

BUDDHIST EPISTEMOLOGY AND ECONOMICS: DECONSTRUCTING DYFUNCTIONAL DELUSIONS

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Abstract: Jerry Z. Muller argues that the recent economic malaise, “our first epistemologically-driven depression,” is due to the unconscious incompetence of those entrusted with the global economy. Recognizing that conceptual errors (viparyasa/viparyaya) prevent clear insight into the working of reality, Buddhist philosophers emphasize the importance of epistemology as a means of transformation by overturning (paravrtti) our cognitive confusion. Accordingly Buddhist philosophy has developed tools to deconstruct our dysfunctional economic delusions and expose the dysfunctional assumptions that have spawned them. This essay examines 1) philosophical flaws in the reigning economic models; 2) the psychology of economics, now penetrating the digital world with its virtual economic reality; and 3) a Buddhist epistemology (anitya, shunyata/pratitya-samutpada, an-atman) that resonates with paradigm changes in post-modern science, including functional counter-models from micro-lending to Bhutan’s GNH (Gross National Happiness) index and the movement of Engaged Buddhism.

Introduction

Unreality is the defining feature of the fashionable ideas of the past decade. Perhaps only a more serious crisis will overturn these delusive fancies. To look back on the ideas that shaped the past decade is to survey a scene of wreckage. . . . It is not often that large-scale crises are due to intellectual error, but a single erroneous belief runs through all of the successive delusions of the past decade. With few exceptions, both left and right seem to think that history is a directional process whose end point - after many unfortunate detours - will be the worldwide duplication of people very like themselves. . . . the ideologies of the past century - neoliberalism just as much as communism - are obsolete. . . . (Gray, 2009).

THE SENSE that change is in the offing is expanding exponentially. But exactly what kind of change is required? We can change our political system (the American Revolution), change our social system (the French Revolution), change our technology (the Industrial Revolution), change our economic system (the Russian Revolution), change our ideology (the Cultural Revolution), and even change our interface with reality (the Digital Revolution). Yet little has changed in terms of the disaffectedness humans continue to experience. We can wait for evolution to change the species, or we can change the way we think about reality—the Buddhist option. The doctrines of Shakyamuni Buddha eschewed dogmatism by questioning the authority of mere conceptualization. Later Nagarjuna analyzed the source of our dysfunctionality in conceptual errors or perversions (*viparyasa/viparyaya*) in the

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Mulamadhyamakakarika. The *Lankavatara Sutra* and the *Diamond That Cuts Through Illusion Sutra* outline the means of transformation by overturning (*paravrtti*) our cognitive confusion.

Although Buddhism is usually regarded as a profound religion of little or no relevance to the real world, I will argue that it is more closely aligned with science than with religion in its adherence to epistemological analysis. By posing seminal questions about our evaluation of and relationship to reality, the deconstructionist methodology of Buddhist epistemology could be of great value in coming to terms with deluded and dysfunctional assumptions that pervade contemporary societies. Such assumptions are deeply embedded in the realm of theoretical speculation, but also suffuse our everyday lives, perpetrating malicious misinformation for us as individuals and as a species.

Buddhist philosophy characterizes reality by what it is not—not permanent (*anitya*), not isolated (*shunyata*), and not self-centered (*an-atman*). A three stage process facilitates access to reality. The entry point of Great Faith, associated with religion, is to be superseded by the philosophical skepticism of Great Doubt. This in turn evolves into the Great Death of delusions. Our discussion applies this process to our contemporary predicament, moving from dysfunctional economic theory to theoretical and then practical challenges to that theory.

1) Flaws in the Reigning Economic Models: Great Faith—an analysis of the cognitive framework grounded in mathematical models of quantitative research that fueled the recent upheaval.

2) The Psychology of Economics: Generating Great Doubt—a transitional stage whereby we deconstruct our deluded concepts, including stereotypical evaluations of human nature and social organizational principles.

3) Emerging Alternative Models: Great Death of Delusion—what follows from a fresh perspective on economic relationships in terms of existing programs that resonate with Buddhist philosophy in combining wisdom with compassion.

I. Flaws in the Reigning Economic Models: Great Faith

The “science” of economics at the center of our economic woes evolved over several centuries, beginning with Adam Smith’s *Wealth of Nations* (1776), a manifesto reflecting the Enlightenment’s confidence that human reason was en route to mastering the essence of reality. By 1969 the Nobel Committee had established a prize in “economic science” alongside the hard sciences of physics and chemistry, on the basis of its “techniques of mathematical and statistical analysis” (Schumacher, 1973, 1). Early in the twenty-first century, academic super-star “quants” (quantitative investment managers) and their computer technology ruled Wall Street—until once-winning strategies led to billions in losses (Creswell 2010, B6). This mathematically-based economic model is the focus of our attention here. However it is merely the tip of the iceberg in terms of a systemic delusion concerning the overarching validity of abstraction.

Jerry Z. Muller has theorized that this economic malaise is “our first epistemologically-driven depression” in which “a large role was played by the failure

of the private and corporate actors *to understand what they were doing*. . . . The financial system created a fog so thick that even its captains could not navigate it.” Hence, “purported virtues have mutated into vices,” including faith in diversification of investments, mathematical models, and the “cult of ‘accountability’” (Muller, 2009, 1). The unique characteristics of this recession are identified as “opacity,” due to the sophisticated mathematical tools that were assumed to reduce risk, and “pseudo-objectivity,” generated by the assumption that “standardized measures of achievement [applied] across large and disparate organizations” (Muller 2009, 2). Acceptable input was confined to numerical data gleaned from statistics and probability theory, while actual experience was deemed irrelevant. Similarly, Shakyamuni Buddha compared the text-obsessed Brahmins to “a file of blind men each in touch with the next: the first one does not see, the middle one does not see, and the last one does not see” (Bhikkhu Bodhi 2005, 98).

Our task is not to cast judgment on the ultimate efficacy of competing economic theories, but rather to examine the far-ranging consequences of elevating a specific type of knowledge, a mathematically-based model and methodology of epistemology, to the exclusion of other knowledge sources. The essential insight of Buddhist philosophy pragmatically focuses on positive transformation, as encoded in the Four Noble Truths: 1. life is experienced as dysfunctional (*dukkha*); 2. the perceived dysfunctionality is a result of thirsting (*tanha*) after ill-advised goals; 3. to end the dysfunctionality, we must end the thirst; and 4. an eight point program deconstructs deluded thinking, behavior, and practice to insure the intended results.

Shakyamuni Buddha espoused an epistemological emphasis of rigorously analyzing knowledge claims and their sources to prevent his students from becoming mired in dialectical games. The Pali texts document that he avoided philosophical debates about the finite or infinite state of the world, mind-body dualism, and an afterlife as inconsequential to the program laid out in the Four Noble Truths, invoking the case of a person injured by a poisoned arrow that needs to be promptly removed rather than subjected to fatuitous speculations (*Culamalunkya Sutta*). Dogmatism is consciously avoided, while Buddhist doctrines are characterized as mere means, like the finger pointing at the moon or the raft used to cross to the other shore (*Dighanakha Sutta*).

In the Mahayana school, Nagarjuna devoted an entire chapter of the *Mulamadhyamakakarika* to an “Examination of the Perversion of Truth (*Viparyaya pariksa*)”; “the cessation of ignorance” is said to destroy “mental conformations,” which Kenneth K. Inada identifies as “a central concept in Buddhism” (Inada 1993, 142, 136). Drawing on Madhyamaka insights, Michel Bitbol has proposed “A Cure for Metaphysical Illusions,” which erroneously take “the empirical reality as it is molded by our perceptive automatisms, basic assumptions, concepts, and conventions for some intrinsic reality” (Bitbol 2003, 329). Bitbol argues that the sciences can benefit from being freed “from the spell of a reified conventional truth,” with Madhyamaka philosophy supplying “a patient dialectical deconstruction of the class of substantialist views and dualist epistemologies that we find so difficult to abandon” (Bitbol 2003, 332, 339).

A similar epistemological deconstruction can be applied to our dysfunctional delusions of the “science” of economics, thereby exposing the dysfunctional metaphysics and values that have spawned them. The hard sciences already have confronted the forces of complexity (initially labeled chaos) in evaluating reality. Heisenberg’s Uncertainty Principle demonstrates that objectivity has yielded to intersubjectivity in its recognition that the assumed observer is in fact a participant in the observation. Correspondingly, Buddhism is philosophically grounded in a recognition of dynamic interdependence (*pratitya-samutpada*) among the assumed parts of reality. Nonetheless, a Platonic infatuation with the perfect noumenal forms (Popper 1945) has persisted, as described by Paul Krugman:

The economics profession went astray because economists, as a group, mistook beauty, clad in impressive-looking mathematics, for truth. Until the Great Depression, most economists clung to a vision of capitalism as a perfect or nearly perfect system. That vision wasn’t sustainable in the face of mass unemployment, but as memories of the Depression faded, economists fell back in love with the old, idealized vision of an economy in which rational individuals interact in perfect markets, this time gussied up with fancy equations (Krugman 2009, 37).

Devotees of abstraction, led by mathematics professors, generated a virtual economic reality that proved addictive. Insight into the attraction of abstraction comes from Alan Lightman, who waxes poetic as he remembers his life as a theoretical physicist: “I miss the purity. . . . work in a world of the mind. . . . The equations have a precision and elegance, a magnificent serenity, an indisputable rightness. . . . That certainty and power, and the intensity of effort it causes, I dearly miss” (Lightman, 2000, D5). Fixation on perfection and the explicit knowledge associated with science leads to what Ikujiro Nonaka calls “the ‘analysis paralysis’ syndrome” (Nonaka and Takeuchi 1995, 42, 198); “There’s a philosophical tendency in the West, following Plato, to conclude that if a theory isn’t working, there must be something wrong with reality” (Nonaka and Takeuchi 2011, 3). Similarly, Thomas Kasulis warns us about the dysfunctionality of the “*Wissenschaft* impulse,” grounded in mathematical models, which favors detached over engaged knowing (Kasuli 2011).

The problem of perfectionism is not limited to economics and business. An obsession with the pure elegance of mathematics has infiltrated unexpected aspects of our lives. Orrin H. Pilkey and Linda Pilkey-Jarvis examine the limited value of mathematical models as applied to coastal geology, which prevent us from grasping the complexity of natural processes (Pilkey and Pilkey-Jarvis 2007). Education is suffering from the same bane, as the presumed science of “value-added assessment” claims to provide objective analysis by means of standardized testing and teacher evaluations. Thus the New York City Department of Education has bragged we “can now calculate a teacher’s worth to the third decimal point by using a few very long formulas.” Concrete results remain elusive: although the No Child Left Behind initiative mandated math and English proficiency for all American children by 2014, 82% of schools have failed to meet their yearly goals (Winerip 2011, A13). Condemning the Bush era law as a “slow-moving train wreck,” Secretary of

Education Arne Duncan has offered schools waivers to avoid the dire consequences of this self-deluded legislation (Dillon 2011, A11).

Perfectionist templates have filtered down into more mundane areas, indicative of a pervasive systemic delusion. Embracing perfect Platonic forms encapsulated in breed standards, dog shows render judgments, not by comparing one canine contestant to another, but in terms of how closely each adheres to the ideal specifications set by the American Kennel Club. These standards include detailed requirements for size, proportion, head shape, coat, gait, and temperament. The same ideal of perfection applies to human beings, whose physical appearance is evaluated in comparison with a perfect 10. A computer program or “beautification engine” has been developed that applies a mathematical formula to produce a theoretically “perfect” version of the user (Kershaw 2008, E1).

Addiction to the assumed perfection and purity of the eternal, unchanging noumena derives from the denigration of phenomena as impermanent, hence inferior. This in turn is fueled by an obsession with certainty, or rather the illusion of certainty. Traditionally certainty was guaranteed by some divine source, such as a divine agent or the *Logos* of Heraclitus. Wall Street sought it in mathematical equations and computer models, and thus “The principles of laissez-faire capitalism were elevated to the status of religious scripture, with Alan Greenspan as high priest” (Leonhardt, 2009, 23). Immanuel Kant, a student of Newtonian science, admitted that Plato was overly optimistic about escaping the cave of phenomena. We could not know the noumena (the “thing in itself,” *Ding an sich*) directly. Nonetheless Kant persisted in his drive for certainty in the form of an “*als ob*” philosophy by which we could think rather than know the noumena, as required to maintain a semblance of law and order in our cognitive universe (Kant 1961, 27). Those who disagree with any of the concepts generate a dialectical competition that does not eschew certainty, but merely redefines its source—theism vs. atheism, free will vs. determinism, soul (idealism) vs. body (materialism).

Karl Popper examines two assumptions that lead to a belief in the infallibility of our knowledge. The first is the assumed existence of “some ultimate or authoritative source of true knowledge,” which he urges us to reject. For the quants, mathematics and computer programs played that role. The second suspect assumption is “that we should submit to truth; that truth is above human authority.” He argues that “Taken together these two ideas almost immediately yield the conclusion that the sources from which our knowledge derives must be super-human; a conclusion which tends to encourage self-righteousness and the use of force against those who refuse to see the divine truth.” Popper’s advice, which he describes as both critical rationalism and critical empiricism, is that we “admit that all human knowledge is human: that it is mixed with our errors, our prejudices, our dreams, and our hopes: that all we can do is to grope for truth even though it be beyond our reach. . . . that there is no authority beyond the reach of criticism to be found within the whole province of our knowledge” (Popper 1960).

II. The Psychology of Economics: Generating Great Doubt

The above analyses need not consign us to “a pervasive cognitive dissonance” in which “intellectuals assert their beliefs all the more adamantly when the only reason for holding them is a well-founded suspicion that they are not true” (Gray 2009) . Instead, it can stimulate an openness to new approaches, whereby a fresh philosophical phoenix can rise from the ashes of despair by identifying the source of the dissonance/*duhkha* and dis-solving it. Zen (Sōn) Master Seung Sahn encourages his students to “only don’t know,” revealing the “don’t know mind” (Seung Sahn 1976, 35), a deconstructed mind that is both empty of conditioned constructs and open to unfiltered experience as a basis for knowledge. Inspired by Buddhism, Theodore Roszak contends that Schumacher displayed “a deliberate intention . . . to subvert ‘economic science’ by calling its every assumption into question, right down to its psychological and metaphysical foundations” (Schumacher 1973, 2-3). This “Keynes of postindustrial society” proposed a way beyond misguided mathematical models, beyond “ethnocentric, Western economics” (Schumacher 1973, 5, 7).

Similar doubts have been raised in the biological sciences. S. J. Gould and R. C. Lewontin challenge the “adaptationist program” in evolutionary theory, which upholds “the near omnipotence of natural selection in forging organic design and fashioning the best among possible worlds” (Gould and Lewontin 1979, 584). Instead they argue for a more modest theory whereby cultural patterns, such as cannibalism among the Aztecs, are nothing more than epiphenomena devoid of inherent adaptive value. Human adaptive behaviors are compared to the architectural design element of the spandrel that results when a dome is constructed; although the spandrel is useful for adding artistic embellishment to a building, it is not part of the original design.

Building on the work of Gould and Lewontin, Scott Atran identifies “universal cognitive mechanisms” essential for survival. By detecting agents in the environment that might pose a threat, we presuppose the existence of an external world (and thus evolve metaphysical theories). Causal reasoning allows us to explain events in a coherent way (laying the foundation for inductive reasoning). A theory of other minds, or “folk psychology,” opens the door to mind/body dualism along with the dualism of good and evil minds as well as the existence of multiple minds. Atran claims we are primed to believe “counterintuitions” that seem to defy common experience because they “draw attention to those aspects of the world that people wish were otherwise” (Atran 2002, 84, 113). For example, dogmatic theories in religion, philosophy, or even science furnish us with the desideratum of universal certainty. Studies by Robert Trivers have revealed that beginning in childhood, a high level of intelligence corresponds to high levels of deception; moreover, self-deception enhances one’s ability to deceive others (Trivers 2011).

Merely noting, and cataloguing, the errors humans are prone to will not resolve our economic woes. The most productive strategy is to examine and re-evaluate the unexamined assumptions upon which such an economic system is grounded, delving into the underlying causes and conditions that have given way to dysfunctional approaches. Nor should we succumb to alleged authorities. Shakyamuni Buddha’s anti-authoritarian pronouncement requires Great Faith to give way to Great Doubt:

Be not led by the authority of religious texts, nor by mere logic or inference, nor by considering appearances, nor by the delight in speculative opinions, nor by seeming possibilities, nor by the idea: “this is our teacher” (*Kalama Sutta*) (Rahula 1978, 3).

In examining the source and validation of knowledge claims, epistemology requires an assessment of metacognitive skills. The Dunning-Kruger effect proposes that “when people are incompetent in the strategies they adopt to achieve success and satisfaction, they suffer a dual burden: Not only do they reach erroneous conclusions and make unfortunate choices, but their incompetence robs them of the ability to realize it” (Kruger and Dunning 1999). Four stages can be discerned in exposing the cognitive bias that generates the illusion of infallibility: 1. unconscious incompetence, assuming knowledge that does not exist, such that there is no motivation to remove one’s ignorance; 2. conscious incompetence, knowing one does not know without pursuing a remedy; 3. conscious competence, a demonstrated possession of knowledge or skills; and 4. unconscious competence, whereby knowledge and skills become internalized.

Buddhist philosophy recognizes a four step process for removing deception, including the deceptions inculcated by social conditioning. Our “continuum of cognition” begins with the false view of unconscious incompetence in which we misconstrue a state of affairs. This gives rise to conscious incompetence in the form of doubt, that evolves from a “nonrealistic” form to equilibrium of doubt and finally to “realistic” doubt. The third stage of conscious competence awakens conviction to challenge doubt, leading to a rational inference. Finally unconscious competence results in the form of “a nonconceptual valid awareness” (Hayward and Varela 1992, 38-40).

It is important to locate the source of our unconscious incompetence, which spawned the flawed economic models responsible for our current distress by replacing concepts about reality for reality itself. In the pressure cooker of high finance, risk takers were richly rewarded on the assumption that mathematical theories made them unassailable masters of the game. Their penchant for risk filtered down into the lower reaches of the economic pyramid, as individuals and families took on risky mortgages encumbered with balloon payments and even riskier second mortgages that financed a lifestyle inconsistent with their financial realities. There is a certain parallel here to the adrenalin-fueled behavior of mountain climbers who seek the ultimate high. Since Mount Everest was “conquered” in 1953, more than a thousand people have tried to follow in the footsteps of the conquerors. Of these, 175 have died in the attempt, with a majority of their bodies (around 120) still littering the mountain (Brooke 2003, A1, A4; Bowley 2010).

Deluded intellect is supported by the Hobbesian assessment of human nature that many accept as indisputable fact. Hobbes famously characterized the State of Nature as riddled with “continual fear, danger of violent death,” leading him to conclude that human life is necessarily “solitary, poor, nasty, brutish, and short” (Hobbes 1952, 85). Hobbes assumes our conflict-ridden existence is fueled by competition that is motivated by greed and ends in violence; by diffidence or a feeling of insecurity

motivated by fear that leads to defensiveness; and by desire for glory or fame motivated by the longing for reputation, resulting in superficial values. Similar theories of the naturally confrontational dynamic of life, the default *duhkha* whose originating thirst (*tanha*) seemingly can never be slaked, is found in philosophers as diverse as Immanuel Kant, Arthur Schopenhauer, and Friedrich Nietzsche.

If man lived an Arcadian shepherd's existence of harmony, modesty and mutuality, man, good-natured like the sheep he is herding, would not invest his existence with greater value than that his animals have. . . . Man wants concord but nature knows better what is good for his kind; nature wants discord. . . . The natural impulses, the sources of asociality and continued resistance from which so many evils spring, but which at the same time drive men to a new exertion of his powers and thus to a development of his natural faculties, suggest the arrangement of a wise creator and not the hand of an evil spirit who might have ruined this excellent enterprise or spoiled it out of envy (Kant 1949, 120-21).

Just as a sailor sits in a boat trusting to his frail barque in a stormy sea, unbounded in every direction, rising and falling with the howling mountainous waves; so in the midst of a world of sorrows the individual man sits quietly, supported by and trusting to the *principium individuationis*, or the way on which the individual knows things as phenomena (Schopenhauer 1883, 455).

Might it be that the "inquiring mind" was simply the human mind terrified by pessimism and trying to escape from it, a clever bulwark erected against the truth? . . . the original Oneness, the ground of Being, ever-suffering and contradictory, time and again has need of rapt vision and delightful illusion to redeem itself [more specifically Apollonian dreams and Dionysian ecstasy] (Nietzsche 1956, 4-5, 32).

From such assumptions concerning human nature has sprung Adam Smith's vision of the "invisible hand of the market" as the self-regulating nature of the marketplace, a model embraced by proponents of the laissez-faire economic philosophy (Although Czech economist Tomas Sedlacek has traced the "invisible hand" back to Thomas Aquinas in the thirteenth century) (Sedlacek 2011). Smith remains skeptical of all motivations not ego-driven: "By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. I have never known much good done by those who affected to trade for the public good. It is an affectation, indeed, not very common among merchants, and very few words need be employed in dissuading them from it" (Smith 1952, 194). Yet, among high living Wall Street traders and exorbitantly affluent CEOs the promised corrective of the alleged hand has yet to assert itself.

III. Emerging Alternative Models: Great Death of Delusion

Having identified the conceptual errors implicated in the economic crisis, we can now address the means of transformation, overturning (*paravrtti*) our cognitive confusion. As the *Lankavatara Sutra* (*Saddharma-lankavatara-sutra*) opens, Buddha emerges

from the depths of the ocean/wisdom to impart “the self-realization of Buddha knowledge” to King Ravana (Red Pine 2012, 21). Buddha conjures up a visual feast, while warning “Those who view such things as real / they don’t see the Buddha / nor do those who imagine nothing / only those who transform their existence.” Ravana immediately experiences “an awakening and transformation of his consciousness,” realizing “what appeared was nothing but the perceptions of his own mind, and he found himself in a realm free from such projections” (Red Pine 2012, 29, 31) . Subsequent chapters elaborate on the cognitive process and the structure of consciousness. The mind itself is credited with creating the magic show of Maya that we ourselves must penetrate.

The Diamond That Cuts Through Illusion Sutra (Vajracchedika-prajnaparamita-sutra) tracks the transformational process in an accomplished discipline of the Buddha, Subhuti, distinguished for his intellectual expertise in emptiness. In the second chapter Subhuti initiates a dialogue with the Buddha by requesting instructions for following the bodhisattva path. The ensuing exchange, which at times tempts the unfocused reader to marvel at its redundancy, subtly allows Subhuti to come to his own realization. By chapter fourteen Subhuti has begun his transformation when he exclaims concerning the sutra that “a perception of its truth is no perception of its truth. Thus does the Tathagata speak of a perception of its truth as a ‘perception of its truth’” (Red Pine 2001, 221). This follows a formula repeated throughout the text—“x is not x, and therefore is called x”—that is applied to key Buddhist doctrines, including merit, the Pure Land, bodhisattvas, Buddha as well as moral and metaphysical concepts such as goodness, space, and time. By calling into question the entire process of conceptualization and its linguistic expression, we liberate ourselves from self-fulfilling prophecies and self-perpetuating delusions.

The parameters of a Buddhist economics were sketched by E. F. Schumacher in his groundbreaking work, *Small is Beautiful: Economics as if People Mattered*. Schumacher elaborated on Right Livelihood from the eightfold Path, the last of the Four Noble Truths (Schumacher 1973, 53). Roszak aligns Schumacher with a “subterranean tradition of organic and decentralist economics . . . the tradition we might call anarchism, . . . a libertarian political economy that distinguishes itself from orthodox socialism and capitalism” (Schumacher, 1973, 3-4). In a chapter entitled “A Machine to Foretell the Future?” Schumacher seems prescient about the ultimate lack of prescience among quantitative investment managers, having foreseen where the lust for mathematical certainty leads us:

Strange to say, under the influence of laboratory science many people today seem to use their freedom only for the purpose of denying its existence. . . . It is the intrusion of human freedom and responsibility that makes economics metaphysically different from physics and makes human affairs largely unpredictable. . . . In his urgent attempt to obtain reliable knowledge about his essentially indeterminate future, the modern man of action may surround himself by ever-growing mountains of data to be digested by ever more wonderful mechanical contrivances: I fear that the result is little more than a huge game of make-believe (Schumacher 1973, 229-30, 240).

What would such an economic system require of us epistemologically? John Cage may offer an important clue. After studying Zen Buddhism with D. T. Suzuki, Cage began to see music as a change agent “to open the minds of people who made them or listened to them to other possibilities than they had previously considered” (Kostelanetz 1994, 42). More specifically, Cage identifies that change with “giving up Bach,” insofar as the allure of Bach’s music “suggests order and glorifies for those who hear it their regard for order” that permeates their deluded existence. Rejecting established definitions of orderliness represents no small change. Once we have deconstructed our cherished, but flawed, conceptual frameworks Cage rightly asks “what do we have left?” (Cage 1973, 262-63).

In Buddhist terms what we have left is a deconstructed reality, one in which the delusive constructs of permanence, inherent separateness, and egocentrism are exposed as conceptual errors. By seeing through the Maya of such distortions, the old sense of order dissipates. It is no longer comfortable and comforting because it is no longer valid. It was part of a self-limiting dream world, a game that was presumed to inescapable. The rules of that game are not universal laws of Nature, merely misinterpretations of our experience or misguided wish-fulfillments. Most importantly, we must remove the self-deceptions that provide us with erroneous data that in turn leads to erroneous behaviors, just as the quants deceived themselves about the efficacy of their computer models and statistical data.

The proposed model is not a manifestation of mysterious spiritual intuitions, but rather is supported by ongoing scientific research in the fields of quantum physics, biology, cognitive science, and psychology. Some scientists cling to the dream of a simple unified theory of everything embedded in the very term “universe.” See, for example, Edward O. Wilson, *Consilience: The Unity of Knowledge* (1998) and Brian Greene, *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory* (2003). Others are exploring the outer reaches of complexity in ways that reinforce Buddhist theories. Mary Clark challenges “absolutist science” (aka scientism) fueled by “excessive hubris” by presenting a detailed compendium of data from numerous sources ultimately focused on the emerging discipline of conflict resolution (Clark 2002, 47). Clark concludes that flexibility and openness to “*new traditions and new meanings*” are most salutary for survival (Clark 2002, 404).

1. Impermanence (*anitya*)

As we have seen, the quants at the center of the economic crisis were dazzled by the glittering specter of their self-discovered universal, eternal truths. Among Francis Bacon’s “Four Idols,” the fourth and final form of idols seems to apply here, “Idols of the Theater” that “have crept into men’s minds from the various dogmas of systems of philosophy” due to an over-reliance on sense experience, rejection of sense experience, limited data, or a confusion of philosophy and theology” (Bacon 1952, 110). Inspired by Bacon, David Ritz Finkelstein seeks to expose “an idol of classical epistemology” that assumes physical laws mirror mathematical models or can be mathematically modeled. Calling for an iconoclastic “conceptual quantum leap,” Finkelstein recommends “replacing reality by actuality” as we become aware of how

conceptualization arises from actions (Finkelstein 2003, 370). The epistemological priority of impermanence in Buddhist philosophy avoids the idolization of absolutes so foundational to classical science. Finkelstein traces the conceptual evolution from Aristotle's spatial and temporal absolutes to Galileo's temporal and spatial/temporal absolutes. The next stage is Einstein's space-time continuum. While Galileo rejects space as "an invalid reification," Einstein adds to that the invalidity of time (Finkelstein 2003, 368). Both the *Diamond Sutra* and Nagarjuna relegate time and space to the level of provisional truth (Red Pine 2001, 402; Inada 1993, 117-18).

2. Emptiness (*shunyata*) and interconnectedness (*pratitya-samutpada*)

In emptying out "false absolutes" Finkelstein's intent is to "relativize" them in the sense of revealing an underlying "interactivity." Hence our simple and elegant law of Nature is in fact the result of "the dynamical process," which becomes "the sole variable under study" (Finkelstein 2003, 366). Finkelstein invokes Heisenberg's Uncertainty Principle to illustrate what the Buddhist philosopher refers to as *pratitya-samutpada* or interdependent origination: "The act of determining a property is an interaction between experimenter and system that now has significant consequences for both. Such reciprocity was expected by some on philosophical grounds long before experimentation at the photon level made it manifest" (Finkelstein 2003, 372).

Interconnectedness also reveals emptiness, in the sense of the lack of any distinct, discrete entities. Hua Yan Buddhism generally prefers to speak of this as Totality, as seen in the riveting imagery of *Indra's Net* in book thirty of the *Avatamsaka (Huayan) Sutra*, appropriately entitled "The Incalculable." When Mind King inquires about the huge numbers spoken of by Buddhas, Shakyamuni Buddha produces amazing calculations squaring ever larger numbers. After arriving at thirty-three digits, he proclaims that incalculable and unspeakable sums loom beyond. Truly a quant's worst nightmare! Such unspeakable numbers are compared to the inestimable number of Buddha discourses, voices, lands, reality bodies, embellishments, principles, meditations, etc., as well as qualities of sentient beings, bodhisattvas that function as interpenetrating and mutually reflective jewels in what has come to be known as Indra's Net. The point, however, is not to dissuade the listeners from inquiring further, but rather to embolden them to move beyond mere abstraction. Buddha concludes the chapter by proclaiming, "Enlightening beings can see them all" (Cleary 1993, 904). Fazang famously designed a powerful demonstration of mutual interpenetration for Empress Wu Zetian, constructing a hall of mirrors surrounding a Buddha image placed in the middle of the room. As he exclaimed, "Right here we see an example of one is all and all is one—the mystery of *realm embracing realm ad infinitum* is thus revealed." He then provided "an example of the small containing the large as well as of the large containing the small" by holding a crystal ball in his hand that reflected the myriad mirrors (Chang 1971, 24).

The wisdom of interconnectedness manifested by Indra's Net has attracted attention in the scientific community as an alternate gestalt (Clark 2002, 8-11, 55). David Bohm speaks of "the totality of existence as an undivided flowing movement without borders. . . whatever part, element, or aspect we may abstract in thought, this still enfolds the whole and is therefore intrinsically related to the totality from which

it has been abstracted” (Bohm 1994, 171). Chaos or Complexity Theory states that when a butterfly flaps her wings in one part of the world, a hurricane occurs across the globe. We now know that a few key strokes in a New York hedge fund office can result in mass protests against government austerity programs in Greece. As Finkelstein observes, “completely visualizing anything ‘as it is’ [static, unchanging] is self-contradictory. ‘As it is’ means without external intervention, in which case the system is sitting alone in the dark, unperceived” (Finkelstein 2003, 373). With perception, and a realization of connectedness, comes compassion.

3. Non-self (*an-atman*)

For true compassion aroused by wisdom to be implemented, we must address what many Buddhists believe to be the most difficult delusion to dispel, the illusion of ego-self. This demands revised definitions of our identity, of human nature. As we have discussed, the Hobbesian view assumes conflict and competition are the default position, based on the “natural” human motivations of greed, fear, and self-aggrandizement. This has become a self-fulfilling prophecy—low self-esteem leads to low expectations, and a presumed need for external controls (the Leviathan).

Consider two recent cases involving powerful companies—Google and Apple. Reflecting a Hobbesian mindset and capitalist “ethic,” Nick Bilton posed the question, “Is Google too big *not* to be evil?” Citing the demands of a highly competitive market, Bilton concludes, “Our distrust of big companies may just be part of the natural evolution start-ups” (Bilton 2012, B6). In so doing he is merely succumbing to popular perversions of Darwin’s evolutionary theory as survival of the fittest. Yet Timothy D. Cook, chief executive of Apple, has seemingly defied the accepted wisdom when he forthrightly addressed human rights issues of exploited workers in Apple’s Chinese supply lines.

Are economic incentives so hard-wired that moral values and compassion must always be sacrificed as the price of success? Gould and Lewontin argue against “the Panglossian paradigm” upheld by many evolutionary theorists that “regards natural selection as so powerful and the constraints upon it so few that direct production of adaptation through its operation becomes the primary cause of nearly all organic form, function, and behaviour” (Gould and Lewontin 1979, 584-85). Clark agrees that such reductionist “oversimplifications” are rampant and also dangerous (Clark 2002, 57). Current research has in fact emphasized the priority of cooperation in assuring human survival. Steven Pinker had compiled an impressive trove of data from a variety of fields strongly suggesting that violence and cruelty have been declining for centuries in human societies (Pinker 2011). Pinker credits a gradual rise of rational thinking for our moral progress as a species, much as Buddhists regard compassion as a natural result of wisdom. It is noteworthy that fellow scientist Peter Singer has heralded this work as “a supremely important book,” indicating an openness to exploring new approaches, new templates, and new solutions to age old problems (Singer 2011).

Buddhist philosophy offers an analysis of human nature challenging common assumptions. Although it recognizes roughly the same three sources of conflict noted by Hobbes and others, these are not assumed to be part of our inherent nature. Instead

they are regarded as external maladies, the Three Poisons of anger/hatred (fear and insecurity), greed/lust (greed and competition), and ignorance/delusion (the desire for fame and superficialities). Inspired by the *Diamond Sutra*, Hui-neng outlines a three part program that addresses each of these poisons. Fixation on thought leads to anger and hatred. Fixation on material forms leads to greed and competition. Fixation on fixation leads to deluded ignorance. Accordingly, Hui-neng advocates “no thought,” “no form,” and “no attachment” (Hui-neng 2006, 140). Today “no thought” would include not being fixated on conceptual frameworks that encourage dogmatism and simplistic theories. “No form” responds to rampant materialistic values. Most crucial and profound of all is “no attachment,” which prevents us from becoming fixated on not becoming fixated. It requires us to empty out even the concept of emptiness itself.

What is called for is an epistemological revolution, a revolution in what we think we know about our environment and about ourselves. Krishnamurti spoke in just such terms, calling for “change in the content of consciousness” that has spawned “the world of corruption, violence, brutality, vanity, and all the structures that bring about war.” Our narrow, deluded sense of individual ego along with our sense of community and culture are all constructs of thought, as are our fears, insecurities, religions, and materialistic ideologies (Krishnamurti 1996, 282-83). Like Hui-neng, Krishnamurti’s recommendation is to empty out these deluded contents: “the mind [as construct] is basically a delusion” (Hui-neng 2006, 144).

While the theoretical soundness of the above arguments may be persuasive to some, lurking in the background is likely to be a lingering skepticism as to the practical applicability of such an approach. Blind adherence to reigning models leads many to assume we are doomed to rely on Smith’s “invisible hand,” as dictated by Hobbesian assumptions. Some transformative post-deconstruction alternatives have appeared that allow us to think outside the box of dysfunctional delusions regarding the economy, not all of which are associated with Buddhism. What they share is a willingness to question the accepted economic wisdom that has proven so dysfunctional, and a corresponding commitment to a wisdom that accepts responsibility for compassionate outcomes.

4. Microcredit

Muhammad Yunus has proven that small is not only beautiful, but also profitable (Yunus 2012). Directing funding to people at the lowest levels of the economy, often women, can have dramatic effects. Yunus envisions a radical reorientation of human priorities—“The only thing we’ll have to do is to free them from the mind-set that puts profit-making at the heart of every business, an idea that we imposed on them through our flawed economic theory” (Leonard 2010, BU7). Unfortunately, the same overreach that characterized large economic institutions may now be infecting this fledgling alternative after its very success drew the attention of the traditional business community. India’s largest micro lender, SKS Microfinance, has lost 70% of its value since going public in 2010. The government has charged lenders with risky loan practices that have driven some lenders to bankruptcy and even suicide. Yunus has responded to these developments in an essay appropriately titled “Sacrificing

Microcredit for Megaprofits,” declaring “[p]overty should be eradicated, not seen as a money-making opportunity” (Yunus 2011, A19).

5. GNH

Economic indicators are faithfully followed in almost all countries to track and promote the GDP—Gross Domestic Product. However, in the Buddhist kingdom of Bhutan, the GNH (Gross National Happiness) index has been promoted since 1972 by King Khesar, who argues that “ultimately without peace, security and happiness we have nothing” (GNH 2008). Nine dimensions are being scientifically studied and evaluated: Psychological Well-being, Time Use, Community Vitality, Culture, Health, Education, Ecological Diversity, Living Standards, and Good Governance.

More recently French President Nicholas Sarkozy created the Commission on the Measurement of Economic Performance and Social Progress, led by Joseph Stiglitz and Armatya Sen, to develop appropriate measures for tracking his country’s GDH. The Commission engaged in a wide ranging review of economic models and measurements, including statistical data, to determine their effectiveness as well as their applicability to complex social contexts. Speaking at the Sorbonne Sarkozy declared, “A great revolution is waiting for us. For years, people said that finance was a formidable creator of wealth, only to discover one day that it accumulated so many risks that the world almost plunged into chaos. . . . The crisis doesn’t only make us free to imagine other models, another future, another world. It obliges us to do so” (Samuel 2009). Britain’s Prime Minister David Cameron has followed suit, implementing a program in 2011 run by the Office of National Statistics to chart Gross National Happiness.

6. Engaged Buddhism

In Asia the Engaged Buddhism movement offers options to the social, economic, and political models of the developed world. A founder of this group, Thai Buddhist Sulak Sivaraksa, avidly opposes “the new imperialist mentality” that threatens to engulf the developing world through manipulative control of its leaders (Sulak 1988, 91). His message penetrates to the core of Buddhist epistemology: “we must reconstitute our consciousness to be less selfish—less greedy, less hateful and less unaware in order that we can reconstruct our society to be more just and participatory” (Sulak 1988, 96). Sulak has offered the Buddhist Sangha as a social model designed around the ideals of “cooperation, propertylessness, egalitarian democracy” that guides followers through “a code of nonviolent ethics and social welfare” (Sulak 1992, 102).

Thich Nhat Hanh is another Buddhist leader involved in this global challenge to dysfunctional values and institutions. His Sangha is guided by 14 Precepts, beginning with two epistemological directives:

Do not be idolatrous about or bound to any doctrine, theory, or ideology, even Buddhist ones. All systems of thought are guiding means; they are not absolute truth.

Do not think that the knowledge you presently possess is changeless, absolute truth. Avoid being narrow-minded and attached to present views. . . . Truth is found in life and not merely in conceptual knowledge. Be ready to learn throughout your entire life and to observe reality in yourself and in the world at all times (Nhat Hanh 1987, 239-40).

Wisdom is the foundation on which effective practice can be built: “Where there is suffering mindfulness responds with the energy of compassion” (Nhat Hanh 2003, 211). Thich Nhat Hanh has been deeply involved in applying these principles to communities in conflict, ranging from American veterans of the war in Vietnam to Palestinians and Israelis.

7. The Business of Caring

Our final example extends Schumacher’s scope from “Economics as if People Mattered” to a Buddhistically appropriate “Economics as if All Sentient Beings Mattered.” The Helen Woodward Animal Center in San Diego has developed a unique program whereby its compassionate mission is supported by thriving business ventures. In addition to facilitating traditional pet adoptions, homeless pets are “marketed” as a valued product by connecting with the community in various ways, such as Pet Encounter Therapy offered at senior centers, children’s shelters, psychiatric facilities, and hospices. Boarding facilities are available at Pet Club, an Equine Hospital services the community, and educational programs provide classes both on and off site. Most importantly, this successful business model is being taught to shelter managers and staff from around the world through Animal Center Education Services (ACES). Director Michael Arms argues that true compassion needs to be founded on wisdom—protestations of love for our fellow creatures is meaningless unless we are able to translate it into caring action. This philosophy—the Business of Caring—is reflected in the center’s mission statement: “Helen Woodward Animal Center’s passionate belief that animals help people and people help animals through trust, unconditional love, and respect, creates a legacy of caring. Sharing this philosophy with others, the Center inspires and teaches, locally and globally, the importance of the animal-human bond.” Insights into the organization’s working philosophy, as well as the obstacles it confronts, can be gleaned from Scott Brigante’s documentary “The Business of Caring,” San Diego based Reel to Real Foundation (2011).

Conclusion

We have seen a range of sources that attribute the global economic crisis to flaws in the knowledge claims of financial experts. More specifically, the mathematical models espoused by quantitative investment managers have emphasized methodologies of risk assessment that they assume provide absolute control over market outcomes—Great Faith. However, errors in calculating and implementing such models have engulfed the world in *dukkha*, exposing a deeper systemic flaw, a dysfunctional epistemology unrealistically tethered to conceptual schemes—Great

Doubt. Deconstructing our obsession with abstraction and eschewing ideologically-driven dogmatism, a variety of individuals offer alternatives combining wisdom with compassion in the Great Death of delusion.

Our discussion began with a quotation from John Gray's pessimistic essay, "The End of a Dream." However we should emphasize that the end of the dream is the moment of awakening. Deconstruction offers a way out of the cunning schemes for quick profits that have wrecked havoc on our economy. As delusion ends we may open ourselves to alternatives that offer true sustainability. Such was the strategy underlying Cage's use of atonality or "proto-tonality" in his compositions, which aimed at the "disintegration of harmonic structure" to undo the damage of our deluded abstractions (Bach included). Cage urges us to maintain "an ambiguous tonal state of affairs" that rejects the familiar comforts of past harmony: "in a bombed out city the opportunity to build again exists. This way one finds courage and a sense of necessity" (Cage 1973, 62-64).

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