



THE SPLIT IN THE WESTERN INTELLECTUAL TRADITION: THE CONTROVERSY OVER KNOWING AND WHAT CAN BE KNOWN

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Abstract

The Western intellectual tradition split over issues concerning the role of reason in revealing the nature of *Being* and the role of knowledge in contributing to integral being. Throughout human history this had traditionally been the concern of religion. In spite of a shift away from religion and greater confidence in an empirical approach to ultimate questions, the problem remains. Kant attempted to resolve the issue but was unsuccessful. The unresolved controversy subsequently led to the “Continental Divide” (which became a crisis for Western Civilization). This article analyzes the issue and points out why complementarity has been successful in reconciling the controversy.

INTRODUCTION

Throughout much of human history questions regarding epistemology and ontology were answered by religion. This means that at the foundation of every culture there had been no separation between religion (the most cherished beliefs of the culture) and observations of what is best for enhancing the human experience. This is an important point because there have been (and still are) societies where the cultural worldview provides answers to the question of ontology that describe existence in terms of complementarity. Cultural worldview, in this sense, has been a means of promoting a greater sense of complementary interaction between humans and nature, and more harmonious social interactions. In light of such examples there is no necessary difference between naturalism, cultural worldviews (religion), and what helps a culture to flourish. This includes cultures that did not become extinct and continue to demonstrate an example of a cultural worldview that promotes Holis-



tic well-being. In other words there are cultures that demonstrate a strong sense of the complementarity between humans and nature. They are respected in the international arena, they score high on world happiness inventories, and they base their planning on naturalism and empiricism.

Although reliance on cherished cultural beliefs for answers on how best to address issues of epistemology and ontology now includes confidence in what is empirically reliable, the quest remains the same: increase the range of beneficial interactions the culture is able to enjoy, produce strong flourishing societies, and improving the score on the happiness inventory. This article argues that achieving these goals is based on gaining reliable knowledge of what is best for enhancing the human experience (epistemology); understanding the true nature of the phenomena that humanity is confronted with (ontology); and what is worth devoting time, energy, and resources to (teleology). One thing that has changed, however, is the fact of global interdependence (meaning that there are some aspects of these concerns that involve global issues thus, are shared by all cultures). In other words, global interdependence means that a viable approach to addressing these issues takes into account the ontological nature of global social existence.

In the history of the Western intellectual tradition—from the Pre-Socratic philosophers to the present—there have been attempts to address and resolve perennial concerns. Aristotle was one of the first to use a logical positivist approach which allowed him to move from earlier mythological and metaphysical claims, to insights based upon observation and reason. His approach to issues in virtue ethics and political economy are still relevant for addressing problems today. Kant can also be considered as coming close to employing what had been religious concerns for contributing to perpetual peace (that is if one takes into consideration his views on cosmopolitan ethics) (Firestone 2006, 142). Kant recognized that Cartesian Dualism was creating problems in human interactions (resulting from the fragmentation of human knowledge) that led to the fragmentary nature of the human experience. He realized that, if unresolved this would undermine the ethical basis for interpersonal and social relations as well as becoming detrimental to interstate relations, to peace, and to collective security.

Kant proposed a method for eliminating this epistemological problem by suggesting a complementary interplay between the ontological ground of Being and human understanding (Kant 1996, 39-40). However, unfortunately, he fell short of fully developing this claim by subse-

quently placing his emphasis on reason. Without clarifying the complementary connection between “raw existence” and the human experience we are left with a set of problems which are set for us by our rational natures and which is otherwise unsolvable (Gardner 2007, 87). If the interplay between the actual nature of things and the human experience cannot be clarified then what is it, actually, that we are forming knowledge about? That is to say, if our conceptualization of reality is not grounded in an actual sensing of reality then our knowledge is actually groundless. For, if conceptuality is confined to the sphere of the conditioned, it leaves us with the incapacity to ground knowledge (Gardner 2007, 87).

One can see attempts to solve this problem in many fields. We see this in Postmodernism, Post positivism, Critical Theory, and Pragmatism. We also see it in the sciences Quantum Physics, Neurobiology, and Social Psychology. In other words what had for millennia been religious concerns (epistemology, ontology, and teleology) still remain a problem – that is, how to be better-integrated within the fabric of *Being* and how to have more beneficial outcomes in all human interactions. This article explains the nature of the problem, and the various academic attempts to resolve the problem through Philosophy of Religion, Quantum Physics, Neurobiology, Pragmatism, and Social Psychology.

THE PURSUIT OF RELIABLE KNOWLEDGE CONCERNING THE NATURE OF EXISTENCE

The pursuit of reliable knowledge implies an inquiry into how humanity can better integrate itself within the fabric of existence. For Socrates such insight was tantamount to self-knowledge. When Socrates asked the *Delphian Oracle* what is the highest knowledge? The answer came, “Know Thyself”. The world famous Confucian expert Tu Weiming describes self-knowledge as revealing the essential connection between the self and the life generating force. In essence, self-knowledge means gaining clarity on the nature of existence and the dialectic connection one has with creation. In other words self-knowledge provides clarity into the relationship between the self (one's sense of individuality, subjectivity, or ego) and the total scope of reality (objectivity, intersubjectivity plus, the connection between self, the phenomenal world and *Absolute Being*).

Thus, according to Confucianism, “Self-knowledge is nothing more

than the realization of one's authentic nature" (Wei-Ming 1985, 20). Aristotle touched on the same theme by describing the sense of self as a "mirror reflection of one's most significant social relations (the good that one is able to perceive reflects the *Virtuous* character of the perceiver) (Aristotle 2004, 179). His philosophy of mind describes the sense of self as potentiality that is actualized by character development then demonstrated in interactions and encounters. In other words Aristotle did not think of self-knowledge in terms of a self in distinction from others, but as an interaction between "what is out there" which is mirrored by or reflected by "something that is in here" (Aristotle 2002, 24). The signal or sign makes an impression, and the impression shapes a conceptual interpretation. "Something 'out there' in the environment signals interaction or engagement however, the interpretation is dependent upon the integrity of 'what is in here'" (Miller 2012, 2). The conception of the interaction is the basis of self-consciousness.

Aristotle's notion of the self as identifying with rather than in contrast with the surroundings was a critical attempt to reform Platonic idealism (Plato believed in a higher world of forms that is imperfectly manifest in the physical world. Aristotle avoids this dualism by establishing a complementary connection between appearance (*legetai kath' hypokeimenou*) and that which is manifest as appearance (*en hypokeimenoi estin*) (Heidegger 1973, 5-10). Emile Durkheim (considered by many to be the father of sociology) offers a similar explanation of the human-nature relationship and human perception. Durkheim asserted, in *The Elementary Forms of the Religious Life*, that the perceptual recognition of complementarity initially played a primary role in human self-formation, the social formation of a culture, and initial expressions of the human understanding of an appropriate relationship with the environment (Durkheim 1995, 85-102).

To fully understand the shift away from complementarity and back to Dualism one must understand the influence of Rene Descartes' turn to idealism. Descartes prioritized mind or consciousness as the seat of the essence of being and superior to material form. This had a tremendous impact on Enlightenment thought which began to devalue natural realm. Descartes' philosophy was based upon doubt: doubts about the reliability of the physical, of the sensuous, and of the reliability of natural evidence (derived from the senses). This led to the rejection of observation as a reliable basis for information about reality. If consciousness is independent and autonomous, as Descartes suggested, it enjoys *the essence* by

turning in on itself. The most drastic consequence of Descartes' proposed solution to the problems of epistemology and ontology was the resultant dualism reflected in subject-object, mind-body, and nature-human schisms.

Kant recognized that the problem holding back the realization of the Enlightenment ideals was related to the skepticism which Descartes attempted to resolve but actually only complicated it. For—as Hegel pointed out in *On the Relationship of Skepticism to Philosophy, Expositions of its Different Modifications and Comparison of the Latest Form with Ancient One*—the Enlightenment ideals were diminished by this skepticism which had developed in Europe (Hinchman 1984, 95). Skeptics doubt the human ability to gain knowledge of the essence of Being and in this respect refuse to accept that reliable knowledge about the ontological ground of being is possible. William James (a pioneer of American psychology) characterized skeptics as plagued with fear which led them to focus on protecting themselves from their fears rather than embracing greater virtues, principles and values (James 1907, 18-26).

This is not to say that suspension of belief, withholding judgment, the rejection of dogmatism, and the rejection of dogmatic authority have no merit. A value of open-mindedness is reflected in Socrates' skepticism, open-minded inquiry is the basis of epistemology in Pragmatism, and the suspension of bias is the basis of Constructivist inquiry. What is called into question and what Kant attacked was the Hobbesian type skepticism where the other is believed to pose a threat to one's interest. In the Hobbesian sense of self-other dualism, the other has to be either assimilated, dominated, or eliminated. This viewpoint on human interactions was in opposition to Kant's ethic of mutuality (the basis of human rights) and in conflict with his Constructivist notion of what enhances human interactions.

What Kant attempted to do was to take the cognitive capacity that Descartes had left isolated from nature, from a Holistic sense of self, and from Being, and connect it to the ground of Being by means of a complementary link that he believed would result in better human interactions and more reliable knowledge. He also implied that the ontological nature of existence can be explained as a complementary interplay between humanity and the essence of Being.

In this respect it can be argued that Kant laid the foundation for an interactional (Constructivist) understanding of how knowledge is acquired. Such an interplay, he argued, could elevate human judgment to a level of genius (Kant 1987, 174). This would be completely consistent

with Kant's interactive ethics and interactive notion of what improves human existence. Kant's Transcendental Psychology—with its assertion that self-knowledge is connected with the transcendental unity of self-consciousness—offered tremendous potential that would gradually be embraced by those social psychologists who are concerned about integral being and Holistic well-being.

Carl Jung, himself, follows this Kantian emphasis on complementarity when he provided insight into the connection between the ego and the whole or Universal (Jung 1963, 70-74). Jung recognized in Kant the premise that self-knowledge is derived by extending the range of human consciousness by opening normal consciousness to the deeper capacities to enable the intuiting of the Universal consciousness. In other words self-knowledge (as referred to by Socrates), the true self (in Jungian terms), or self-actualization (in Maslow's terms), results from a consciousness *awakened* by perception of (or perhaps conceptual realization of) the semiotic nature of existence (Michel et al 2008, 306). William James concurred by defining self-knowledge as perception of the essential continuity between phenomena (the not-self), the Universal (that *superimposed* on all phenomenon), and self-consciousness (the sense of being a particular superimposed on the Universal which is transpersonal).

THE NEED FOR REFLECTION ON WHAT HOLDS-BACK THE ENLIGHTENMENT AGENDA

Kant failed to fully develop his complementarity theory. For this he was criticized by later thinkers and this set the stage for Critical Theory. Kant's failure is attributed to the unresolved contradiction between his initial project in *Critique of Pure Reason* and its contradiction with the ingenious claims he makes about aesthetics and the psychology of perception in *Critique of Judgment*. That is, after making his marvelous claims about semiotic perception (a complementary interaction that provided a means by which humanity can be better-integrated with the underlying nature of existence and with each other) he—in the end—claims that the ground of Being is unfathomable. This implies that *knowledge is groundless* and that concepts are cut off from “the thing within itself”. Then the question remains: what are we forming concepts about? Or why is the human pursuit of knowledge not resulting in outcomes that are mutually satisfying, that generate more mutually beneficial outcomes in

relationships, contribute to more sustainable use of resources, and outcomes that help to create less disruptive human interactions?

The culmination of the Enlightenment did not resolve the problem of skepticism but exasperated it. It merely made the problem more apparent, leading to Dialectic Materialism's attempt to revise the conceptual basis of Western history (Gunther 2001, 317-319). The split – which eventually was evidenced as a divided Europe – was rooted in interpretations of Kant (German transcendental idealism). However, Dialectic Materialism – the claim that the Western intellectual, social, economic, and political system(s) have unresolved contradictions that could result in crisis – became the doctrine that fueled an ideological warfare that ultimately led to a global bipolar stand-off.

Thus, the issue of how to carry the Enlightenment aims forward by means of the Modernity project was also hampered by the impact of skepticism that dominated international relations. These involved the notion of power, the role of knowledge in generating power, the effects of power on human interactions, and its impact on international relations. It emphasized that the use of *power-over* to protect ones interests and to *maximize utility* is justified.

Thus classical skepticism, throughout history has always influenced the position of Realism (the belief that values and norms matter less than material capabilities or values matter less than the increase of material capabilities primarily measured in terms of military and economic power). Historically Realism dominated approaches to human interactions and intercultural relations (Miller 2012, 9). The belief – dating back to the pre-Socrates philosopher Thucydides – was that “Imperialism is based on certain traits inherent in human nature, which are believed to be universal. Egoistic individuals pursuing wealth and security are seen to be behind all political struggles. Thus power politics is ultimately rooted in an egoistic human nature” (Freyberg-Inan 2004, 26). Classical skepticism not only had “Doubts regarding the human intellect's self-sufficiency” but even doubts about humanity's aptitude toward moral improvement. Such doubts have justified attitudes toward international relations theory that are characterized as ‘self-help’, hard power, and power politics (Monoson & Loriaux 2007, 49-50).

Modern skepticism is distinct from ancient skepticism because it not only doubts rationalism but also about the nature of the external world. This doubt has had an impact on globalization because it engenders a view that the international arena exists in a *state of anarchy*. Interna-

tional Relations theorists argue that those burdened with such skepticism will not accept the Constructivist claim that democratic, rational deliberation can be applied to the international arena. Without this reconsideration of the traditional approach to international relations there can be no acceptance of the role of culture and values.

There were repeated warnings that the dilemma regarding knowing and what could be known could produce dire consequences if continued to be unresolved. This prompted enormous intellectual effort toward understanding the best approach to epistemology and toward understanding how humanity fits best within the fabric of Being. However, the full recognition that the split was apparently irreconcilable became evident during the period leading up to the First World War. This period marked a heightened crisis in Europe with the average person increasingly realizing the mounting problems in politics, economics, morals and ethics, as well as in science (which would only increase as a result of the onslaught of WW I). Thus, it became apparent that the depth of Moral Skepticism was hampering Western Civilization's effort to realize its hope for the Enlightenment aims. This has been especially problematic as Moral Skepticism prompts the conviction that the criteria for interaction is how much it satisfies self-interests.

Because of the present concern for managing humanity's earthly existence, the acquisition of and application of knowledge seem to be a major concern (given the meaning, significance and transformative power of science and technology in the human experience). "The devastation of World War One made strikingly evident the fact that the unresolved nature-human dichotomy with its anxiety producing tension (which humanity has attempted to mediate by means of science, reason and technology) had put humanity on a path that culminated in unparalleled destruction" (Miller 2012, 7).

The issues in dispute are important because they demonstrate various conceptions of the human experience; conceptions of power and how power is employed in human interactions, conceptions of the method, goals and methodology of philosophy and science plus, how knowledge is applied to human interactions (Miller 2012, 7). Post World War One Europhiles had hopes of quieting the worries over these issues by generating some sense of improved cooperation between the people of Post-World War One Europe but the intellectual split (the crisis in Europe) only became more apparent (plunging Europe into a Nietzschean nihilism—the most extreme form of skepticism) (Nietzsche 1967, 2-3).

This was evident in the Great Depression, World War II and the Cold War.

RESOLVING THE DILEMMA (A MORE WIDELY ACCEPTED EPISTEMOLOGY AND ONTOLOGY)

As the last century progressed, scientists and philosophers began to realize that what Kant feared (that the fragmentary nature of knowledge would become increasingly evident in the fragmentary nature of the human experience) was beginning to be realized. Thus, there was an almost concerted effort to resolve the dilemma of why knowledge did not yield better insight into how to have more mutually beneficial and satisfactory human interactions. Niels Bohr's was successful in devising one of the most influential attempts to resolve the dualistic dichotomy between the subjective—what is taken to be self—and the raw nature of existence.

Bohr's solution is referred to as the principle of complementarity. His exposition of the principle also emphasized its epistemological value for providing more accurate information regarding what seem to be paradoxical aspects of reality. "However, scholars also acknowledge that it contributes to resolving the problem of the discontinuity between underlying reality and the human ability to conceptualize the ontological nature of existence. It has grown in popularity because it seems to offer a means of addressing dichotomies in other sciences and in philosophy" (Kafatos 2011).

In addition, it has grown in popularity because it seems to be complementary with the latest theories of biology, neurology, psychology and the philosophy of mind. Complementarity allows a more accurate analysis of fundamental reality which even today is designated as being marked by "uncertainty" because from a "bottom up" perspective it seems that it can be reduced to something indiscernible while from a "top down" perspective, it is clearly discernible as enormous complexity. The principle of complementarity offers a reconciliation between what heretofore had seemed to be diametrically opposing descriptions of the fundamental nature of existence.

The philosopher John Searle believes that the new paradigm provides empirical evidence that, from the "top down" perspective, creation displays a complexity that can be described as a full manifestation of in-

intentionality (a life generating principle that perpetually manifests itself through forms as the Universal) (Searle 2012, 85-87). Thus, complementarity emerged as an epistemological and ontological principle that offered reconciliation to long-standing controversies within and between the world's wisdom and philosophical traditions. Complementarity, became widely accepted as an explanation of the fundamental nature of existence while at the same time resolving disputes between the sciences, between science and philosophy, and between Eastern and Western intellectual traditions. These seeming contradictions primarily regard epistemology and ontology, the relationship between subject and object, plus the connection between the material objects of reality and creation's vitalizing life force. However, complementarity also provides insight into the essential connection between underlying reality and the human ability to intuit/conceptualize the ontological nature of existence. A part of its popularity is due to the fact that it has been established as the fundamental paradigm for current views of science and philosophy (Searle 2012, 3).

Above all the principle of complementarity provides insight into self-knowledge (the realization of what Socrates claimed is the most worthwhile life pursuit or what the pursuit of knowledge is really all about). Self-knowledge, in Aristotle's terms, means knowledge of how to maintain a sense of personal integrity (a Holistically well-integrated person that is in appropriate relation with others and with the environment). Such a person experiences happiness, well-being, good health, and they avoid misfortune.

Eastern and Western perennial philosophies attest to the fact that self-knowledge does not occur if conception is limited to cognitive constructs because normal mind alone cannot provide a full sense of self. Self-knowledge accompanies the recognition that, in addition to perceiving the distinction between particulars (the difference between the self and other things), there are the Universals or the way in which life force manifests itself as particular things and connects particular things with the laws of nature (a recognition of the yin-yang interplay between manifest form and the Universals which are manifesting). Thus, the first prescription for achieving self-knowledge is to employ the principle of complementarity as a means for analyzing the connection between *the nature of things* and the nature of the self.

Richard Rorty—noted for his contribution to attempts at reconciling the historical split in the Western intellectual tradition—stated that

the problem of knowing could be eliminated by means of a mediating factor between the observer and the observation. The solution Rorty proposes is a strategy based on employing the principle of complementarity. In Rorty's own words, "The Kantian picture of concepts and intuitions getting together to produce knowledge is needed to give sense to the idea of theory of knowledge" (Rorty 1979, 168). He points out that explanatory theory related to self-knowledge (clarity on the nature of the individual and the relationship of the self to existence) has always run into seeming contradictions that the theory of complementarity has always contributed to resolving (Rorty 1979, 41-42).

Rorty states that the problem of knowing is tied to the "problem of consciousness". He also acknowledges that the problem of knowing, as it is connected with the problem of self, is a concern that can be traced back to Greek philosophical issues where one of the central concerns was the problem of personhood. From its Greek origins, Rorty argues, the issue is related to the body-mind problem, the ability to sustain relations to the inexistent, intentionality, and the subject-object problem (Rorty 1979, 34-36).

Thus, as Philosopher of Mind John Searle pointed out, the principle of complementarity provides empirical evidence that there is a complementary connection between primordial forces that shaped the biological nature of existence and the individual's biological nature. In other words there is an essential interconnection between the self and the phenomenal world. With added insight from new perspectives on neurobiology, the metaphysical issue of consciousness (mind being something that although ethereal clearly interacts with and effects what is tangible) could also be more adequately analyzed in empirical terms.

The principle of complementarity has enormous heuristic value that provides the means for establishing a link between the mental functions of the brain and the forces of nature that gave rise to the factors that evolved into consciousness (Semetsky 2012, 56). Nobel Prize-winning neuroscientist Gerald Edelman implies that complementarity explains the fundamental connection between nature's biological principles, humanity's biological nature and the neural value preferences naturally triggered as human cognitive skills developed. What the principle of complementarity contributes to in this sense is a means for shedding more light on the relationship between matter and that aspect of existence that heretofore was considered indiscernible. It bridges the gap and at the same time reveals the complementary connection between the two aspects of reality

(Wheatley 2001, 249).

In this respect, mind and matter are no longer at odds but exist in a complementary relation. Research in complementarity conducted by physicists, biologists, psychologists, and sociologists makes it clear that the concept explains the link between the biological aspects of human behavior, how individuals self-organize, the structuring of culture, and the human relationship to the environment (Bernston 2008, 36-37). Studies in perceptual psychology and neurobiology reveal that humanity's inherent perceptual preference for experiencing interactions is complementarity (Gibson 1986 127).

John Searle agrees that organisms—interlaced with elements of nature in a particular way—are predisposed by nature to continuously seek integration (within their particular environmental context) in an attempt to maintain being well-integrated (Searle 2012, 86). “As human cognitive skills developed, reliable knowledge was shaped by the human neural network “firing” in patterns aligned with the neural value preference. The value preference favored relating to things in nature in ways that shape environmental interactions into outcomes that are beneficial for individuals and cultures” (Miller 2011, 129).

The popularity of the principle of complementarity is in part due to the agreement it generates between science, philosophy and religion. The sciences, metaphysics, and religion all agree that complex organisms must maintain some type of integrity. Integrity is enhanced when a biological organism adheres to its natural urge to become more fully integrated and in the human situation helps the individual to experience a fuller sense of self. In this sense, being better-integrated within its niche enables the organism to experience more beneficial interchange. The natural biological inclination can be thought of as an inherent value preference that establishes the inclination for social cooperation and culture. This natural value preference has been expressed by the world's wisdom traditions as the conviction that the human cognitive capacity—that provides an ability to discern what is best for human well-being and for the human experience in nature—is a natural part of the ontological nature of existence.

The most cherished wisdom traditions of the East and the West agree that viewing existence from the perspective of humanity's inherent value preferences is personally beneficial, mentally beneficial (heightens cognitive abilities), and is socially beneficial. Today, in accordance with the admonition of the great wisdom traditions, social psychologists stress

that such a perspective is more likely to result in the experience of a more enhanced sense of being. In other words, today there is widespread agreement amongst neurobiologists that the fundamental biological principles of creation (the laws of nature or the Universals) have been encoded into the organic elements of nature with the propensity that this can be decoded by humans into an understanding of the teleological significance of existence. From the perspective of the world's wisdom traditions, the teleological significance of existence is realizing how to enjoy this fuller sense of well-being (Miller 2011, 129).

Gerald Edelman implies that the principle of complementarity explains the connection between nature's fundamental biological principles and the way biological elements evolved into sensations and consciousness. The principle of complementarity provides the conceptual propensity for bridging the gap between contrasting features of reality. According to Paul K. Feyerabend complementarity can be interpreted, on the one hand, as the intuitive capacity that complements what is needed for theoretical comprehension and, on the other hand, as a heuristic principle guiding empirical research (Feyerabend 1981, 221). Certainly when a person realizes that his or her existence is dependent on the perpetual dynamic transformation of his or her biological make-up by means of reintegration with the fabric of being then the person also realizes that this is in fact what one clearly continuously perceives as the difference between phenomena and the self (constant interchange).

However, although it is clearly apparent that what a person thinks of as the self is in a continuous state of transformation, most people have not developed the perceptual capacity to realize that what is thought of as a separate ego is a constant interaction between the self and the phenomenal world. One would assert that, when looking out at existence he or she merely observes life or reality and its processes and in some respect this is true. Take, for example, the perception of a tree in winter. One observes the tree's form that is indeed barren. Now imagine that same tree perceived when full of blossoms in late spring. One is not only observing the form but also the life generating force which is manifesting itself through the tree's form (perceiving the manifestation of the life-generating force makes a big difference).

For the Japanese a certain aesthetic perspective—*Yugen* 幽玄 an aesthetic perceptual capacity that allows penetrating through the appearance to the essence of Being—allows one to see past the superficial to the very nature of things. “*Yugen* is a means whereby one obtains a glimpse of



things eternal in the world of constant changes: that is we look into the secrets of Reality” (Suzuki 2012, 220). In the Japanese worldview, to really perceive the essence of a thing (its Kami 神) one has to perceive beyond the superficial (as we all know appearances are deceiving) to enable aesthetically detecting Yugen. For the Japanese this allows the ability to perceive or experience existence in its wholeness rather than in a fragmentary or superficial way (Miller 2012, 17-18).

The problem hindering the full realization of self-knowledge (even for the well-informed) is the inability to sense the complementary interconnection between the particular and the Universal. Self-knowledge, in this sense, is the result of the perceptual ability to accurately appraise the semiotic interaction between the Universal force that is manifest as appearance and the particular manifestation of this life-generating principle or life force that one takes to be the self. Yet, in spite of the clarity of the principle of complementarity as an explanation of the perpetual (yin-yang) interchange between all aspects of nature, the validity can still be hard to accept, even for experts in the science of mind, because of aspects that seem to reflect an unresolved paradox (Peirce 1958, 224-225).

ENHANCING ALL ASPECTS OF HUMAN INTERACTIONS’

The principle of complementarity has been successful in impressing scholars in the sciences, the philosophy of science, the social sciences plus, scholarship in the Eastern and Western wisdom traditions because it explains the process by which the primordial life-generating force evolved into humanity’s biological nature. In other words, the principle of complementarity seems consistent with the cultural worldview and the sciences of both the East and the West. In this respect, the principle of complementarity explains how the elements of nature exist in constant interchange and not in isolation that makes each part ecologically connected other parts. Thus, according to this principle what appears to be not self becomes the basis of how the self is formulated and cognitively realized (the self exists as a continuity of biological elements, forces, and principles). According to Gerald Edelman the principle of complementarity explains how humanity’s neural value predisposition (that was ordained by nature’s biological forces) evolved into a clear preference for beneficial interactions (interactions occurring between individuals, within cul-

tures, between cultures, and interactions between nature and humanity). Edelman implies that complementarity explains the connection between nature's creative forces, nature's biological principles, humanity's biological nature, and value preferences triggered as human cognitive skills evolved (Edelman 1992, 118-119).

The wisdom traditions of the East and West assert that information encoded into the fabric of existence illustrates a feature of nature that links elements together into a complex unity. Thus, information inherent in the nature of things urges the fulfillment of nature's intention. In the human case, the urges are experienced as the individual's biological predisposition or value preference(s). Self-knowledge, in this sense, results from an accurate appraisal of the semiotic interaction between the information that is fundamental to the biological make-up of the individual and the information encoded into aspects of existence.

The encoded information—that is fundamental to the way nature's biological forces shaped complexity into what we understand to be the self-contained the potential for the self to decode this information (as a means of deciphering nature's ontology and teleology) (Edelman 1992, 19-20). John Searle states that this "special feature" of the nature-human relationship highlights the significance of human interactions by giving them intention, value and meaning. In his recent book *Rationality in Action* he explains that rational decision-making is a matter of selecting means that enable fulfilling human ends. The ends are a matter of values. We come to the decision-making situation with established value preferences and rationality is a matter of figuring out the means to our ends (Searle 2001, 1).

Humanity's value preference accounts for what Searle calls the cooperative and coordinated character of collective intentionality. Searle adds that this value preference is rooted in the biological structure of the human organism thus stems from the ontological nature of "how the world in fact is". In other words, collective intentionality and cooperative behavior are displays of natural functions (Miller 2011, 129). "For the individual there is a value in survival and reproduction, and for a culture there is a value in continuity. But natural function takes place only within a set of prior assignments of value (including purposes, teleology, and other functions)" (Searle 1995, 6 & 15). In this sense reliable knowledge provides insight into how to extend a culture's range of more cooperative or more beneficial interactions (Searle 1995, 292).

The pioneer of American Pragmatism John Dewey believed that a

cultural worldview represents an accumulation of knowledge of how to manage interactions in ways that promote the flourishing of the culture. Human culture developed by expanding the range of beneficial interactions, not only for maintaining individual integrity, but also for maintaining the integrity of all structured units (Miller 2011, 141). This means that the worldview of a flourishing culture must be based on expanding its scope of internal and external beneficial interactions. To promote a thriving culture, neural value preference must be shaped into conceptual understandings of how to extend the range of cooperative interactions (Miller 2011, 129).

What Kant set out to achieve with his Cosmopolitan Ethics – the effort to fulfill the Enlightenment aims by balancing individuality and mutuality – can be realized by coupling the individual's effort to maximize benefits with the realization that utility results from increasing beneficial interactions (Smyth 1994, 53 & 54). Because of the fact of interdependence, one's rational preference should be to follow inherent human value inclination for experiencing enhanced interactions. The principle of complementarity contributes to the ability to perceive and conceptualize the complementary connection between one's discreteness (one's own self-interest) and the force of continuity that is superimposed on the interests of the individual. Thus, connectedness prompts realization of the value for making life's unavoidable encounters a means by which the interaction between the ontological nature of existence and one's unique self is perceived not as self-other dichotomy but as complementarity (the basis of self-knowledge) (Miller 2012, 22). The experience awakens a perceptual capacity described by William Blake as the ability to see the secrets of the sea in a grain of sand, heaven in a wild flower, and sense eternity within the here and now (Blake 2001, 356).

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