophy*, translated by John Veitch (London: J.M. Dent & Sons, 1960), 182

¹² Ibid. *A Discourse on Method*, 27

¹³ See Paul Edwards (ed.), *The Encyclopedia of Philosophy*, Volume 8 (New York: Macmillan Publishing Co., 1967), 38

¹⁴ Reid's remark can be found in Bernard Williams' essay, René Descartes in Paul Edwards (ed.), *The Encyclopedia of Philosophy*, Volume 1 (New York: Macmillan Publishing Co., 1967), 354

¹⁵ Nasr, Seyyed Hossein. *Religion and the Order of Nature* (Oxford: Oxford University Press, 1996), 158

¹⁶ Ibid., 131

¹⁷ Collingwood. *The Idea of Nature* (Oxford: The Clarendon Press, 1949), 7

¹⁸ Nasr (1996), 131

¹⁹ Mulla Sadra is a popular name of Muhammad bin Ibrahim Sadr al-Din al-Shirazi (1571 – 1640), who is one of the most prominent figure of post-Avicenna in history of Islamic philosophy. His school of thought called “transcendent wisdom” (*al-hikmat al-muta’aliyah*) has made a great impact on later Islamic philosophy. A number of modern and Western philosophers have taken a study in depth on Mulla Sadra’s philosophy such as Henry Corbin, William Chittick, Toshihiko Izutsu, James Morris, David Burrell, Oliver Leaman, Legenhausen, and Joseph Lumbard.

²⁰ Henry Corbin (1903-1978) is a French philosopher who vastly studied Mullā Ṣadrā’s philosophy. See his essay “*La place de Molla Sadra Shirazi dans la philosophie Iranienne*”, *Studia Islamica* 18: 81-113 (Paris, 1962).

²¹ Misbāh Yazdī, *Philosophical Instruction* (translation of M. Legenhausen and A. Sarvdalir from *Amūzesh-i-falsafa*) (New York: Binghamton University, 1999), p. 478.

²² Scholars studying Mullā Ṣadrā commonly translated the term *al-wujūd* into being or existence in synonymous meaning.

²³ Several terms used by scholars studying Mullā Ṣadrā for *aṣālat al-wujūd* are principality of existence (Seyyed Hossein Nasr, William Chittick, James Morris), fundamentality of existence (Toshihiko Izutsu, Legenhausen), priority of existence (Henry Corbin), primacy of existence (Ibrahim Kalin), primordial univocal of existence (Mehdi Hairi Yazdī).

²⁴ Essence (*māhiyah*) in the general sense is actually not opposed to existence because existence itself has an essence in this sense.

²⁵ Mullā Ṣadrā, *al-Hikmah al-Muta’aliya fi-l-Aṣfār al-‘Aqliyyah al-Arba’ah* (Beirut: Dar Ihya al-Turath al-‘Arabī, 2002), Vol. 1, p. 53.

²⁶ Mullā Ṣadrā, *al-Mashā’ir*, translated by Parviz Morewedge (New York: SSIPS, 1992), 6.

²⁷ Mullā Shadrā, *Aṣfār*, Vol. 1, p. 61

²⁸ Mullā Shadrā, *Aṣfār*, Vol. 1, p. 63

²⁹ Mullā Shadrā, *Aṣfār*, Vol. 1, hal. 65

³⁰ Mullā Shadrā, *Aṣfār*, Vol. 1, hal. 77

³¹ Mullā Ṣadrā, *al-Mashā’ir*, translated by Parviz Morewedge (New York: SSIPS, 1992), 10.

³² Mullā Ṣadrā, *al-Hikmah al-Muta’aliya fi-l-Aṣfār al-‘Aqliyyah al-Arba’ah* (Beirut: Dar Ihya al-Turath al-‘Arabī, 2002), Vol. 3, p. 49-50.

³³ Mullā Ṣadrā, *Aṣfār*, Vol. 3, p. 67.

³⁴ Fazlur Raḥman, *The Philosophy of Mullā Ṣadrā* (Albany: State University of New York Press, 1975), p. 94-97

³⁵ Mullā Ṣadrā, *al-Mashā’ir*, translated by Parviz Morewedge (New York: SSIPS, 1992), 80.

³⁶ Murtada Muṭahhari, *Fundamentals of Islamic Thought: God, Man, and the Universe* (Berkeley, Mizan Press, 1985), 169

³⁷ Ibrahim Kalin, *Between Physics and Metaphysics: Mulla Sadra on Nature and Motion* (Tehran: Sadra Islamic Philosophy Research Institute, 2001 Vol. 1), 301-327.

³⁸ See Werner Heisenberg, *Physics and Philosophy* (New York: Harper and Row Publishers, 1958).

³⁹ Mullā Ṣadrā, *al-Aṣfār* (Beirut: Dar Iḥya al-Turath al-‘Arabī, 2002), Vol. 6, p. 102.

⁴⁰ Mullā Ṣadrā, *al-Aṣfār* (Beirut: Dar Iḥya al-Turath al-‘Arabī, 2002), Vol. 7, p. 145-147

⁴¹ Gregory Bateson, *Mind and Nature* (London: Wildwood House, 1979), p. 8

⁴² A.N. Whitehead, *Science and the Modern World* (New York: The Free Press, 1967), 54

⁴³ A.N. Whitehead, *The Concept of Nature* (Cambridge: Cambridge University Press, 1982), 18

⁴⁴ A.N. Whitehead (1967), 51

⁴⁵ A.N. Whitehead, *Process and Reality* (New York: The Free Press, 1978), 128-129.

⁴⁶ A.N. Whitehead, *Process and Reality* (New York: The Free Press, 1978), 18

⁴⁷ Ibid. p. 22

⁴⁸ A.N. Whitehead, *Process and Reality* (New York: The Free Press, 1978), 23.

⁴⁹ Ibid. p. 21.

⁵⁰ A.N. Whitehead, *Process and Reality* (New York: The Free Press, 1978), 50

⁵¹ Ibid. p. 28

⁵² Ibid. p. 215.

⁵³ A.N. Whitehead, *Science and the Modern World* (New York: The Free Press, 1967), p. 79.

⁵⁴ A.N. Whitehead, *Process and Reality* (New York: The Free Press, 1978), 166.

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