

EMERGENT FUTURES: AT THE LIMINA OF COMPLEXITY, AND CONSCIOUSNESS

by

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Standing between epochs is perhaps too misleading a metaphor to describe the current situation in futures research, as it conjures up an image of one foot in the past and the other stepping towards some distinct future. We use it, however, for that very reason, namely to point out the strengths and weaknesses of language, metaphor, and meaning in the pursuit of the future. Standing between epochs is the embodiment of a Cartesian metaphor, present or future.

A different metaphor, such as emergence, shows that the new epoch is far from a single location, or goal to be attained, or some fantasm waiting to be solidified by sciences yet to be invented. It describes something rather more like a field (as in field theory), emerging around us instead of feeling the Cartesian gravitational pull from a single future (Wheatley 1999). Said in a slightly different way, the future is not out there, it is in us, and around us, as observed by John Seeley Brown, director of Xerox PARC, who said about planning and the future: “The way forward is paradoxically to look not ahead but to look around” (Seely-Brown 2000).

That field around us is composed of myriad emergent elements. Those elements range from marginalized ideas and somewhat obscure disciplines (some ancient, such as the Taoism discussed below) to successful examples of new disciplines, especially those that have come to be known as the “new sciences.” (Wheatley 1999) The new epoch is also emerging around us in the form of thousands of examples of new communities of thought, practice, and being, a whole subset of which is documented in Paul Hawkins’ recent book *Blessed Unrest* (Hawkins 2007).

This new epoch is emerging, in part, by slipping the conceptual grips of the old sciences, and discovering and applying novel methods by incorporating images, metaphors and tools found in the new sciences. This is happening through the discovery of new frame-

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works and ways of being, allowing us to shift perspectives and successfully navigate the limina between epochs (Hoyningen-Huene 1993). The obstacles to doing this are many, and include our often times unconscious dependence/attachment to the comfortable toolsets and methodologies of the old sciences, the stability-seeking social architecture of existing disciplines and institutions, and the habits and illusions of mind, that we all share (Pohl 2000 and Faconnier 2004).

REGAINING CONSCIOUSNESS

Emergence, in this context, represents a higher order “blooming, buzzing, confusion” of choices and perspectives, with seemingly little to guide one successfully through the chaotic overload of possibilities, or help discriminate between the useful and the useless. Just as William James showed that subjective perception can bring order to his original description of the “blooming, buzzing confusion,” the world presents to our senses (Taylor 1992), it may now fall to futurists to codify how we might bring a new form of order to the “blooming, buzzing, confusion” of emergence.

In his paper “Towards an Integral renewal of Systems Methodology for Futures Studies,” Josh Floyd makes the point that simple “methodological pluralism” is insufficient to the development of these new frameworks and toolsets, and that to really address these issues, an “understanding of the structures of consciousness within which methodologies are conceived and applied is needed.” (Floyd 2008) This paper will examine the emergence of complex adaptive systems and the structures of consciousness which in part mediates our understanding of emergence and the resulting constellation of new opportunities to be found in the new epoch.

Understanding human consciousness has only recently become accepted as a valid scientific/experimental discipline. While philosophers have spent thousands of years on the subject, the so called hard experimental sciences were late to accept consciousness as an experimental subject, for many reasons, best summed up in Gerald Edelman’s book, *A Universe of Consciousness: How Matter Becomes Imagination*:

The reasons for this late acceptance are clear: Although all scientific theories assume consciousness and conscious

sensation and perception are necessary for their application, the means to carry out scientific investigations of consciousness itself have only recently become available (Edelman 2000)

For evidence of the strong resurgence of consciousness as an experimental science, one need only look to the “Science of Consciousness” conferences convened by the University of Arizona, Center for the Study of Consciousness, which have grown over the last decade to become a vibrant and productive interdisciplinary culture.¹ Or a similarly vibrant community of researchers and conferences around the Association for the Scientific Study of Consciousness at Caltech.² The European Union has a similar community emerging around project MindBridge.³ Ironically, early last century, there was a major revolution in scientific thought across many disciplines, with an integral focus on consciousness (Bertalanffy 1968, and Gerbser 1984).

ORGANISMIC ROOTS OF EMERGENT PARADIGMS

Early in the last century, a near simultaneous emergence occurred across disciplines of a broad new holistic/organismic framework countering the prevailing positivist, mechanist, and behaviorist philosophies of the time, and setting the stage for the later emergence of the sciences of complexity and consciousness. Looking back to the roots of this emergence was in part the subject of a series of lectures given by the founder of General Systems Science, Ludwig von Bertalanffy.

In 1968, itself a time of emergence, Clark University invited Bertalanffy to inaugurate the Heinz Werner lecture series. His opening remarks about those times observed that “Workers widely separated geographically, without contact with each other, and in very different fields arrived at essentially similar conceptions—sometimes to the point of almost literal coincidence of expression” (Bertalanffy 1968).

Heinz Werner, for whom the lecture series was named, was a German psychologist and founder of the Organismic Developmental School of Psychology and past Chairman of Clark University’s Department of Psychology. Werner was being honored by Bertalanffy at this inaugural lecture, for having developed perhaps the first “pro-

gram” to set a path of research beyond the positivist mindset, and especially beyond the reigning behaviorist mindset which had an iron grip on the direction and application of psychological research around the world. Werner introduced this new organismic developmental approach in his 1926 German edition of *Developmental Psychology*. It was two years later that Bertalanffy himself (with no prior knowledge of Werner’s work) would make a similar call for an Organismic Biology (Bertalanffy 1968).

During the lecture at Clark, and in the spirit of the times, Bertalanffy was not shy about pointing out the second order ill effects that the “failure” of the mechanist and behaviorist schools were having on society then, which sadly continue to the present day (Lakoff 2008):

More important than academic niceties is the fact that psychology today is a social force of the first order. Robot psychology still prevails in our society and, even more, seems necessary to keep it going: reducing man to the lower levels of his animal nature, manipulating him into a feeble-minded automaton of consumption or a marionette of political power, systematically stultifying him by a perverse system of education. ...turning Jeffersonian democracy into a manipulated herd of cattle (Bertalanffy 1968).

Bertalanffy points out that while Heinz Werner was the first to break with the positivist past, there were many currents and schools of thought emerging as a kind of second wave following on Werner’s Organismic Developmental framework. Reflected in the works of:

Gordon Allport, the Buhlers, Piaget, Goldstein, Maslow, J. Bruner, the New Look in perception, the emphasis on exploratory and play behavior, neo-Freudians such as Rogers and the ego-psychologists, Sorokin from the side of sociology, phenomenological and existentialist approaches and others. [Forming] what is sometimes called the “third force” or humanistic psychology (Bertalanffy 1968).

He went on to discuss elements of complexity and adaptation in nature as challenges to science to find new frameworks, and world views, setting the stage for the later emergence of complexity:

“What are the principles of order and organization [that] run right through all levels of reality and science? Goal directedness, adaptiveness and the like are facts observed in natural phenomena; how can they be accounted for by science? It appears an *expansion of categories*, [authors italics] models, and theory is necessary to deal with the biological, behavioral and social universes” (Bertalanffy 1968).

ANOTHER WAVE OF EMERGENCE

Another figure from that time, Jean Gebser, has recently found new relevance, as a prominent figure in the Integral Futures movement, along with Ken Wilber and others. Gebser, who has been described as a philosopher of culture, formulated a theory of the “transformations of the structure of consciousness, and proposed in his book “Ever Persistent Origin” that the time period, in the early 1900’s, was a time of parallel emergence of new frameworks across disciplines, and was also a time when consciousness itself made an evolutionary leap (Gebser 1984).

Underlining that the time period of this lecture, the 60s, was also a period of emergence, is the work of a small group of futurists working under the aegis of SRI International’s Social Sciences Research Group, which published an (at the time) obscure but controversial study called, “Changing Images of Man.” (Markley, Harman 1971) Many of the same insights Bertalanffy outlines are included in Changing Images’ main scenario and model for Humanity Transforming. Not insignificantly, their broadening of the images of humanity included incorporation of what would be called the fourth force in psychology, transpersonal psychology, hinting at the eventual emergence of the Integral Futures Movement.

Another remarkable voice from the 60s, William Irwin Thompson, penned a definitive meta historical context of those emergent times in which he clearly described the effects of consciousness on technology and the evolution of the culture. His vision of conscious technology stands as perhaps one of the clearest in detail and broadest in scope of any such normative scenarios (Thompson 1976 1977), and set the stage for later explorations of conscious technology (Glenn 1985 and Jin 2005).

ROOTS OF COMPLEXITY AND EMERGENT METAPHORS

Many new images and metaphors are emerging from the field of chaos and complexity science, and the insights they have stimulated in the hard sciences are slowly being integrated into their respective research agendas. Complexity science, replete with colorfully suggestive metaphors such as the Butterfly Effect, and Chaotic Attractors, caused a widespread interest in, and fascination with, possible applications and implications across myriad other disciplines including futures research.

We want to underline the crucial nature of metaphor in this regard, and its role in both communicating about and understanding complexity. George Lakoff and Mark Johnson make this same point in their book on the embodied mind:

Human cognition depends heavily on metaphor... [A] single complex, conceptual metaphor structure can inform a whole series of specific linguistic expressions, ... [M]etaphorical expressions are not simply fixed, linguistic conventions but rather represent the surface manifestations of deeper, active, and largely unconscious conceptual structures (Lakoff and Johnson 1999).

From its roots in the work of mathematician Rene Thom on Chaos and Catastrophe Theory, the meteorologist Edward Lorenz's discovery of the sensitivity of nonlinear systems to small changes in initial conditions, through the groundbreaking work of chemist Ilya Prigogine on dissipative systems, to its current embodiment in the insights and applications of the multidisciplinary learning community surrounding the Santa Fe Institute, the pursuit of non linear dynamic complex adaptive systems has also spawned its share of controversy. Relative to the application of non-linear dynamic systems (NDS) to the social sciences, Guastello had this to say:

It would be a legitimate debate whether NDS is a true paradigm of social science or a metaphor run amuck. There is some truth to both sides of the debate. On the one hand, metaphorical thinking is a major component of creative thought. If an idea truly represents a new paradigm, it is likely that scientists will see applications of it everywhere;

numerous phenomena will look different from what they had always looked like. On the other hand, metaphors can be notoriously misleading (Guastello 2002).

COMPLEXITY SPREADS BETWEEN DISCIPLINES

Misleading or not, complexity metaphors spread like pollen, cross-fertilizing many other sciences. It was also a two-way street, as contributions to complexity research emerged in individual disciplines as they reached their own limits of linear analysis. Like a self-similar fractal pattern, complexity also shared a near-simultaneous emergence in physics, chemistry, biology, psychology, and philosophy as its organismic predecessors did before it.

The hard sciences of biology, physics, and chemistry warmed easily to complexity as they could work with clear instances of complexity principles reflected directly in physical processes, allowing for a more traditional integration with experimental methods. Whereas, more controversial applications of chaos and complexity emerging from the soft sciences had to rely on more tenuous insights and metaphors in place of the more palpable “scientific” results of the hard sciences.

Such use of metaphor in the soft sciences was initially seen as controversial and ill-advised at best, to outright contrived and naively absurd at worst. As complexity frameworks, and the recognition of the importance of “syncretic,” associative and holistic thinking spread, and as emergent metaphors cross-fertilized disciplines, new calls for transcending the dichotomy between the hard and the soft sciences also emerged (Jin 2005).

COMPLEXITY SCIENCE IN AN INTERDISCIPLINARY CONTEXT

Complexity science survived this first round of irrational trans-disciplinary exuberance and a community of researchers formed to more methodically explore the potential interdisciplinary implications and applications of the new science. Under the stewardship of George Cowan, the Sante Fe Institute became one of the leading centers of interdisciplinary research into complex adaptive systems science, one of their early interests was in exploring its implications for the field of economics.⁴ Stanford economics professor Brian Arthur,

famous for his non-zero-sum theory of increasing returns, was recruited as the first director of the Economics Program at SFI.

In the early days at SFI, there was much discussion over SFI's role. Was it strictly a research facility, a policy think tank, or a combination of both? Arthur had strong opinions on the direction SFI should take. But from the beginning Arthur was clear about the distinctions between policy and research and the metaphors derived from their researches:

It turns out that an awful lot of policymaking has to do with finding the appropriate metaphor. Conversely, bad policymaking almost always involves finding inappropriate metaphors. For example, it may not be appropriate to think about a drug "war," with guns and assaults [Waldrup 1993].

Arthur's view of the powerful role metaphor can play in policy making greatly influenced his position on the role SFI should play:

[So from this point of view,] the purpose of having a Santa Fe Institute is that it, and places like it, are where the metaphors and a vocabulary are being created in complex systems [Waldrup 1993].

COMPLEXITY SCIENCE AND, STRATEGIC CRITICALITY

The strategic big picture implications of the advent of the complexity framework and our current context within it are well summarized by general systems theorist Ervin Laszlo, who in his book *The Chaos Point* states:

Chaos theory shows that the evolution of complex systems always involves alternating periods of stability and instability, continuity and discontinuity, order and chaos. We are living in the opening phases of a period of social and ecological instability—at a crucial decision window. When we reach the point of chaos, the stable "point" and "periodic" attractors of our systems will be joined by "chaotic" or "strange" attractors. These will appear suddenly, as chaos theorists say, "out of the blue." They will drive our

systems to the crucial point where they will select the one or the other of the paths of evolution available to them. In the current decision window, our world is supersensitive, so that even small fluctuations produce large-scale effects (Laszlo 2006).

Laszlo clearly conveys the urgency and need for preparing ourselves to be ready to meet the challenges of the “critical decision window” we face. In the next section of this paper, we will point to some obstacles in the way of successfully addressing these challenges. But first we must make a brief excursion into the epistemology of circularity and paradox to fully contextualize the “structures of consciousness” we must understand if we are to overcome the limits of the old epoch, and successfully navigate the turbulent flow of the emergent present.

CIRCULARITY, RECURSION, AND PARADOX

Recursion, or circularity, is a recurring (unavoidable recursive pun) subtext to this paper, and, as we shall see, one of the inescapable elements of dealing with any transition between paradigms. Varela, in his essay on the Natural History of Circularity (Varela 1984) comments on the inevitable emergence of paradox out of circularity, as an indicator of reaching the edge of one’s knowledge system, requiring a shift in perspective to see beyond.

“Paradox is exactly that which cannot be understood unless we examine it by leaping beyond both levels tangled in the structure of the paradox.”(Varela 1984).

Perhaps even more telling and relevant, is the conclusion Varela reaches in his exploration of the nature of circularity and its ultimate meaning in the pursuit of knowledge.

We live in an apparently endless metamorphosis of interpretations following interpretations. It reveals to us a world where noground and no-foundation can become the basis for understanding, that the age-old ideal of objectivity and communication as progressive elimination of error for gradual attunement is, by its own scientific standards, a chimera. We should do better to fully accept the notoriously different and more difficult situation of existing in a

world where no one in particular can have a claim to better understanding in a universal sense. This is indeed interesting: that the empirical world of the living and the logic of self-reference, that the whole of the natural history of circularity should tell us that ethics—tolerance and pluralism, detachment from our own perceptions and values to allow for those of others—is the very foundation of knowledge, and also its final point. At this point, actions are clearer than words” (Varela 1984).

One could say that in a single stroke, Varela has reduced all of science and the pursuit of knowledge to a groundless daydream bounded by paradox, from which we can never awake through the use of argument or discourse alone. He prescribes instead, action as the only means of transcending paradox, and achieving higher order understanding.

Echoes of Varela’s conclusion are found in most of the new sciences, from Quantum Mechanic’s repudiation of the objective observer, and its realization that the universe is at its core based on relationships and not an objective hierarchy of atomic particles (Walker 2000 and Peat 1991) to Kurt Gödel’s incompleteness theorem (Goldstein 2005), and perhaps most relevant to this example, the Taoist concept of Wu-Wei (Cline 2003).

We will return to these ideas and to Varela’s conclusion later in this paper, and in particular the implications relative to prescriptions for action, and the development of new methodologies. After a brief disclaimer regarding our use of terms, we will look at some of the obstacles to fully incorporating these complexity-related frameworks into our world view. Many of these obstacles stem from innate habits and illusions of mind.

A NOTE ON OUR USE OF THE TERMS EPOCH AND PARADIGM

We have hesitated up to now, to use the more familiar term *paradigm* to describe a new epoch, because the term paradigm is so often interpreted only in the sense of what Kuhn called an “exemplar”.⁵ We focus rather on Kuhn’s secondary interpretation which he refers to as the “Disciplinary Matrix:”

A disciplinary matrix is an entire theoretical, methodological, and evaluative framework within which scientists conduct their research. This framework constitutes the basic assumptions of the discipline about how research in that discipline should be conducted as well as what constitutes a good scientific explanation” (Hoyningen-Huene 1993).

A recursive example of this disciplinary matrix, within futures research, is the emergence of the integral futures movement. It is recursive because, as Richard Slaughter and others have pointed out, integral futures is itself an integration of earlier frameworks previously excluded from futures research (Slaughter 2008).

OBSTACLES, ILLUSIONS, AND HABITS OF MIND

Paradox emerges not only in the epistemological arena referred to by Varela, but is also present in a broad array of “cognitive illusions” that are inherent in the biophysiology and cognitive programming of our perceptual systems (Pohl 2004). These cognitive illusions can and usually do have a profound effect on our ability to see or think outside of whatever disciplinary box we inhabit. We are, on a daily basis, usually and unconsciously in thrall to many of these cognitive illusions, which work in synchrony with the social architecture of a discipline, or a community of practice, to reinforce the practices and perspectives of the existing epoch.

One of the more stubborn cognitive illusions affecting our ability to make full creative use of new tools is called functional fixedness:

When people develop functional fixedness, they recognize tools only for their obvious function. For example, an object is regarded as having only one fixed function. The problem-solver cannot alter his or her mental set to see that the tool may have multiple uses.⁶

The point here, in the context of complex adaptive systems Science, is that the tools and insights derived from the new sciences are most probably being applied through the lens of one form of functional fixedness or another.

Even though most researchers would probably feel they were free of positivist influences in their work, the power of the meta-

phors of the mechanistic worldview, the nature of functional fixedness, and the social architecture of one's discipline, almost guarantee that vestiges of positivism will tenaciously affect our creative thought, especially as it applies to defining the role of new tools and how to apply them to one's discipline (Wheatley 2002).

Take, for instance, the simple notion of framing a research topic as a problem. A problem, by its nature, demands to be solved and, almost as a knee jerk reflex, we organize the pursuit of solutions to problems, and as a hierarchical strategy, we divide-delegate and analyze. This "strong bias towards solution seeking"(King 2006), how it becomes an obstacle, and how it fits into our larger meta perspective is nicely described in an article by Jonathan B. King in the *Journal Teaching Business Ethics*:

There are fundamental differences between seeking-to-solve and seeking-to-understand. We are strongly biased toward seeking-to-solve on a number of dimensions. As a result, we are increasingly at risk in a world that is becoming increasingly complex and fast paced. We therefore need to understand these biases so that we can defend ourselves—we need to develop (moral) concepts and methods of inquiry that transcend our dominant and pervasive analytical presuppositions (King 2006).

A concrete example of this effect can be seen at work in the WFUNA Millennium Project's 15 Global Challenges (Glenn and Gordon 2001-2008) When this cluster of 15 global issues first emerged through the Millennium Project's global Delphi surveys, they were consciously described as "Challenges" to try to avoid the problem-centered issues raised above. However, in practice, even members of the Millennium Project invoke the "seeking to solve" bias in calling for solutions and mitigation strategies for each of the challenges.

We would propose that the walls set up by these types of biases are not hard and fast prisons from which there can be no escape, but are more akin to bad habits which can, with a little work, be overcome. One method for overcoming habits of the mind suggested by complexity science is to stretch beyond the familiar stable center of our thinking, to stray consciously into new territory, and to listen

with new ears to the “noise” or the “chatter” on the edge of our respective disciplines or organizations, and to do so on a regular basis.

As an example of such an exercise, the next section will stretch well into what for most of us might be unfamiliar territory, Taoist Philosophy.

TAOISM - ANOTHER ORGANISMIC WHOLE SYSTEM FRAMEWORK

We’ve already looked at the promising emergence of the complexity framework from within the old epoch, and sampled the types of obstacles in our path to transcending the positivist remnants of the old epoch. And now we will look to find tools which are emerging from these new frameworks, with which we might craft new methodologies. Curiously the new tools are sometimes mirror images of the obstacles we encounter.

Take for instance the problem-centered focus just discussed, and the concomitant striving for a solution. An almost mirror image to this strategy can be found in a powerful set of three root concepts from the “Tao-Te,” the ancient Chinese Taoist philosophy. These three highly interdependent root concepts are: Wu-Wei, Wu-Chih, and Wu-Yu. The first of these interrelated concepts, “Wu-Wei” is usually poorly translated for the Western mind as, Doing Nothing, Inaction, or sometimes with slightly more insight as Action Through Non-Action.

Wu-Wei, or "nonassertive action," is action in accordance with unprincipled knowing, acting in such a way as to take up, or at least to appreciate, the particular perspective of a thing.... This simply means that one cannot understand Wu-Wei as distinguishable in the same manner as are knowledge and action in the Western senses of those terms (Hall 1984).

The rational analytic mind interprets Wu-Wei as doing nothing, which immediately poses a paradox where action somehow emanates from non action. Paradox even stalks the proposition of how one might attempt to achieve this state.

The paradox of Wu-Wei centers on the fact that "effortless action" is a state that must be achieved, prompting the question of how it is possible to try not to try, or, more specifically, how a program of spiritual striving can result in a state that lies beyond striving (Cline 2003).

Wu-wei is one of the tools used in the methodology discussed at the end of this paper. In that context, it is utilized as a non directive form of alertness, one might otherwise describe as a kind of peripheral vision for picking up weak signals. In its application to the methodology we call SOCBED (Self Organizing Community-Based Economic Development), it acts as a navigational tool to inform key decisions and strategies for action.

DIGGING DEEPER INTO THE TAOIST FRAMEWORK

We began this section with reference to the somewhat obscure Chinese Taoist Framework deliberately, to highlight the magnitude of the conceptual gulf that must be spanned in order to fully appreciate and apply new frameworks from outside one's traditional experience. We will continue with this example from Taoism, as we feel it may offer new ways of thinking about equivalent emergent patterns in other frameworks, such as from General Systems Theory, Organismic Developmental Psychology, Deep Ecology, Complex Adaptive Systems, and Integral Futures.

As perhaps one of the earliest frameworks describing humanity's relationship to the universe, Taoism wears its age well and, in the light of the new sciences, can be seen to be a remarkably relevant, effective, and fertile framework for developing new perspectives and methodologies for dealing with rapid change, complexity, ambiguity, and uncertainty (Thompson 1976, Glenn 1985, Jin 2005).

Delving a bit more into the concept of Wu-Wei will, hopefully, illustrate some of its depth of meaning and potential range of implications for the Western mind. Wu-Wei, is in fact such a deeply textured and globally profound concept, that in some ways it rivals in importance, the quantum concepts of "uncertainty" and "entanglement," and as such deserves in depth study to more fully appreciate its implications.

As described previously, Wu-Wei cannot be truly understood outside of its interdependent relationships to two other Taoist con-

cepts, Wu-Chih, and wu-yu. These three terms are second only in importance to the overriding concept of the Tao itself.

In Taoist philosophy, the Tao is actually considered to be a bifurcated entity referred to as the Tao-Te, "Tao" being the vast undifferentiated whole of the universe and "Te" being the local focus of the moment within the Tao. Perhaps one of the clearest and most succinct descriptions (for the western mind) of how these three concepts interrelate and are interdependent with the Tao, can be found in an article by David Hall in *Philosophy East & West* (Hall 1987).

"The concepts of Tao and Te form a single notion, Tao-Te, which is best understood in terms of the relationship of field (Tao) and focus (Te). By recourse to the model of a holograph, one may get some notion of the relationship of tao and te. In a holographic display, each element contains the whole in an adumbrated form; so each thing in accordance with its Te contains the totality; the particular focus of an item establishes its world, its environment. In addition, the totality as sum of all possible orders is adumbrated by each item" (Hall 1984).

So while the Te is considered to be the focus of the moment, it is not only a singularly embodied element of the whole but is at the same time an "adumbrated" reflection of the whole. The author likens this to the functioning of a hologram, where even the smallest piece of a hologram reflects, albeit at lower resolution, the entirety of the whole. And, in a classic literary paradox clearly echoing Varela's earlier words, it is said that the Tao that can be described, formulated or interpreted, is not the true Tao.

WU-CHIH, WU-WEI, AND WU-YU

The Wu-Chih concept speaks perhaps most directly to the need to transcend the positivist mind set, escape categories and classifications, and best reflects the organismic sense of seeing the system as a whole:

Wu-Chih means "noknowledge"; it is best understood, I believe, as "unprincipled knowing," the sort of knowing that does not have recourse to principles as external, de-

termining sources of order. Wu-Chih involves knowing the Te of a thing rather than knowing that thing in relation to some classificatory concept--as an instance of a universal, or a member of a class. Ultimately Wu-Chih permits a grasp of the Tao-Te relationship of each encountered item and permits, therefore, an understanding of the world construed from the particular focus (Te) of that item (Hall 1984).

The concept of Wu-Wei can spring only from this base of the "unprincipled knowing" of "Wu-Chih," resulting in action stemming not from rationality or one's will, but from a spontaneity not unlike what is called upon in sports, or martial arts. When you are "in the zone" you are experiencing effortless action. In this instance the analytic mind is subservient to the embodied mind (Evan Thompson 2007).

Such actions must be spontaneous (Tzu-Jan), which is to say that they must not be mediated by rules or principles. This simply means that one cannot understand Wu-Chih and Wu-Wei as distinguishable in the same manner as are knowledge and action in the Western senses of those terms (Hall 1984).

The concept of Wu-Yu, likened to "Objectless Desire" is perhaps closest to a western spiritual, mystical or shamanic principle. Wu-Yu reflects in part what has been labeled by Aldus Huxley as the Perennial Philosophy. A particularly western interpretation can be found in the book *Philosophy of Consciousness without an Object* by Franklin Merrill-Wolf (Merrill-Wolf 1983).

Wu-Yü means something like "the absence of material desires." I would characterize that term as meaning "objectless desire." This seemingly odd locution is justified, I believe, by the fact that neither unprincipled knowing nor nonassertive action can in the strict sense objectify a world or any element in it. The sort of desiring associated with the Taoist sensibility, therefore, must be understood as in the strictest sense "objectless." The claim here is that enjoyments are possible without the demand that one define,

possess, or control the occasion of one's enjoyment." (Hall 1984).

How these unusual concepts are reflected in the West, and thus embodied in practice, can be seen, in part, in the new proto-method presented in the next section, especially in its approach to establishing Temporary Autonomous Zones (Hakim Bey 2003 and Doherty 2002). Temporary Autonomous Zones, (TAZ) in many ways embody, in a physical space, some of the Taoist elements described above. Wu-Chih is encouraged in a space that is systematically stripped of its social programming, thus eliminating "external determining sources of order." Wu-Wei is evident in the initial stages of the method as a passive receptivity to cues and feedback from the community, resulting in spontaneous actions to fine-tune elements of the method.

Temporary autonomous zones also offer a space in which to close the divide between the virtual and the actual. The TAZ can act as a new high bandwidth human interface to the virtual world, finally convolving meaning and purpose in virtual space with action and policy in actual space.

SOCBED - A FUTURES PROTO-METHODOLOGY EMBRACING ORGANISMIC COMPLEXITY

We will now introduce a very abbreviated thumbnail example describing a new method which draws on many of the concepts discussed above. It is presented in the format of a mini case study, as opposed to a more formulaic outline in hopes of underlining the sometimes ad hoc spontaneity that is a vital component of implementation and execution of this method.

Self-Organizing Community-Based Economic Development (SOCBED) draws from a dynamic mix of elements in part derived from the Social Architecture⁷ methodology called "adventure theater,"⁸ pioneered by Jim Channon as a tool for organizational change and transformation. It includes various humanistic and transpersonal exercises, narrative, storytelling, myth and drama, with direction derived from principles of complexity, emergence, self-organization, and the Taoist concepts discussed above.

The SOCBED method, came about while the author was serving on a committee to examine the feasibility of creating a university on

the Hawaiian island of Maui. When the committee exhausted its search for a viable business model, the author proposed an alternative model, which could be easily produced as a test and a demonstration of how something like a university might self-organize on Maui, drawing on Hawaii's indigenous communities of practice and excellence such as ocean science, astronomy, complimentary and indigenous medicine, and the small but vibrant high-tech community growing around the Maui High Performance Computing Center. It was glibly described as a learning-community exercise.⁹ The SOCBED acronym was born, out of a necessity to overcome one last obstacle to funding the proposal. The director of economic development was sympathetic to the idea of the grant, being partly responsible for the university committee's charge, and having little to show after a year's worth of meetings, he wanted to act favorably on the grant request, but the informal and somewhat vague proposal offered him was not what he was used to.

Inevitably the discussion came down to justifying the dollars invested. "Where was the business plan and budget." In an inspired moment of fiscal Aikido, the vagueness of the proposal was turned into a strength. By describing the proposal as a way to demonstrate a new methodology called self-organizing, community-based economic Development, and precisely because it was self-organizing, it was impossible and in fact oxymoronic to try and create a business plan and budget in advance. After it was well underway, the "emergent" business plan and financial model would become clear and could then be documented at length.

At this point, his understanding of, and/or tolerance for these new ideas was rapidly approaching saturation. Drawing on the ace in the hole of any bureaucratic negotiation, an acronym was created, SOCBED. Knowing full well that any acronym ending in BED had a far greater chance of passing muster in a mayor's office than some esoteric complexity reference.

SOCBED THE METHOD

SOCBED, as described in the previous section, is a method for discovering and nurturing emergent opportunities in a given community. The main toolset cycles through three phases in roughly the following order:

- Action Research
- Appreciative Inquiry
- Mimetic Prospecting
- Management by Self Selection
- Social Architecture
- Temporary Autonomous Zones

Looking at each of these three phases in more detail, we can see elements emerging that are somewhat homologous to a traditional business plan, but the emphasis and order of execution are very different.

SOCBED PHASE I

In the initial stages of a SOCBED project, the traditional business plan is replaced with an action research plan (no longer than a silicon valley “elevator pitch”) that continually cycles and adapts through the steps of appreciative inquiry and memetic prospecting and back. Through a continual testing and feedback of various candidate memes, eventually a central core of organizing memes will emerge from this early stage. This process is applied throughout all interactions with the community, whether it is a casual conversation on the street, a community meeting, or a more elaborate expression through performance, workshop, etc. In this case, the initial formulations of the meme were around the notion of starting a Cyber Cafe and Learning Center.

Mimetic prospecting is a term invented to describe the process of appreciative inquiry undertaken at the start of a SOCBED project. In some ways, it is not unlike the classic concept of mimesis, “a stylizing of reality in which the ordinary features of our world are brought into focus by a certain exaggeration [or imitation]” (Michael Davis 1999) however in a SOCBED project, the focus is on stylizing a typical reality, whether that is a preferred future, a community vision, a mythic narrative, or some other emergent reality.

The mechanics of implementing this phase are simple: Get the current meme candidates out in the community and then listen for their effect. This is not unlike a market test phase of a more traditional project, only the feedback you are looking for is not related to mass appeal, but rather you are looking for a bifurcated response. A good meme will elicit one of two responses; a tempered, but non-

committal enthusiasm, or a lightning-strike-like reaction of unrestrained enthusiasm and recognition as meeting some deep, possibly life-long goal, or interest. Once you have tuned your memes to this level, you will have ignited the self-organizing, self-selecting properties of a SOCBED project.

SOCBED PHASE II

As the self-organizing engine starts, the SOCBED process proceeds to the next step by managing the people and resources attracted by the project's central memes, using a self-selection criteria. A SOCBED project is fueled to a large degree by the passion of those who choose to participate, and they self select their roles and responsibilities. Using social architecture tools and lessons from the nascent art of managing through self selection, the rough outlines of the emerging community become defined.

Once a project has reached this phase, there will be at first a trickle, then a more steady stream of those wanting to self select into the project. This type of process comes with a whole set of new management challenges unlike those you would expect to find in a more traditional project. You are not creating personnel rosters and categories of needed talent and then interviewing people for the job, you are rather faced with an interesting set of puzzle pieces, a group of self-selected personnel, each with their own talents and resources and overflowing with passion and urgency to do something.

At this stage, the temptation is great to try to force fit the pieces into some more recognizable form. Another temptation is to triage those considered to be superfluous to that form or those who just don't seem like they would fit in socially, attitudinally or otherwise. This is where management by self selection requires large margins of tolerance and patience, and something of a choreographers sense of orchestrating emergent patterns of movement and activity. You must tolerate even the most disruptive elements for a time, as complexity dictates, solutions often come from the turbulent disruptive elements of a system. And from experience, we can say that some of the most remarkable breakthroughs coming from use of this method have come through the most disruptive elements, who would have been summarily fired, exiled, or shunned in any other organization.

SOCBED PHASE III

Depending on how a particular project emerges, the need for this last step of creating a temporary autonomous zone may need to occur earlier in the process or in parallel with one of the first two phases. Flexibility in all phases is indicated, as is cultivating the skill of recognizing opportunity, no matter how obscure, irrational or repugnant they might seem from a traditional management perspective.

It is at this phase of a SOCBED project that the temporary autonomous zone becomes a crucial stage on which the emergent choreography of self-selected resources will find their own optimum patterns of relationship to the whole. The temporary autonomous zone is somewhat loosely interpreted here from its more radical roots (Hakim Bey 2003 and Doherty 2002). We, instead, work with the most basic elements of the temporary autonomous zone, such as crafting of public or private spaces that are as devoid of cultural overlays and programming as possible, while simultaneously filling them with a creative mix of resources in novel juxtapositions. Such a space provides a fertile ground for emergence, especially when tuned toward the primary memes of the project.

As soon as an appropriate space emerged in our current example, and was structured as an autonomous zone, it acted like a magnet drawing out more self selected individuals, organizations and resources, all of which served to begin a continuing process of sculpting the space as a TAZ. Within a month or two, remarkable transformations had occurred. Murals, a large dance floor surrounded with six foot tall mirrors, \$250,000 worth of Silcon Graphics and Macintosh computers, had all arrived as well as a volunteer-staffed business incubator, and of course a cappuchino machine.

CONCLUDING THOUGHTS

In conclusion, it seems only appropriate to return to the image of standing between epochs, where the ground between epochs is now seen to be dotted with obstacles to fully engaging emergent futures. Instead of appearing as obstacles, however, they each appear as compelling, accepted paths, which seem logical and comfortable to pursue in advancing a cause, quest, or question. They engage us, instead, in “apparently endless metamorphosis of interpretations following interpretations.” where “‘no-ground’, ‘no-foundation’ can become the basis for understanding.” Where effective action comes

only from a passive receptivity to your current role and its place in the larger context.

No simple shuffling or combining of existing methods can finesse this endless paradox, unless a deeper understanding of the frameworks and mindsets involved has been incorporated into the process. Taking a lesson from early consciousness research suggests that the effectiveness of any experience with a new state of consciousness, framework or perspective of mind, is only as effective as our ability to adopt it totally into our consciousness and belief systems "as though it were our own" (Lilly 1968). Beliefs must be fully inhabited and embodied for effective learning to truly take place. There is a second, and important, part to Lilly's principle and that is: Once you have fully experienced the new framework, you must return to your consensus reality, in an action research step to compare and absorb your new understanding with the old.

"At this point, actions are clearer than words."

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NOTES

1. <http://www.consciousness.arizona.edu/>
2. <http://assc.caltech.edu/index.htm>

3. <http://www.eumindbridge.org/Site/Intro.html>
4. One of SFI's first grants came from Citicorp chairman John Reed.
5. A concrete achievement that defines by example the course of all subsequent research in a scientific discipline.
6. "Functional Fixedness." Encyclopedia of Psychology. 2nd ed. Ed. Bonnie R. Strickland. Gale Group, Inc. 2001. eNotes.com. 2006. 20 Mar 2008 <http://www.enotes.com/gale-psychology-encyclopedia/functional-fixedness>
7. <http://arcturus.org/arcturus3/?q=node/2>
8. <http://arcturus.org/arcturus3/?q=node/5>
9. Mainly to avoid muddying the waters with the need to explain the complexity and self organizing foundations of what was being proposed, and because a lack of specificity and vagueness are a key component of this phase of the method.

¹ <http://www.consciousness.arizona.edu/>

² <http://assc.caltech.edu/index.htm>

³ <http://www.eumindbridge.org/Site/Intro.html>

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⁶ "Functional Fixedness." Encyclopedia of Psychology. 2nd ed. Ed. Bonnie R. Strickland. Gale Group, Inc. 2001. eNotes.com. 2006. 20 Mar 2008 <<http://www.enotes.com/gale-psychology-encyclopedia/functional-fixedness>>

⁷ <http://arcturus.org/arcturus3?q=node/2>

⁸ <http://arcturus.org/arcturus3?q=node/5>

⁹ Mainly to avoid muddying the waters with the need to explain the complexity and self organizing foundations of what was being proposed, and because a lack of specificity and vagueness are a key component of this phase of the method.