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ENERGY-FLOW—A NEW PERSPECTIVE ON JAMES MACGREGOR BURNS’
TRANSFORMING LEADERSHIP: A NEW PURSUIT OF HAPPINESS

PI-JERN CAROLINE FU

A DISSERTATION

Submitted to the Ph.D. in Leadership & Change Program
of Antioch University
in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

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This is to certify that the dissertation entitled:

ENERGY-FLOW—A NEW PERSPECTIVE ON JAMES MACGREGOR BURNS’
TRANSFORMING LEADERSHIP: A NEW PURSUIT OF HAPPINESS

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DEDICATION

In memory of my ever-loving parents, Professor and Mrs. Chong-Te Fu,
whose energy-flow continues to inspire me to
spread my butterfly wings and soar to fulfill the aspirations of my dreams.

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My scholarly pursuit in this Ph.D. Program has been a superb learning and transforming experience. I find myself fulfilling many of my deepest longings. I feel so blessed to have my dissertation committee. They immersed me in wisdom, gave me their utmost attentiveness and unwavering intellectual sustenance, and embraced me in their own transforming energy-flow. Al, you have been patiently advising and shepherding me from day one in the program and encouraging me to follow my dream. Laurien, your insights in going beyond the prevalent notion of dissertation research to bring energy-flow into a collective presence and grounding my theoretical ideas to the practical realm lingers in my heart. You both urged me to follow Peter's wisdom. Peter, Peter, Peter, "how can I ever thank thee" for your sagacious guidance. You are my inspiration and guiding light on this learning journey in which I have discovered the merit of the energy-flow concept. Your confidence in me has kept me sane while I explicate and liberate my "true energy," and continues to reassure me that I am actually not crazy. Your familiarizing me with polymathic traditions has taken me to a transcendent level of leadership meaning, and heightened my logic reasoning and writing skills to levels that I had never dreamed attaining. I am indebted to your sharp mind and wit, which invoked my many paradigm shifts. Each shift led to a higher intellectual "flow" in my lifelong learning. I am so grateful, Al, Laurien, and Peter for your presence in my paradigm that made it possible to bring an extremely difficult concept into being. Thanks to Ruth, as an external reader, for her perspective from a different paradigmatic frame of reference.

Behind my degree committee are many favored professors. Dr. Richard Couto, my deepest gratitude to you for recognizing my concept of integrating Tao of leadership and quantum physics was worth pursuing. You have unrelentingly inspired and advocated for me, so bravely. I enjoyed co-authoring with you and your including my Virtuous Leadership Loop in *The Authentic Leadership of Sacred Texts* paper presented at the 2004 Gallup Leadership Summit (Couto & Fu, 2004). Dick, without your innovation and influence, this pursuit of scholarship would not have transpired to this state of being. Dr. Elizabeth Holloway, you initiated my curiosity in hermeneutics, which contributed to and improved my interpreting ancient and modern texts. Dr. Carolyn Kenny, your introducing me to phenomenology, the hermeneutical spiral and horizon cloud helped me interpret my epiphanies. Dr. Jon Wergin, you sparked this dissertation journey to unfold and enfold deeper meanings of transformational leadership. I also want to include my heartfelt thank-you to our superior librarians and program support staff, Deborah Baldwin, Cathy Boswell, and Vickie Nighswander; I much appreciate your sustaining devotion to our learning.

My dearest sphere of gratitude encompasses my soul mate and dedicated dissertation editor, my hubby, Richard Bergeon, and my sweet and angelic daughter, Desirae Fu. Included in this sphere are also my inspiring philosopher sister, Pi-Yau Lin, and engineer brother-in-law, Dr Kuang-Ming Lin. With all of your love and wholehearted reassurance, I have become a butterfly, ready to spread my wings and fly.

ABSTRACT

This theoretical dissertation documents a personal transforming leadership experience; during which, I explored my *Leadership as Energy-Flow* model by having a virtual dialogue with the polymathic works of theorists and thinkers to corroborate and refine it. The model consists of a theory and a conceptual scheme. The energy-flow theory, based on the laws of physics and Chinese philosophy and cosmological science, fashions the energy-flow conceptual scheme. Using the conceptual scheme, I delve into the *Premise of the Dialogue*, “In what ways and to what extent would using the energy-flow frame of reference describe and stimulate new meanings in *Transforming Leadership: A New Pursuit of Happiness?*” I venture forth in this exploration, sparked by Bertrand Russell’s (1938) and James MacGregor Burns’ (1979) on leadership power, to discover how one might use energy-flow abstractions to represent leadership phenomena. Energy-flow abstractions are images of events captured in thought, within which one unfolds and enfolds new meanings and deepens understanding of transforming leadership. The dialogue with six different traditions includes the works of: Alfred North Whitehead on philosophy and science, Ilya Prigogine on physics, Abraham H. Maslow on human potentials, need hierarchy, and management, Mihaly Csikszentmihalyi on psychological energy-flow, Richard Gerber on physiological energy-flow and vibrational medicine, and Ralph H.G. Siu on quantum and the Tao of science of leadership. The dialogue then continues into the work of Burns (2003). Many of my epiphanies, using the energy-flow conceptual scheme to fathom transforming leadership theory, induce some propitious ideas for further exploration in viewing leadership as energy-flow and using energy-flow as a basis for deciphering human affairs.

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Chapter I: Introduction

This is a theoretical dissertation. This scholarly pursuit fashions a *Leadership as Energy-Flow*¹ model, which comprises a theory and a conceptual scheme², to delve into a less-obvious realm of leadership and transformation. The model draws upon the existing disciplines of physics and Chinese philosophy and cosmological science. The works of six major thinkers and theorists from six different traditions provide support and illuminate the energy-flow theory. This dissertation illustrates how to employ the energy-flow conceptual scheme as a framework by exploring *Transforming Leadership: A New Pursuit of Happiness* (Burns, 2003). The learning from the exploration refines and improves the use of the *Leadership as Energy-Flow* model.

What is a Theoretical Dissertation?

There seems to be numerous opinions about what a theoretical dissertation is. There appears to be no definitive agreement. Very often, universities and students explain a theoretical dissertation by describing what is a theory, a theoretical model, a theoretical study, or a theoretical research to differentiate from practice or applied research. I found the following definitions of a theoretical dissertation in my search for it in publications:

We can distinguish three different kinds of student dissertation: theoretical, methodological and empirical. Each of these demands different discussion of 'methods' . . . Theoretical: here you claim to develop some theoretical insights by means of a critical review of a body of literature. In the theoretical dissertation, your methodology chapter will need to discuss your rationale for selecting your corpus of literature and any illustrative examples. It will also need to show how you have attempted to produce a systematic analysis . . . (Silverman, 2005, p. 301)

¹ *Leadership as Energy-Flow* concept binds two thoughts into one abstraction. It denotes the proposed concept to describe human affairs as abstractions of concrete facts and leadership as process flow of energy in a spatiotemporal field of relationships.

² Conceptual scheme—The Oxford University Dictionary of Philosophy defines it as the general system of concepts, which shape or organize our thoughts and perceptions. The outstanding elements of our everyday conceptual scheme include spatial and temporal relations between events and enduring objects, causal relations, other persons, meaning-bearing utterances of others, and so on. (Blackburn, 2007)

What is the difference between an empirical dissertation and a theoretical dissertation? Dissertations that involve your collecting information from people (using interviews, questionnaires, focus groups) or analysing [sic] items you have collected (such as images, text, film, video) are usually called empirical dissertations: Library-based dissertation undertaken by critically analyzing and engaging with theoretical literature in your discipline are usually called theoretical dissertations: . . . In this type of dissertation, you would be critically engaged with, and providing your own interpretations in relation to, the theoretical literature relevant to the topic . . . (Bhatt, 2004, p. 411)

. . . to write a theoretical dissertation and bypass the need for data collection entirely. This is by no means an easy alternative. Original theoretical contributions are a profound intellectual challenge. . . . If you choose to pursue a theoretical dissertation, you will be expected to argue from the literature that there is a different way of understanding a phenomenon than has heretofore been acknowledged. Some of the more viable theoretical dissertation in the social sciences are those that bring together or integrate two previously distinct areas . . . (Rudestam & Newton, 2007, pp. 54-5)

My mentor, Peter B. Vaill provided the following definition for me:

A theoretical dissertation is one whose process is one of reflection on existing bodies of raw or interpreted data, and whose output is a new theory explaining some phenomenon, or a substantial addition or modification to some existing theory which, within the dissertation itself, is not tested against an appropriate body of empirical data (Vaill, Wergin, & Kenny, 2007, Vaill's definition).

This theoretical dissertation seems to meet the requirements as stated in the information provided above. My own experience in this dissertation prompts me to offer my own definition of a theoretical dissertation as an energy-flow and a transformation experience, an unfolding³ and enfolding⁴ of new meanings about a subject of interest:

A theoretical dissertation is documentation of abstractions (by text narrative, visual, audio, or other means) that captures a personal transforming experience in a pursuit of scholarship. Beginning with a transforming vision, a new theory, one identifies the gap between the current knowing and the desired knowing. By having a continuing dialogue exploring the works of subject area theorists and thinkers, one confirms and refines that new theory and expands one's knowing.

³ Unfolding meaning is a practice to think differently. This thought must enter deeply into our intention, actions, and so on – our whole being to bring about a different, more harmonious reality (Bohm, 1980, 1985).

⁴ Enfolding – means implicate or to fold inward. The implicate order, in which any element contains enfolded within itself the totality of the universe. The concept of totality includes both matter and consciousness (Bohm, 1985).

One may encounter difficulties articulating a new theory or identifying the gap of knowing. As indicated in Vaill's definition above, a new theory may be a substantial addition or modification to some existing theory. A substantial modification may constitute an integration of different existing theoretical disciplines into a collective whole. The new theory, as a collective whole, is an "enfoldment" of the collective "unfoldment" from existing theories (Bohm, 1980, p. 185).

The enfoldment of a new theory may bring into being newfound attributes, which are so intricately bound; attempting to dissect and analyze them from the reference frames of its original existing theory would become abstruse and lose its new meaning. The newfound attributes may be perplexing and obscure the intended closure point of knowing. Thus, if one sets one's desired aim too far out for a dissertation then one may not be able to close one's intended knowing gap; or too close in, then there is not enough effect to demonstrate scholarly achievement. Jon Wergin, my Antioch professor confirms that theoretical dissertations are difficult because they are "examples of integrative scholarship (difficult enough by itself)." "They also have the challenge of reframing the knowledge base in a way that, as Peter [Vaill] notes, 'no one has ever explained before'" (Vaill, Wergin, & Kenny, 2007, Wergin's notes).

Another Antioch professor, Carolyn Kenny resonates, "theories shift and change over time. A nice quality for a theory is plasticity⁵! The world is changing so quickly. We need theories with flux that can just as quickly accommodate the swift changes" (Vaill, Wergin, & Kenny, 2007, Kenny's notes). Perhaps what constitutes a theoretical dissertation is the gap identified is subjective rather than objective; and the student and assessors of the work would consider shifting their thinking to accommodate the swift changes. An assessment of the

⁵ Plasticity: ability to be molded and to retain its change in shape. The "difference between *ceteris paribus*, the classic scientific qualification, and *mutatis mutandis*, which means, 'with the necessary changes' . . . So we would not say, 'Energy-flow is valid for all leadership situations *ceteris paribus*.' Instead we would say, 'Energy-flow is valid for all leadership situations, *mutatis mutandis*,' which is the plasticity idea" (Vaill, 2008, plasticity).

achievement may measure how and what the student has experienced as epiphanies while documenting that experience may articulate those abstractions in writing. However, epiphany experiences differ from one to another. One's epiphany may appear too trivial or so far-off our commonsense gauge that it may require assessors to shift their own paradigm and adopt new measurement criteria to fathom the contribution of the new theory.

The quality assessment of a theoretical dissertation depends on confirmation of the credibility of the literature selected to support the new theory. The quality of analysis hinges upon how well the selected literature coherently corroborates with the new theory. Other assessments might consider to what extent the dissertation demonstrates the use of the new theory and in what way the new theory contributes to the subject area and expands the student's knowing. For example, in Chapter VI, *Table 6-3* demonstrates how I use the *essential energy-flow* in *Leadership as Energy-Flow* Model to map the dissertation process of refining my theory.

The Energy-Flow Theory

Understanding leadership phenomena as abstractions of energy transformation, conservation, and fluidity led me to perceive leadership as “energy-flow” and to view leadership phenomena from an energy-flow frame of reference. This dissertation uses that frame of reference from this point on.

The theory in the *Leadership as Energy-Flow* Model binds two schools of thought.

One school of thought is about how the laws of physics explain nature's phenomena. Classical Newtonian physics provides laws for explaining nature at the macro energy level—biological, chemical, and physical; while Einsteinian quantum physics offers laws to explain nature at the micro quantum level—the non-obvious realm. The latter answered numerous problems the former is unable to explain, such as what happens to human intuitions, paradigms,

acumens, and concepts. Einstein successfully averted that “everything is energy” by using his famous formula $E=mc^2$ to explain that macroscopic energy (mass and material) transforms into microscopic energy at the speed of light. Confirming with Einsteinian physics, energy-flow is a (quantum) abstraction of concrete facts in thought, a “reflective correspondence with ‘real thing’” (Bohm, 1980, p. 53).

Understanding the concept of leadership as energy-flow requires a paradigmatic shift to recognize that manifestations of leadership phenomena are abstractions of concrete facts and are sense perceptions captured by individuals and retained in thoughts. This energy-flow theory focuses on what happens between behavioral manifestations—a transformation, which is perceived as abstractions. Leadership phenomena are concrete facts that radiate visual image frequencies, traveling at light speed, observed and captured as energy abstractions in observers’ thoughts or in video recorders. The image is “a wave of energy spreading through the universe with the velocity of light. Energy had to replace matter as what is permanent. But energy, unlike matter, is not a refinement of the commonsense notion of a ‘thing’; it is merely a characteristic of a physical process” (Russell, 1945/1972, p. 47). The energy-flow transformation from macro-energy to micro-energy occurs during the formations of the abstractions; “something in the microscopic world of which macroscopic irreversibility is the manifestation” (Prigogine & Stengers, 1984, p. 258). To explain leadership as energy-flow, it is necessary to have some tools.

Another school of thought is about how Chinese philosophy and cosmological science provide the tools. The ancient (5000-year old) Chinese wisdom of the Tao contains an abstraction representing the universal energy-flow—the yin-yang. The wisdom says that everything is made of two elemental polar opposites, of yin and yang energies, such as, night-day, black-white, still-movement, soft-hard, and cold-hot. Recognizing there are “in-betweens”

in nature, such as dusk-dawn and shades of gray, the ancient wisdom further expanded from the two elemental yin-yang energies into eight varying degrees of mixtures of yin and yang energy intensity. They adopted symbols from nature to represent the abstractions of energies involved.

Using the energy-flow theory in perceiving leadership entails a turn in thought, diverging from the prevalent social science perspectives of leadership to explore leadership in a new uncommonsense dimension explainable by laws of nature in physics. The Tao philosophy of paradox tenders insights into the new dimension to apprehend leadership manifestation as a milieu of interacting forces of energy-flow in social life that exhibits opposite attributes. Those attributes are in either complementarity or contradiction within a social collective.

Combining the two schools of thought covered above, I propose to use them to form a basis for a *Leadership as Energy-Flow* model and use it to understand leadership phenomena from an energy-flow frame of reference. This dissertation will show how to perceive leadership as energy interaction, energy conservation, and energy transformation in physics with the lens of Chinese philosophical and cosmological science as tools for interpretations.

Energy-Flow Conceptual Scheme

The conceptual scheme, derived from the above theory in the *Leadership as Energy-Flow* Model, encompasses two energy-flow analysis tools. The two analysis tools are the yin-yang energy-flow transformation in the Tao of leadership and the *essential energy-flow*. The former is for creating a consciousness of yin-yang energy-flow complementarity while the latter is a loop of virtuous leadership I derived from the ancient Chinese cosmic energy-flow concept. The laws of energy in physics, such as, positive-negative entropic energy, kinetic-potential energy conservation, and macroscopic-microscopic energy transformation, support using yin-yang energy-flow abstractions to explain different types of leadership theories and phenomena.

Using the two analysis tools in the conceptual scheme to find energy-flow in leadership theories and leadership instances leads to insights in the study of leadership, such as in leadership decision making, transformation initiative, and planning. The use of these tools to fathom Burns' (2003) *Transforming Leadership* theory and some historical exemplar transforming leadership instances has improved the energy-flow model. Demonstrating briefly (in a couple of examples) how to interpret other leadership theories refines the tool usage further. Epiphanies experienced while using the tools demonstrated the tool usage at a personal transforming level. Chapter II explains in detail the theory and conceptual scheme in the *Leadership as Energy-Flow* model.

Preamble to the Chapters in this Dissertation

This dissertation documents the exploration of a new energy-flow perspective about leadership and transformation. Although social scientists have used “energy” metaphorically to describe leadership, this study insists we recognize “energy” not to be a metaphor of illusory comparison, but a language of abstractions representing real phenomena in human relationships.

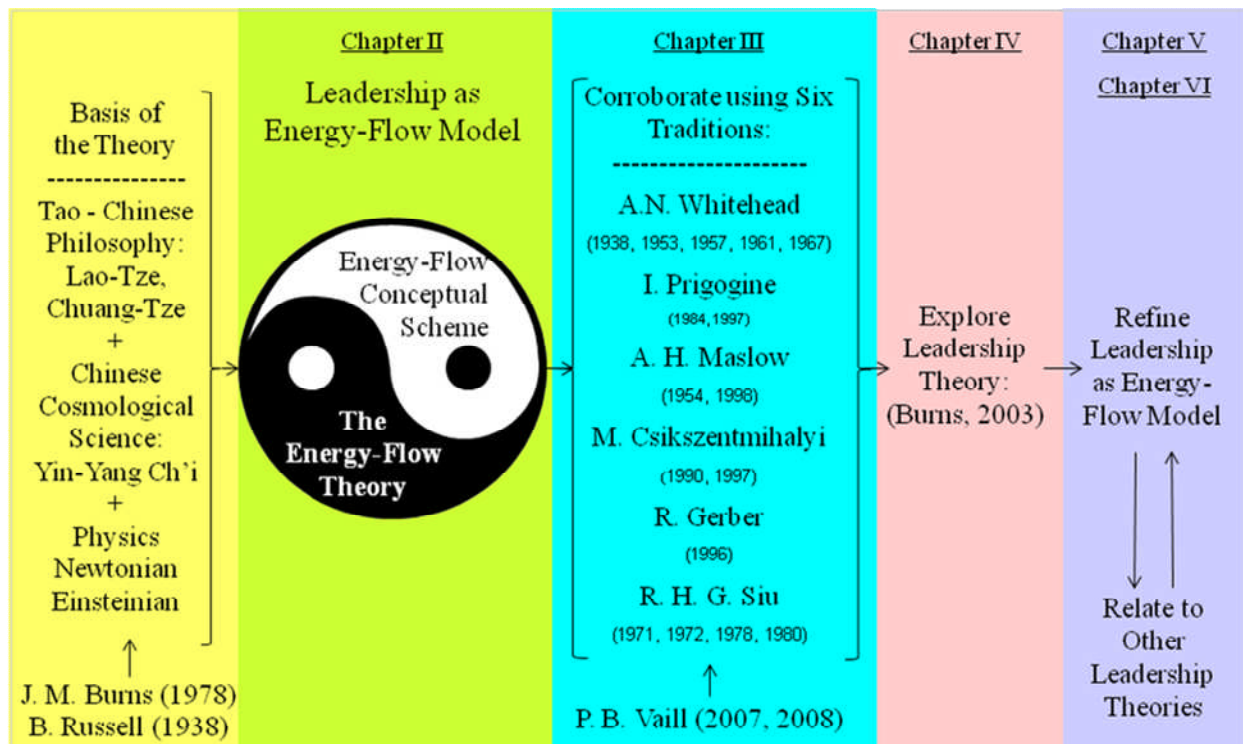
Figure 1 (below) illustrates the process flow of this dissertation.

From the left, the first column indicates the basis for the *Leadership as Energy-Flow* model. The model is derived from physics, Tao philosophy, and Chinese cosmological science—my background of experience and education led to the energy-flow ideas. Burns (1979) and Russell's (1938) notion about expressing human affairs, borrowing from and using the laws of energy in physics, sparked this energy-flow theory.

Chapter II, in the next column, shows the *Leadership as Energy-Flow* model, consisting of a theory and a conceptual scheme. The theory is the more implicit yin energy supporting the conceptual scheme, which is the more explicit yang energy. Together, they form a yin-yang complementarity in the consciousness of the Tao. In the diagram, yin is black and yang, white.

Chapter III, depicted in the next column, is the heart of this theoretical dissertation that provides the essential credence for the *Leadership as Energy-Flow* model. This chapter is about engaging in a virtual dialogue with works of six exemplar theorists in six different fields, choreographed by Vaill (2007, 2008). The purpose of this exploration is neither theory building nor to bring works of the theorists together into some single compartmental construct. Rather, each work refines and strengthens the energy-flow theory and conceptual scheme and heightens comprehension of the *Leadership as Energy-Flow* model.

Figure 1: Sequential Process of Confirming the Leadership as Energy-Flow Model



The following briefly states how their works corroborate the energy-flow theory:

Whitehead's (1953) wisdom in science, thought, process philosophy, and energy-spiritual based social life ideal strengthens the basis for conceptualizing energy-flow abstractions. His logic theory, scientific reasoning, fallacy precaution, intrinsic-extrinsic dipolar realities percepts,

and subjectivism-objectivism offer methodological guidance for this exploration.

Prigogine's (1997) reverse second law of thermodynamics in non-equilibrium systems, dissipative structures⁶, energy bifurcation, negative entropy, and singularity offer insightful perceptions of the eternal aspects of energy-flow. His *Order out of Chaos*, laws of nature in physics, self-organization, sustainability, and time-irreversibility explain energy-flow transformation and conservation.

Maslow's (1954) acumen in human potential and self-actualization contribute to management theory. His relating different levels of human motivation hierarchies to satisfy human needs in bringing about unconscious impulses of happiness attests to my theory of viewing leadership as energy-flow.

Csikszentmihalyi's (1990) extensive research shows the way to reach a psychological and mental state, the physic energy FLOW⁷ state that allows people to induce energy-flow from within to transcend to happiness.

Gerber's (1996) profound thoughts offer a revolutionary *Vibrational Medicine* paradigm to perceive "human as energy of being." He augments medical practice with regulating energy-flow to maintain physiological balance and well-being of organizations, nations, and humanity.

Siu's (1980) connecting modern science to the ancient leadership wisdom of the East and the West and to the Tao of attaining "sageness[sic] within and kingliness without" (Siu,

⁶ Vaill comments Prigogine's word "dissipative" is somewhat unfortunate because it has negative connotations to Americans. However, there are no good alternatives. "Diffusion" gets at some of what he means so as "dispersion." Literally, "dissemination" meaning to "spread seed around" as in "a tree disseminates itself" gets at some of what he meant. "Dissipative," a word, though with negative connotations, is not being used negatively by Prigogine; but rather to describe how energy gets lost as a system's "forward motion" begins to become disorganized (Vaill, 2008, dissipative structure). The dissipative structure describes well when disequilibrium in a system reaches its maximum tolerant level, bifurcation occurs (C. Fu, 2001a); there is uncertainty whether the system will transform into, self-sustainability or self-disintegration (Kirk, 2000).

⁷ Founded on decades of research, FLOW is "the positive aspects of human experience—joy, creativity, the process of total involvement with life I call flow" (Csikszentmihalyi, 1990, p. xi). There are general principles "to transform boring and meaningless lives into ones full of enjoyment" (p. xi).

1957/1971, p.158) offers profound leadership advice. He says leadership is about balancing the yin-yang energy-flow, to “subsume and resonate,” practicing the “Singularly Essential Art” (Siu, 1978, p. 83) in virtual presence of leadership.

Chapter IV, shown in the next column in *Figure 1*, delves into Burns (2003). It provides a synopsis of Burns’ text to explore the *Premise of the Dialogue*:

In what ways and to what extent would using the energy-flow frame of reference describe and stimulate new meaning in *Transforming Leadership: A New Pursuit of Happiness*?

Through an energy-flow lens, this unfoldment dialogue reveals energy-flow attributes in Burns’ text (Burns, 2003). This unfoldment is not “empirical” (in the normal meaning of the term).

Therefore, Burns’ text is not “data” in this study; rather, it is a field exploration directly relevant to the subject of leadership and change. The purpose of the dialogue is neither to build a theory nor to prove a theory. It is to refine and improve the *Leadership as Energy-Flow* model using the energy-flow conceptual scheme to explore Burns’ *Transforming Leadership* theory.

Chapter V, the top box in the right-most column of *Figure 1*, discloses my epiphanies occurred during the exploration of Burns (2003) as a benefit of using the energy-flow conceptual scheme. I reinterpret his theory of transforming leadership and the instances of his ten exemplar-transforming leaders from the energy-flow perspective.

Chapter VI, shown in the bottom box of that same column in *Figure 1*, summarizes the knowledge gained from Chapters III, IV and V that refines and improves the conceptual scheme. It **imparts** my personal transforming experience in this exploration; describes the implications of viewing transforming leadership as energy-flow; and suggests future exploration and research using the energy-flow conceptual scheme. The refining process is iterative. I hope more iteration will contribute and inform future creative leadership theory and practice.

Chapter II: Antecedents Leading to the *Leadership as Energy-Flow* Model

Unfolding meanings of leadership has been a most intellectually thought-provoking exercise because leading, or being led, engages our core values. Perceived from different thinking paradigms (Kuhn, 1962/1970), this value-laden topic proffers dissimilar contextual meanings (Vaill, 1984, 1989, 1998a) that people enfold into diverse definitions of leadership.

Incomprehensibility of the Leadership Phenomena

Everyone has an opinion about leadership. “Leadership is one of the most observed and least understood phenomena on earth.” (Burns, 1979, p. 2) The topic of leadership provokes reactions ranging from agnostic stands to outright disputes. One reason might be found in the observation is the opinion “enfolded” from one individual’s frame of reference is subject to be “unfolded” by others into disparate frames of reference and belief systems (Bohm, 1980, p. 172). People try to decide the truth of an opinion according to their own beliefs and values.

Our thoughts about leadership may be constrained by our proclivity for “understanding the nature of reality in general and of consciousness in particular as a coherent whole, which is never static or complete” (Bohm, 1980, p. ix). The whole is “in an unending process of movement and unfoldment” (p. ix). Our thoughts about meanings of leadership seem to be “apprehended either as static, or as a series of static images” (p. ix). Yet, in our reflections on experience, we sense “an unbroken, undivided process of flow” and change in the actuality (p. ix). The relationship between thinking and reality is constantly changing because both are in motion and rarely synchronized, resulting in diverse understandings of reality and, therefore, our understanding of leadership.

Without a common frame of reference, people cannot communicate easily about their subjective understanding of leadership. Thus, seeking resolution of conflicts between different

beliefs and values is like “maneuvering over ever faster and more undirected ball bearings” (Bennis, 2000, p. 161). People have yet to reach consensus on a starting point that would facilitate adoption of different leadership paradigms; so the search for a common frame of reference continues. For lack of a starting point our perceptions of leadership continue to diverge, and promulgate “a vast and bewildering” attempt “to organize the literature according to major approaches or perspectives has been only partially successful” (Yukl, 2001, p. 10). We may be dwelling in a commonsense paradigm, as the meaning of leadership has remained elusive since ancient times in both the East and West.

Ancient Leadership Wisdoms of the East and the West

A canvass of the ancient wisdoms of the East and of the West reveals that each “determines its system of thought” (H. Wilhelm & Wilhelm, 1979/1995, p. 20). H. Wilhelm (in his lectures) credits the fundamentals of the Western thought to an Eastern one. He says, “we are immediately reminded of the aphorism *pantra rhei*, ‘everything flows,’ used by Heraclitus of Ephesus around the year 500 B.C. as the foundation of his own philosophical system” (p. 126). H. Wilhelm finds this thinking in “Wang Fu-chih, the greatest *I Ching* [*the Book of Changes*] scholar of the Ch’ing era” (p. 126) who described laws of energy in nature:

Between heaven and earth there exists nothing but law and energy. The energy carries the law and the law regulates the energy. Law does not manifest itself (has no form); it is only through energy that the image is formed, and the image yields the number. (Image here equals idea, number is the intelligible aspect of law as embodied in the idea) . . . (H. Wilhelm & Wilhelm, 1979/1995, p. 126).

There are remarkable instances of parallelism between Eastern and Western thinking when concepts simultaneously found expressions in similar ways. Closer examination, however, uncovers differences between the two worlds. “Heraclitus, who held that life was movement and that it developed through the conflict of opposites, also conceived a harmonious world order, the

Logos, that shapes this chaos” (H. Wilhelm & Wilhelm, 1979/1995, p. 20). This fundamental of Western thinking perceives dualities as conflicts needing resolution where expenditure of energy leads to entropy. Eastern thinking sees dualities as complementarities of energy-flow, which lead to conservation and transformation. To the Chinese, “the two principles, movement and the unchanging law governing it, are one; they know neither kernel nor husk—heart and mind function together undivided” (p. 20).

Leadership study initially found no grey areas. Everything was one or the other, such as, leader-follower, good-bad, right-wrong, and success-failure. There are “the philosophical and practical questions” debating over dipolar views, such as the tensions between “the pure and the applied,” “the relationist [sic] and the absolutist,” and “the ancients and the moderns” (Burns, 1979, p. 143). Modern leadership scholars have become cognizant of the allusion to the modern words “leadership” and “energy-flow” in ancient texts. Now they are bringing together the ancient wisdoms of both East and West to form new knowledge for the modern era based on the concepts of complementarity. Vaill suggests we use “the nine muses of Greek mythology” that engage arts and sciences to understand managerial-leadership is “a performing art” (Vaill, 1989, p. xi). He suggests managerial leadership warrant a “tenth muse” (Vaill, 2008, the tenth muse).

My Background and Personal Captivation Leading to this Pursuit of Scholarship

My long sustained curiosity about the dynamic forces underpinning observable phenomena led me to wonder if there is some elemental entity that could describes the ebb and flow of events and matters in leadership. Though nature embodies a continuous stream of nonstop events, they are explainable by the laws of energy-flow in physics. While my college education substantiated these beliefs, their origins were earlier. My upbringing (a child of an academician in China and the sister of a logician and philosopher, P. Y. Lin, né Fu, with her

scholarly focus being the work of Chinese Chuang-tze philosophy) instilled in me a strong interest in finding meaning in everyday life. In Chinese culture, we learn to balance the yin-yang in our personal ch'i (life energy) to uphold good health and order in life. In school, we learn Confucianism to develop social manners and Taoist philosophy as the way to attain virtue. In martial arts, I learned to synchronize my ch'i with nature's cosmic ch'i. All those teachings compelled me to bring those ancient Chinese wisdoms to this study.

My academic training and lengthy experience in management obliged me to pursue this exploration into *leadership as energy-flow*. My academic accomplishments include a BS in Applied Mathematics, Electrical Engineering and Physics (a tri-major) and an MS in Computer Sciences both from the University of Wisconsin-Madison. Later, I attained an MA in Whole Systems Design from Antioch University and received a Certificate of Completion in Advanced System Dynamics from a two-year distance-learning program at MIT Sloan School of Management. My corporate experiences include being: a laser-fusion research engineer, an engineering and business programmer, a computer scientist (in robotics, artificial intelligence, voice recognition, and neural-networks) (C. Fu, 1986). My corporate leadership includes serving as: an information technology manager, a system dynamics consultant (C. Fu, 2001b), and a change agent heading a 6,000-person transformation effort (C. Fu, 2000).

Synchronizing with the rhythms of change, I aspire to bring a fresh perspective to enrich the meaning of leadership. I hope to leverage my professional experience, my background in ancient Chinese philosophy and cosmological science, and my education and interest in (and love of) modern physics. My hope is this theoretical exploration with enfolded new meanings of leadership will prompt others to carry on further enrichment and applications of the *Leadership as Energy-Flow* model. The following describes the energy-flow theory and conceptual scheme.

Leadership: a Chinese Philosophical Perspective

The ancient Chinese Tao philosophy of leadership has, at its base, the polar yin-yang energy-flow of complementarity. Lore says, five thousand years ago, the ancient sage Emperor Fu-Hsi (or Fu-Xi) discovered ontological traces of nature's phenomena, the cosmological effect of the day-night cycle, which he extrapolated as the basis for seasonal and yearly cycles. He developed the yin-yang polar concept as a binary language to represent all nature's phenomena. The polarity attributes of the yin and yang, create both attracting and repelling forces that induce movement of energy-flow as found in a magnet, electromagnetic field, or Earth's magnetic field.

Ancient Chinese philosophers and theorists (Emperor Fu-Hsi, King-Wen, Duke of Chou, Lao-Tze, Chuang-tze, Confucius, Mencius, Sun-Tze, Mo-Tze, Han-Fe-Tze, and many others) were respected for their contribution to leadership (Perkins, 2000). They were sages, rulers, and those what we might now call leadership consultants to the rulers of kingdoms or princedoms (K. C. Wu, 1982). Their advice influenced rulers' decision-making strategies—from warfare to peace, from power-over to empowerment, from seeking survival to attaining spiritual prosperity. Their work formed the fundamentals of Chinese philosophies and science: one of which I find most relevant to the idea of energy and its flow—the Tao.

In “Tao,” science, philosophy, and spirituality unified to fathom leadership. The ancient Chinese leadership philosophy portrays the Tao:

The common and ordinary things serve certain functions and therefore retain the wholeness of nature. From this wholeness, one comprehends, and from comprehension, one comes near to the Tao (Legge, 1899, Chuang-Tze Ch.7).

Chuang-Tze, who inherited Lao-Tze's work (K. Wu, Lao-Tze, & Chuang-Tze, 1955), further explains and clarifies the paradoxical nature of Tao and gives it a deeper meaning:

Tao has its inner reality and its evidences. It is devoid of action and of form. It may be transmitted, but cannot be received.

It may be obtained, but cannot be seen. It is based on itself, rooted in itself.
 Before heaven and earth were, Tao existed by itself from all time.
 (P. Y. Fu, 1953, Ch.1)

Modern philosophers describe Tao:

start from metaphysics, epistemology, and the theory of human life and
 end with politics . . .
 the so-called Tao has two meanings, namely, Ontology and Cosmology . . .
 Tao in the Sense of Ontology . . . “The Great Supreme”
 Tao in the Sense of Cosmology . . .
 There is no base where Tao comes from; there is no hole into which Tao goes.
 There is actuality but no place; and there is length but no beginning and end.
 (P. Y. Fu, 1953, Ch.1)

One may regard perceiving leadership phenomena as energy-flow to be discomfiting;
 nevertheless, the concept has been around for centuries. Both ancient Chinese thinkers Confucius
 (Cleary & Confucius, 1992), Lao-Tze, and Chuang-Tze (Cleary, Lao-Tze, & Chuang-Tze, 1993)
 and “ancient Greek” philosophers (Russell, 1945/1972, p. xx) hinted at this concept. In their
 writings, those ancient thinkers observe nature perceiving the effects of “universal governing
 rules” (Freeman, 2004, p. 193). The Eastern philosophers based their leadership strategies on
 balancing the yin-yang energy-flow observed in nature (R. Wilhelm & Baynes, 1950/1997).
 They sensed yin-yang energy transformation and conservation were “based on the principle of
 organic world, in which there is no entropy” (p. 298). All strove for harmony in the Tao.

The Tao Paradox

The Tao of leadership reveals a paradox as the *Book of Tao (Tao-Te-Ching)* has told us:

In the highest antiquity, (the people) did not know that there were (their rulers).
 In the next age they loved them and praised them.
 In the next they feared them; in the next they despised them.
 Thus it was that when faith (in the Tao) was deficient (in the rulers) a want of
 faith in them ensued (in the people).
 How irresolute did those (earliest rulers) appear, showing (by their reticence) the
 importance which they set upon their words!
 Their work was done and their undertakings were successful, while the people all
 said, 'We are as we are, of ourselves!'

(Lao-Tze & Legge, 1891, Ch. 17)

Modern leadership looks at the “design dimension of leadership” (Senge, 1990, p. 341). That is, while designers assume active or direct leadership (yang energy) as they create designs, they also retain and embed passive or indirect leadership (yin energy) in their designs. They continue to provide guidance for operation and actions through their design principles. To illustrate that dimension of leadership, Senge refers to Lao-Tze’s paradoxical teaching and paraphrases, “The great leader is he who the people say ‘We did it ourselves’” (Senge, 1990, p. 341).

Paradox confronts leaders throughout the world daily. “Events are outrunning understanding in all sectors of society” and it seems we have become disconnected from the meaning and “musings of thought” (Vaill, 1989, p. xi). Enfolding paradox, Vaill turns to the Taoist abstractions in managerial leadership as he recommends embracing the tension between action and non-action. He says, “it is possible that wu-wei [non-action] is a more powerful idea about taking action in conditions of permanent white water than anything” that we have “produced in the West” (Vaill, 1989, p. 177). “Perhaps at some level below conscious thought, Western managers and other action takers might be better at ‘going with the flow’ and ‘moving with the available energy’ than we like to think” (p. 178). Rost proposes a post-industrial paradigm, both “leaders and followers form one relationship that is leadership . . . the yin and the yang” (Rost, 1993, p. 109), both influence, flow, and fold into each other in oneness (p. 112).

Yin-yang energy-flow can represent leadership behaviors, taking action being yang and non-action being yin, leaders “by their stillness become sages; by their movements, kings” (Legge & Chuang-Tze, 1890, Ch. 13). We find the yin-yang paradox in *The Art of War*, which offers war and political strategies and tactics for different conflict situations. On one hand it says, “The balance scale [Tao] is the means of selecting the wise and choosing the good. Yin and yang

are the means of rallying the masses and meeting opponents” (Cleary, Sun-tze, & Sun-Pin, 1996, p. 65). On the other hand, it advises to avoid jingoism—one should avoid wars altogether and negotiate peace. This balancing between action and non-action typifies the philosophy of Tao.

This Tao paradox manifested itself in Chinese culture with the advent of the Confucian leadership philosophy. The yin-yang energy-flow explains the polarity between two complementary philosophies. In an age of constant warfare between competing kingdoms, Confucian social order called upon rulers to bring peace to society while Taoist philosophy advocates returning to nature’s spontaneity for dealing with change. It may be astounding to some that though Confucian thinking and Taoist’s transcendence represent two opposite trends in Chinese leadership philosophy, but they are complementary and form one inseparable unit. Confucius’ social order for an illuminated world begins with a leader’s sincere intention. The *Great Learning*, one of the four Confucian classics, says,

Those who wished to illustrate the qualities of illumination throughout the world first brought order to their nation.
 . . . to bring order to their nation first balanced their families.
 . . . to balance their family first cultivated themselves.
 . . . to cultivate themselves first strengthen their minds.
 . . . to strengthen their minds first made their intention sincere.
 (Cleary & Confucius, 1992, p. 147)

Lao-Tze focuses on intention and being, as the paths to “marvels” are different for each of us.

His *Book of Tao* (*Tao Te Ching* or *Book of the Way to Ultimate Virtue* a literal translation) says:

A way [Tao] can be a guide, but not a fixed path;
 name can be given, but not permanent labels.
 Nothing is called the beginning of heaven and earth;
 being is called the mother of all things . . .
 Both are considered mystery; the mystery of mysteries is the gateway of marvels.
 (Cleary, Lao-Tze, & Chuang-Tze, 1993, Ch. 1)

Paradoxically, Confucianism instills social, leadership order—the yang; while Taoists embrace chaos and change in nature—the yin; but their collective purpose is to bring about

unison with the Tao. Capra observes there was a general tendency to emphasize Confucianism whenever it was necessary to reinstate or restore order to society, “to learn the rules and conventions necessary for life in society” (Capra, 1975/1991, p. 102). In contrast, Taoist teaching seeks renewal whenever it is time “to regain and develop the original spontaneity which had been destroyed by social conventions” (p. 102). Both Confucians and Taoists connect changes in nature with changes in the state of human affairs. Arising from the perceptions of duality and harmony seen in the day-night and yin-yang cycle, both kinds of change follow similar simple laws of energy-flow and transformation found in nature.

Yin-Yang Relativism of Leadership Philosophy

To find examples of the recurrence of nature’s yin-yang cycle appear in cultures and social movements, we need only to look at China’s history of leadership philosophy. After Lao-Tze (more yin), there was Confucius (more yang), then there was a Chinese philosopher Mo-Tze (or Mozi). Mohism (more yin), found in *The Mo Tze*, was a doctrine of universal love—that called upon people to extend love to others beyond their own families and states (Mo-Tze, 450 BCE). Mohism also advocated moderation in social affairs, condemned offensive war, and urged people to lead a simple life, harmful to none. The popularity of Mohist philosophy declined in influence after two centuries during the rise of the legalism of Han-Fei-Tze in the era of chaos (Han-Fei-Tze, circa 250 BCE). Legalism (more yang), rejected both the Taoist Way of nature and the Confucian moral way of antiquity, emerged as a third school of thought. Chinese legalist philosophy reached its apogee in the policies of the tyrant Emperor Qin Shi Huangdi (230 BCE) emphasizing complete submission of individuals to the state control. Both Mo-Tze and Hun Fei Tze have provided two extreme yin-yang polar examples in the history of ancient Chinese leadership philosophy.

Modern leadership studies sometimes appear to retrace the ancient manifestation of yin-yang energy-flow in the Tao abstractions to explain paradoxes in social life. Burns recognizes similarities in leadership between “Confucian China and Victorian England” (Burns, 1979 p. 127). Greenleaf references Confucius’ advice to adopt a servant’s attitude, “the servant views any problem in the world as in here, inside oneself [the king], not out there” (Greenleaf, 1977, p. 43). The “leaders will bend their efforts to serve with skill, understanding, and spirit, and that followers will be responsive only to able servants who would lead them—but that they will respond” (p. 4). Other scholars see interchangeability of yin-yang energy-flow in “leadership-followership” (Rost, 1993 p. 109) and yin-yang leadership in higher education (Guskin & Marcy, 2002). Guskin’s balancing “centripetal” and “centrifugal” forces in generating the “creative tension” necessary to turnaround an institution (Guskin, 1999, p. 88) suggests to me that the creative tension might be seen as the complementary energy-flow induced in polar yin-yang energies. The various leadership adaptations suggested by those scholars reveal connectivity associated with, and applicability to, balancing energy-flow.

Yin-Yang Energy-Flow and Science

One may mistakenly regard yin-yang energy-flow as only metaphor. The yin-yang energy-flow is an abstraction representing a concrete event in nature. Metaphors and abstractions differ in meaning and intention. Metaphors are illusory comparisons without defined correlations while abstractions represent concrete processes, factual extractions, thoughts, preoccupation, and conceptualization—explainable by laws of energy in physics. Yin-yang energy-flow is a binary language to represent abstractions of events in life and human affairs.

Intellectual leaders often bring into being what ancients say about balancing the flow, “embracing the tension” between polar aspects of leadership raised by the “social and political

environment” (Burns, 1979, p. 143). Capra “found the Chinese terminology of yin and yang very useful to describe this cultural imbalance” (Capra, 1975/1991, p. 8). As yin and yang are polar energies, they work to both repel and complement each other to form a connecting magnetic-force field.

Thus, in nature’s cyclic transformation, yin fades as it folds and flows into yang and vice versa, yang into yin. Prigogine reminds us nature is “what is by itself” and is “governed by simple, knowable laws” (Prigogine, 1997, p. 12) “The concept of a passive nature subject to deterministic and time-reversible laws is quite specific to the Western world” (p. 12) while “According to Chinese tradition, nature is spontaneous harmony” (pp.12-3). The different degrees of yin-yang energy-flow interacting with one another are behind the epistemological power of the primary energies in nature. The ontological assumption of these beliefs is the dualities and complementarities between the polar attributes activate nature’s energy-flow to form a unity.

Chinese science and philosophy tend to communicate nature’s phenomena as abstractions in thought; such communications are often nonspecific, as they never provide the quantitative measurements the Western minds demand. This dissertation attempts to rectify this omission by connecting the yin-yang energy-flow concept in Chinese cosmological science, and its philosophical arguments, with the laws in physics. Both Newtonian and Einsteinian physics explain well the energy transformations and phenomena at both macro and micro levels. Therefore, physics might also help describe the transformations in the Tao and leadership in general. Using the laws of energy transformation in physics might enable us to discern leadership characteristics and attributes; and delineate leadership commonalities and dissimilarities.

Leadership: a Physics Perspective

With my training in (and having a passion for) physics and working in laser fusion, I cannot help but think in terms of relativity and quantum theory. This dissertation relies on the laws in physics in three aspects. It uses Einstein's relativity theory to explain our differing sense perceptions, frames of reference, or paradigmatic orientations. Newtonian (or mechanistic) and classical physics can be used to describe abstractions of leadership behavior and observable phenomena at a physical, behavioral macro-level. Einsteinian (or quantum) and modern physics provide theories and concepts, which will give us some scientific acumen for exploring leadership at a thought micro-level.

Relativistic Frame of Reference

THE theory of relativity is intimately connected with the theory of space and time . . . I introduce a controversial subject. The object of all science, whether natural science or psychology, is to coordinate our experiences and to bring them into a logical system. . . . The experiences of an individual appear to us arranged in a series of events; in this series the single events which we remember appear to be ordered according to the criterion of . . . subjective time . . . (Einstein, 1922, p. 1)

different individuals can, to a certain extent, compare their experiences. Then it turns out that certain sense perceptions of different individuals correspond to each other, while for other sense perceptions no such correspondence [on a same event] can be established. We are accustomed to regard as real those sense perceptions which are common to different individuals, and which therefore are, in a measure, impersonal. The natural sciences, and in particular, the most fundamental of them, physics, deal with such sense perceptions. (Einstein, 1922, pp. 1-2)

The above averments extracted from Einstein's 1921 Princeton University lecture, *The Meaning of Relativity*, which concerns his discovery of the paradoxical properties of light, as particle and as wave that eventually led to quantum physics. His discovery is, if an experiment is setup to detect wave property, it will find property of light as a wave, while if it is setup to observe light as a particle, it will discover light as particle. His message above shows us how different observers' sense perceptions on an event could yield different experiences; different paradigms

and belief systems would bring forth different test results. In this dissertation, I use his relativistic theory to provide an energy-flow frame of reference that allows one to perceive leadership phenomena as energy-flow and transformation. It applies the laws of energy transformation and conservation in Newtonian and Einsteinian physics to explain the abstractions we interpret as leadership.

The laws of energy transformation in classical physics are useful for explaining observable manifestations of leadership phenomena, such as observable leader-follower interactions and behaviors. Modern physics helps us explore transformational concepts of leadership theories, characteristics, and attributes that are in the non-obvious realm. The relativity theory helps us discern the same event captured in an individual intrinsic sense perception as well as those extrinsic sense perceptions of others. Some scholars conceptualize social interactions as phenomena in physics and perceiving them as physical and mental events (Russell, 1925/2001). Others spark the thought to envisage both energy transformation and conservation be fundamental in human affairs and common base factors in social life (Capra, 1982, 1996). As we become more familiar with using energy-flow to explain abstractions of social events, we might also use them to describe leadership, which is an aspect of human affairs.

Leadership Interactions as Macro-level Energy-Flow

Scientific laws in modern physics justify declaring that energy relates to all matters and events in nature (Einstein, 1956). In classical (Newtonian) physics, leadership-in-action is energy-in-motion (kinetic energy) while leadership-potential is energy-on-hold (potential energy, to-be-made kinetic)—potential ability or potentiality (Prigogine, 1997). In addition, the “laws of nature within the range of low energies” in “macroscopic physics, chemistry, and biology” (p. 6) explain the energy interactions as well as behaviors of leadership. Modern (Einsteinian) physics

explains energy-flow abstractions of concrete social events, such as leadership phenomena, captured in media or retained in thought represent energy in a web of life (Capra, 1996).

Vaill cautions us that expectation of certainty in leadership encourages us to focus on the “positivist-objectivist facts” (Vaill, 1984, p. 18) of the apparent leadership behaviors. These behaviors do not explain how our reflections on them as the subjective “relationality [sic]” (p. 33), which yields lasting impressions in our thoughts. Our thoughts about reality and mental processes are probabilistic; they are as uncertain as nature (Prigogine, 1997). Classical physics evolved to ensure predictability, but in doing so, it failed to explain the unpredictable behavior of nature, leaving people with contradiction to positivist-objectivist facts.

If we forgo the notion of certainty and adopt an Einsteinian notion of energy, leadership might take on new attributes in our thoughts such as transformability, instability, uncertainty, agility (Vaill, 1998b), and mutability (Rost, 1993). Energy and leadership share common attributes and enable us to better describe the elusiveness, inconsistency (Yukl, 2001), and perplexity (Bennis & Nanus, 1997) of leadership phenomena observed by leadership experts. The concepts of energy-flow and transformation explained in physics might help us understand the dynamics of leadership and unfold a deeper meaning of leadership in transformation.

The fluidity attribute makes leadership phenomena (Vaill, 1989) seem complex, dynamic, and ambiguous (Burns, 1979). Leadership-in-action manifests as observable behaviors, activities, and outcomes. They are snapshots of event abstractions, which do not reveal the underlying dynamics that are the culprits responsible for those manifestations. The underlying dynamics is a process in a “spatiotemporal field of relationships, flowing and shifting” (Vaill, 1998b, p. 29). “There is a field upon which there are multiple players,” Vaill says, each of which have, “expectations of the rates at which things ought to proceed, and resistances to being sidetracked

by other people's temporal perceptions and priorities” (p. 29). In this, Vaill captures the essence of the fluidity in organizations.

Leadership Concepts as Micro-level Energy-Flow

To overcome blindness to the dynamics underlying events, Burns suggests “we must note how levels of wants and needs and other motivations, combined with hierarchies of values, and sharpened by conflict, undergird the dynamics of leadership” (Burns, 1979, p. 30). These undergirding dynamics of leadership-in-action, their flows and transformations, have the attributes of high-level energy (Prigogine, 1997) and are energy interactions as described in quantum physics. Examples of such energy-flow and transformation in physics are the wave and particle properties of light, the electromagnetism created by electric current, and the magnetic field induced by magnetic poles. Other examples of energy transformation are the gravitational forces generated by the Earth’s rotation and the transformation of mass into energy when mass is accelerated to the speed of light (Einstein & Infeld, 1938/1966).

Physics is not a metaphor for social interaction but provides a quantitative method to explain the linkage between perceptions of leadership behaviors and event outcomes (Russell, 1938). People resist using physics as a consensus starting point because, perhaps, we are not conversant with laws of nature or physics; we tend to exert control over nature rather than to synchronize with the nature’s flow. We are unfamiliar with the abstraction in human thought that would facilitate adoption of different leadership paradigms and frames of reference; and the search for that common language base continues. Some deep thinkers suggest we look to laws of physics to explain nature and to nature to describe social relationships (Prigogine, 1997). Therefore, the task at hand is to bridge the gap between the laws of physics and abstraction of social relationship in human thought. The conceptual scheme next attempts to address that gap.

Conceptual Scheme for Leadership as Energy-Flow Model

From the energy-flow theory described above, I derived a conceptual scheme, which consists of two analysis tools for exploring leadership phenomena. The two tools are the yin-yang energy-flow transformation in the Tao of leadership and the *essential energy-flow*. To build the tools for fathoming modern leadership, I draw upon the concepts Chinese cosmological science, which is the basis for Tao leadership philosophy. The laws of physics help explain the concepts of Chinese cosmological science to make them more comprehensible.

This section delves into the development of the conceptual scheme beginning with the yin-yang energy-flow belief to explain how cosmic energy-flow effects affect ontological energy-flow in life. The belief is also the basis for Chinese metaphysical and epistemological theories about natural and social phenomena and for the energy-flow conceptual scheme.


Universal Ch'i and Chinese Cosmological Science

The Tao philosophy finds its origin in Chinese cosmological science, which is a 5000-year-old concept the Chinese sages used to explain cosmic energy-flow effects on Earth that affect its inhabitants. They call that energy-flow of consciousness, Super Cosmic “ch’i.” The concept offers explanations connecting the states of change in nature with those in human affairs.

Chinese sages called the Super Cosmic “ch’i” or universal energy-flow, “Tai-Ji,” translated literally as the “Great Supreme” (P. Y. Fu, 1953, Ch. 1). “I call it the “Universal Consciousness.” It represents the aggregate of all paradoxical relationships of “being” in all nature’s phenomena. The original symbol portrays the “Universal Substance” (Secter, 1993, p. 20), “Supreme Ultimate” (Capra, 1975/1991, p. 107), or “primal beginning” (R. Wilhelm & Baynes, 1950/1997, p. 298).

According to an ontological assumption of Chinese science, “ch’i” is energy-flow

activated by unity within the apparent dualities and dipolar relationships between the elemental yin and yang energies. The opposing and complementary energy-flow creates presence of repulsing and attracting movements (for example, Earth and other planets, solar systems, galaxies create magnetic fields and gravitational forces) in the cosmic universe. The different polar intensities of interacting energy-flow, the “ch’i” in nature, induce the dynamics underpinning the epistemological power of nature’s primary energies. These energies are in constant motion relative to their polar opposites and other polar energy pairs. The cosmic “ch’i” interacts with each individual’s personal “ch’i” amalgamating personal energy-flow with the universal consciousness.

The ancient Tai-Ji () symbol, we then refer to as the Tao. Tao is “the Way” to attain Te “the highest virtue” explained in Lao-Tze’s *Tao-Te-Ching* (the *Book of Tao*). Philosophically, Tao symbolizes the perfect harmony achievable through contemplating the well-being of the collective whole. The Tai-Ji symbol (or Tao) contains black and white forms, which allude to the presence of duality in nature. The choice of color is significant, black for yin and white for yang. As explained in physics, white is the mixture of reflections from all colors while black is the mixture of all colors (absorbed, with no reflection). The swirling (rotating clockwise) of the two primary forms represents a constant motion and intertwining of everything in the cosmos. The swirling motion is in fact a process of replacement where black evolves into white and white into black, much like the evolving duality of chaos and order in social and natural phenomena. The dot of opposite color within each primary form represents a significant meaning that each form embraces its opposite. Thus, yin-yang energies are not absolute; they contain each other.

The two primary forms represent the elemental polar energies yin energy (⚋) and yang energy (⚊). They denote as positive (light-yang) and negative (dark-yin). In general, yang

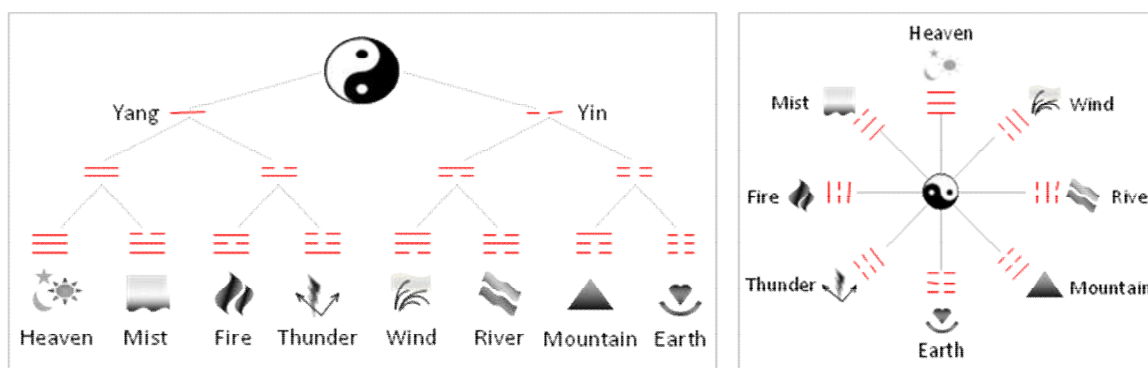
“discloses itself as active, firm, light, initiative, contractive, immaterial, affirming, turned on, and sustaining and positive” while Yin “discloses itself as passive, dark, material, yielding, soft, expansive, nourishing, pliable, and turned-off, and negative” (Secter, 1993, p. 18). However, real life consists of colors, not just black and white, the positivity and negativity are not absolute. Combinations of two energies, yin and yang epitomize all phenomena and relationships between an individual and the universe. One can deconstruct a leadership instance by reducing it down to the binary elemental yin-yang essences. The process is much like the computer binary code (0 and 1) or International Morse code (. and -) that represent all different languages in the world.

Expanding upon the binary elemental yin-yang energies, the ancients intuited nature’s cosmic energy effects on Earth and were inspired to delineate the various attributes of nature into eight mixtures of varying intensities of yin and yang energies, much like three-digit “octal code” based on (0, 1) permutation used in computer. The eight energies (2^3 permutations of yin and yang) are the so-called trigram energies. Predating the *Book of Changes*, the ancient assigned Chinese character icons that have loaded meanings representing “an aggregate of distinct, expressive, dynamic, complex, phenomena or energies” (Secter, 1993, p. 20). In order to grasp the meanings inherent in each of the eight energies, each represents a composite of some familiar nature’s characteristics, social temperaments, parts of body, force intensities, nature’s products, colors, energy movement, seasonal transformations, compass directions, and so on (p. 22).

There have been hundreds, if not thousands, of translations of the original icons resulting in numerous applications. Most translations use names in nature we can relate to represent the eight trigrams. I selected from thirty-three translations of the ancient Chinese *I-Ching* texts to arrive at the following that represent the uniqueness of nature’s energy attributes, movement, and polarity. They are Heaven (☰), Earth (☷), Mist (☶), Mountain (☴), Thunder (☳), Wind (☴),

(☰), River (☵), and Fire (☲). Almost all the translations use the same naming convention on all energies except two. I chose “Mist” over “Lake,” “Ocean,” and others, because “Mist” that denotes energy movement attribute most polar-opposite to stability of Mountain, while others names emphasize nature’s mysterious undercurrent. I chose “River” over “Water,” “Rain,” and others, because “River” conveys setting and changing direction of water flow, while other names denote water erosion. The eight nature’s energies are mixture of yin and yang energies; some exhibits more yang energy while others, more yin energy. The left-hand box of *Figure 2-1* shows how the eight trigrams, permuted from the yin and yang energies. I added the graphic representations to capture some of the meanings they represent. The right-hand box shows the “primal arrangement” or “Before the World Sequence” (R. Wilhelm & Baynes, 1950/1997, p. 266), with English translations. It depicts the relationships, in an octagon, between polar pair opposites, Heaven-Earth, Wind-Thunder, River-Fire, and Mountain-Mist. All trigram energies are supposedly seeking constantly to maintain balance with their opposites and the center Tao.

Figure 2-1: The Permutation of Yin-Yang Energies and Polarity Arrangement



Tables 2-1.1 and *Table 2-1.2* below show attributes of the trigram energies in the Confucian’s order (heavenly father, earthly mother, sons and daughters). The left-hand column consists of trigram name, line representation and graphics I created. The right-hand column shows the energy movements and meanings of the symbolic representations.

Table 2-1.1: The Attributes of the Trigram Energies in Nature









Trigram	Energy Movements and Meanings of Symbolic Representations
 Heaven	<p>Heaven energy is the polar opposite of Earth energy.</p> <p>This symbol represents energy moving straight, upward or forward, as an advancing force that may, and can, ultimately push aside obstacles. This energy's qualities encompass resolution, judgment, power and will—tempered by experience, purity of intention, stature, and endurance. It is tireless, dispassionate, unemotional, and impassive with no time to waste. It is the field of universal energy and a spiritual, ethical mind force. The field of universal energy and spiritual, ethical mind force that protects whatever comes under its sphere of influence—oneness, determination, majesty, and high principles. It is the polar opposite of Earth energy.</p>
 Earth	<p>Earth energy is the polar opposite of Heaven energy.</p> <p>This energy sustains original creation and fosters new creativity expressing the need for the perfection of fulfillment and the endowment of substantive and material form. The energy movement is that of mass and is the manifestation of essence. It is both receiving (accumulating) and sinking down into (absorbing); material yet dynamically at rest, frees of tension or pressure, and, while having no particular form, it represents all forms and all that ripens and matures. It is a cohesive collection of individual particulars—an assembled multiplicity.</p>
 Thunder	<p>Thunder energy is polar opposite of Wind energy.</p> <p>The energy movement has such speed it seems to be in two places at once or moving in two directions at the same time. It rebounds and ricochets, quickly travels in straight lines that form interior angles creating a resonating chamber. This energy is universally oriented, always on the go, having vigor, vitality, decisiveness and enthusiasm that impels, propels, compels, and stimulates others to action. It blends the material and spiritual on an unceasing quest, projects sound far and wide. It is vibrant, stimulating, emergence, impulsive, energizing, and manifestation blessed with resiliency and versatility.</p>
 Wind	<p>Wind energy is the polar opposite of Thunder energy.</p> <p>This energy moves curvaceously, sometimes quickly, sometimes slowly, with the ability to proceed in many directions at the same time. Constantly advancing and retreating, it is the most cerebral, unpredictable, and changeable energy. It has the capacity to simultaneously envelop and penetrate—often in ways that are comfortable and caressing. It is intense, proud, self-assured, resilient, and inviting, yet sensual, active and mature, permeating and yielding at the same time. Its seductive character that may not become apparent until it is too late. Its quality hovers on the edge, being precarious, but managing to retain a delicate balance and demonstrate impunity.</p>

Table 2-1.2: The Attributes of the Trigram Energies in Nature (Continued)

Trigram	Energy Movements and Meanings of Symbolic Representations
 River	<p>River energy is the opposite of the Fire energy.</p> <p>The energy movement is always falling, tumbling, flowing, streaming, or swirling down and around unpredictably. It represents the many atmospheric forms of water—rain, snow, sleet, hail—as well as water flowing on, and under, the ground toward a destination. It also connotes the effects of water erosion—canyons, abysses, caverns, and dry riverbeds. It is usually meandering yet still contained or confined in the same way that rivers are retained within their banks but continue to create a new path. It is carrying on the mission to accomplish the predestined purpose.</p>
 Fire	<p>Fire energy is the polar opposite of River energy.</p> <p>The energy movement proceeds forward and upward with occasionally sudden and incredible bursts of energy. It may also pause or move laterally in what appears to be an erratic, indecisive, or evasive manner. There is something mysterious to this energy. Although totally dependent on having fuel, it tends to consume everything in its path. Thus, it is inherently self-destructive, rarely returns or retreats. This energy is externally resistant, yet internally consuming, dry, empty, and yielding. It signifies brightness, clarity of consciousness, and psychic or intuitive awareness. While it is emotionally and intellectually quick, physically, it is usually but not always slow moving.</p>
 Mountain	<p>Mountain energy is the polar opposite of Mist energy.</p> <p>This energy pushes upward and presses downward simultaneously, but is immobile and still. Any movement disrupts everything around, and a significant shift is devastating. It embodies the mystery of metaphysical beginning and ending, meaning it addresses the questions of expansion and motion, of space and time. It is grounded, immovable, remote, resisting, and indestructible, and associated with reliability, faithfulness, guarding and defending others. It is introspective and self-assured; it exerts stability and exceptional will power. It is action at rest. It is the gateway to an inner spirit having the ability to withstand any confrontation and is, therefore to be given a wide berth or encountered congenially.</p>
 Mist	<p>Mist energy is the polar opposite of Mountain energy.</p> <p>This energy, while settling downward, diffuses subtly upward. Like mist, fog over water, or clouds wrapped around mountains, blown by soft wind and water currents and temperature changes. It undulates. Like lake, it appears calm and stable above and from the outside, its surface ripples playfully offering excitement, pleasure, and relative security. Like ocean, it is subtly threatening and intense within or below; there lies mystery, dangers, extreme pressure, and resistance to being thoroughly explored or known. It warms and delights the cold-hearted, yet able to break up or destroy the unwary and negligent. It may be enjoyable, gregarious, and colorful, but only with prudence and caution. Its attractions are enticing, but they also harbor unanticipated, unknown and lurking dangers.</p>

















The ancients recognized that energy transforms from one state to another. “Thus are the eight trigrams intermingled” (R. Wilhelm & Baynes, 1950/1997, p. 265). Their movements describe events in nature’s continual interactions transformations, and flows, with one another as they progress in accord with the Tao.

The yin-yang is a binary language to represent state of energy-flow in life. The *Book of Changes (I-Ching)* consists of sixty-four hexagrams created by stacking two of the eight trigrams together to make a hexagram (there are 8^2 combinations) (R. Wilhelm & Baynes, 1950/1997). Adding the concept of fluidity (stable or changing) to each line of the trigram leads to sixteen (or 8×2) possible combinations. As one constructs one’s six-line hexagram when consulting the *Book of Changes*, one may encounter any one of (16^6) probable answers, which is “16,777,216 different forms” of possible energy manifestations (Williams, 1941/1981, p. 151). The energy interplays contain “the elements of metaphysical knowledge; even clues to the secrets of creation” (p. 148). Those implications help explain why human affair such as leadership phenomenon is non-static and dynamic. This is why the *Book of Changes* was such a valuable source of introspection for leaders in ancient China (Cleary & Liu, 1800/1986).

Essential Energy-Flow—a Meta-Pattern of Leadership in Transformation

The *Book of Changes, I-Ching*, is useful for making management decision. I have consulted with various versions of *I-Ching* to tap into cosmic and inner wisdoms to understand the non-obvious dynamics underlying the obvious. I continue to wonder if there is some meta-pattern responsible for complex, chaotic leadership processes. Tapping into the ancient wisdom as guiding principles for leading transformations in human affairs, I chose from over thirty translations of the *I-Ching* texts to describe the trigram energies. *Table 2-2* illustrates how I translated the descriptions of nature’s trigram energy to leadership attributes.

Table 2-2: *Converting from Nature's Energy to Leadership Energy-Flow*

Trigram	Symbolic Representations of Energy Quoted from (Secter, 1993, pp 24-31)	Leadership Attributes/effects Based on Experience	<i>Leadership Energy-flow</i>
  Heaven	protect whatever comes . . . within its . . . sphere of influence . . . the field of universal energy and spiritual, ethical mind force. Its qualities encompass resolution, judgment, power and will. . . . It symbolizes oneness, determination, majesty, and high principles.	It creates concurrently a foundation, kernel, and locus from which to defend or transform.	Founding
  Earth	It is . . . a cohesive collection of individual particulars, an assembled multiplicity . . . the manifestation of essence . . . dynamically at rest, completely free of tension or pressure . . . open and nourishing, without a personal agenda . . . substantive or has material form	It sustains original creation, nurtures growth, creativity, and development of multiple disciplines, maintains well-being of the collective whole.	Sustaining
  Thunder	has such speed it seems to be in two places . . . moving in two directions at the same time. It rebounds and ricochets quickly traveling in straight lines that form an interior angle that serves as a resonating chamber . . . It blends material and spiritual in an unceasing quest.	Most swift expeditious, it responds to internal issues and challenges; provides multiple resolutions; stimulates others to action; planting seeds for ideas.	Responding
  Wind	moves around curvaceously, quickly and slowly. . . the capacity to simultaneously envelope and penetrate, often in ways that are comfortable and caressing. Constantly advancing and retreating . . . cerebral, unpredictable, and changeable energy	Charismatic, influential, inviting, permeating yet yielding, convincing, suave, it can turn the populace into believers; could have hidden agenda leading to disaster.	Influencing
  River	always falling, tumbling, flowing, streaming, swirling unpredictably down and around, . . . connotes . . . erosion . . . of canyons, abysses caverns, dry river beds. Contained within . . . expresses confinement of a "heart and soul" locked within the body; unfulfilled yearning.	With a mission, abiding by policies and environment, it is diligent, meandering, and circuitous, continuing to create a new path. deal with obstacles strategically;	Strategizing
  Fire	proceeds slowly forward and upward . . . with sudden and incredible bursts of energy . . . tends to consume . . . everything in its path . . . self-destructive . . . clarity of consciousness . . . intuitive awareness . . . resistant on the outside . . . dry, empty, and yielding within	It is bright, enlightening, impassioned, sociable, arousing those on whom it depends to do work within the prescribed route in spite of the ultimate purposes,	Implementing
  Mountain	immobile . . . still; any movement . . . disrupt . . . a significant shift would be devastating. . . embodies . . . metaphysical beginning and ending . . . it addresses . . . of expansion and motion; of space and time. Symbolic of action at rest . . . the gateway to inner spirit.	Introspective and self-assured, it anchors to the collective core values and purpose of existence; it is a cornerstone, or foundation rock, sometimes invisible.	Anchoring
  Mist	While settling downward . . . [it] evaporates subtly upward . . . expresses the mysterious . . . resist being thoroughly explored or known . . . harbor unanticipated, unknown and lurking dangers . . . delight the cold-hearted and . . . destroy the unwary negligent	It invokes untested, unknown ideas that appear dangerous, yet is curiously attractive and enticing, adventuring into places where no one has ever been before.	Innovating

The *Table 2-2* shows columns, from left to right, the nature's trigram energy labels and symbols, Sector's (1993) translation of them in modern science, the synthesis I contemplated on leadership processes involved in complex transformation and arrived at the leadership attribute descriptions and effects, and labels I selected to represent the leadership energy-flow.

The conversion above illustrates there are varying degrees of yin-yang energy states in nature corresponding to those in human affairs such as leadership. The ancient sages used those primary energies to represent the certain attributes and objects in all human affairs, perhaps we can mimic likewise to contemplate about leadership. Each of the energies encompasses unique and shared attributes in performing specific functions to attain the shared leadership aspirations.

The following describes the qualities of interactions between the polar-energy pairs:

Founding energy creates and establishes foundation; while
Sustaining energy maintains and upholds the foundation.

Influencing energy penetrates through, like wind, unidirectional outward; while
Responding energy reflects, like a mirror, offers multi-directional feedback.

Strategizing energy sets direction for performing tasks; while
Implementing energy performs tasks adhering to the strategy.

Innovating energy invokes new ideas causing instability; while
Anchoring energy fastens ideas to the cornerstone foundation to provide stability.

Each of the eight leadership energies, while maintaining balance with its polar-energy opposite, is also engaged in trying to keep the collective whole in equilibrium with the Tao.

Each of "the eight trigrams succeed one another by turns, as the firm and the yielding displace each other" (R. Wilhelm & Baynes, 1950/1997, p. 283). Although when "the old is brought to an end," "the new is begun" (p. 271), each energy state succeeds, flows, and folds into the next and form transforming cycles. Thus, "the cycle is closed. Like the day or the year in nature, so every life, indeed every cycle of experience, is a continuity by which old and new are

linked together” (p. 271). They are time-irreversible; human label those cycles as date (day-night), month, year, decade, century, and millennium.

Echoing the cyclic transformations in nature (Prigogine & Stengers, 1984). I observed that there might be similar cycles of transformation in human affairs such as leadership phenomena. For example, the yin-yang cycles are exemplified by the economic sequence of a nation, the rise and fall of a company, the commercial life cycle of a product, the taste of rhythmic fashion (C. Fu, 2000). The end of the cycle is also the beginning of a new state of being at a higher-level complexity and spiritual attainment, leading to a new transformation cycle in the future (Kirk, 2000).

During my careers as manager, change agent, and system dynamics consultant in corporate America, I observed many of the ups-and-downs of corporate maturing cycles (and succeeding and failing change initiatives) in corporations. I often wondered if one could identify a meta-pattern to help leaders manage the seemingly chaotic, complex leadership processes. The *essential energy-flow* of the eight primary energies arose from my experience contemplating about leadership phenomena in transformations. The order suggests, “an” (but not “the only”) *essential energy-flow* of leadership attributes related to transformations, there may be others.

A precursor for embarking on a transformation, leaders must have a transforming vision, identifying the gap between current reality and desired future. In the following, I list the leadership energy states required to accomplish a transformation.

1. Founding brings about creation of foundation for transforming leadership vision. It is about the leadership energy needed to establish a foundation on solid ground before a transformation starts, such as ensuring there is a clear vision and available resources for accomplishing the transformation.
2. Sustaining brings about receptive leadership provision and facilitation. It is about the leadership energy required to sustain foundation solidity, to hold and support all functions throughout the transformation effort, such as acquiring, developing, and maintaining staff capacity.

3. Innovating brings about joyous ideal leadership and collective happiness.
This energy is about innovative leadership and other transformational ideas that could lead people into a desired future, such as conceptualizing groundbreaking ideas for a new process, product, and/or service.
4. Responding brings about leadership inquiry and arouses feedback.
This energy is about provoking multi-directional communications; offering feedback, critique, and advice about intended and/or unintended outcomes; consulting is involved at each level of leadership function.
5. Anchoring brings about leadership keeping-still, adhering to values and purpose.
This energy is about ensuring the transformation is grounded and adheres to people's wants and needs, and the organization's core values and purposes; this leadership energy provides the cornerstone of the transformation foundation.
6. Influencing brings about leadership using gentle persuasion to share a vision.
This energy is about spreading the transformation initiative, reaching out to every corner of the organization to communicate the vision, elicit participation of the collective in transforming the organization.
7. Strategizing brings about leadership direction to navigate through danger.
This energy adheres to the global transformation purpose, defines locally the strategic directions for tactical implementation to achieve the local goals within the global purpose of the transformation.
8. Implementing brings about leadership lighting to guide the path.
This energy is about keeping tactical activities focused on the strategy; it guides and assists people to perform the detailed tasks required to accomplish the transformation successfully.

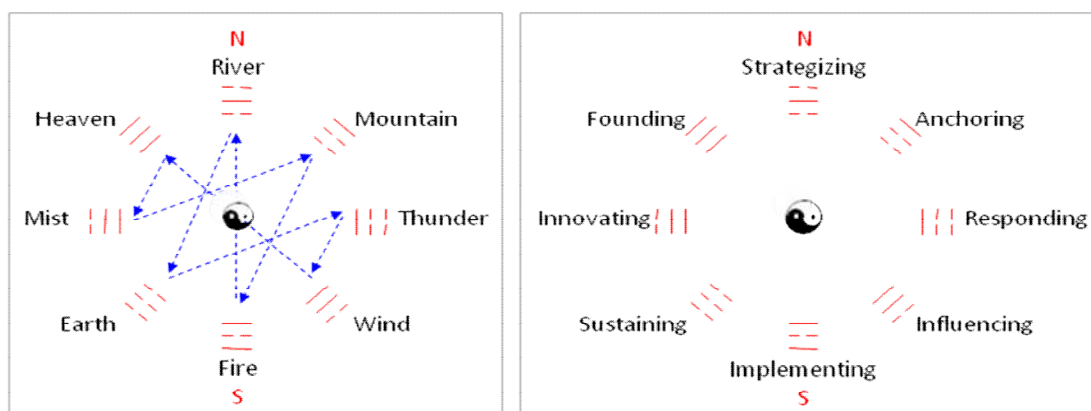
The flow listed above, though it appears sequential, is actually a cyclic meta-order, and it can begin at any point, though successful transformations appear to need to transition through all the leadership energy states. Therefore, one can start anywhere in the flow and assess, diagnose, or plan the next step in a transformation. Each state in a transformation affects other states, "Counting that which is going into the past depends on the forward movement. Knowing that which is to come depends on the backward movement" (R. Wilhelm & Baynes, 1950/1997, p. 265). Thus, leaders might consider going backward to rectify a situation or jumping forward if the situation is well in place.

Loop of Virtuous Leadership: Visualizing Essential Energy-Flow in the Tao

The suggested *essential energy-flow* for leadership in transformation facilitates, beyond the linear text description. To illustrate the additional dimensions of the cyclic and temporal aspects of energy transformation and energy interactions, I borrowed from the ancient, again, the diagram they used to illustrate the cosmic energy-flow.

In the ancient text, the sages arranged the eight trigram energies into the so-called “the Inner-World Arrangement” (R. Wilhelm & Baynes, 1950/1997, p. 269), derived from the nature’s traces of cosmic energy-flow they discovered. They placed the trigrams at the vertices of an octagon to illustrate the effects of different variations of cosmic energy-flow and yin-yang polar strengths. Chinese cosmological science reveals the fly-through pattern of the Super Cosmic Energy-Flow (Too, 2000, p. 59) that exhibits the flux, with temporality and intensity, of an energy field. *Figure 2-2* shows, in the left-hand box, the fly-through pattern (the blue arrows). In the right-hand box of *Figure 2-2*, shows retaining the ancient arrangement, the leadership energy-flow labels have replaced their respective trigram labels on the vertices.

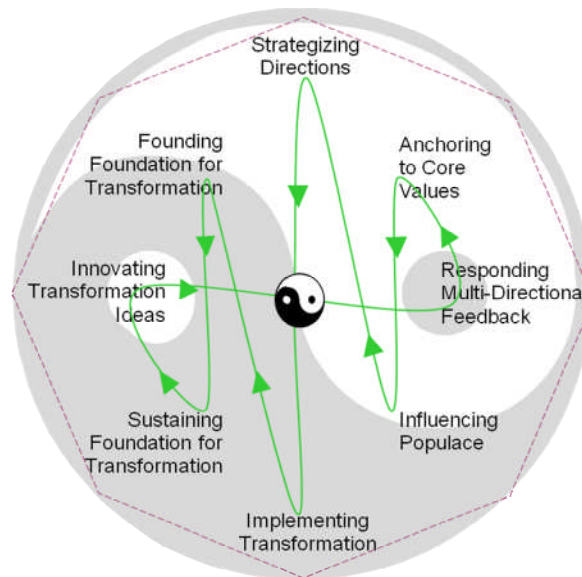
Figure 2-2: Inner-World Arrangement (or Sequence of Later Heaven)



The arrangement in *Figure 2-3* below is a synthesis derived from the ancient concept of cosmic energy-flow. The green curving arrows shown in *Figure 2-3* indicate how the eight

leadership energy-flow abstractions intermingle, exchange, and transform. I call this a Loop of Virtuous Leadership (LVL); the virtuousness represents the movement in the Tao consciousness (through the center) and taking a transcendent leadership path from a prior energy state to the next in the sequence presented earlier. This is an intuited meta-pattern of the *essential energy-flow* for guiding the design, management, and assessment of a transformation. One may jump back and forth in thoughts, as in virtual presences, to envision or reinvent the future, to design or redesign the transformation.

Figure 2-3: Synchronizing with Essential Energy-Flow—the Tao Way to Virtuous Leadership



Again, the energy-flow meta-order, though it appears sequential, is not a discrete-stepwise process. In the midst of transformation, certain parts of the process could be iterative, recursive, and overlap other states; the flow may appear very complex and difficult to discern. Organizational resources, cultures, traditions, behaviors, and external influences all contribute to the formation of unique flow-patterns and layering at the reality level. In addition, in the real world, leadership transformation processes may physically manifest at very different paces and forms even more complex and different patterns. It is likely that several transformations may be

going on at the same time to make the pattern even yet more complicated and obscure.

Integrating Physics with the Essential Energy-Flow

Viewing leadership as social events of yin-yang energy-flow “based on the principle of organic world, in which there is no entropy” (R. Wilhelm & Baynes, 1950/1997, p. 298); energy conserves and material is entropic. Prigogine’s notion of dissipative structure confirms the energy-flow abstractions. “Energy is one of the most important concepts used in the description of natural phenomena” (Capra, 1975/1991, p. 200). In classical physics, “energy takes various forms” (motion, heat, gravitational, electrical, and chemical) of energy (p. 200). In relativity theory, “mass is nothing but a form of energy” (p. 201). In quantum physics, mass “can be transformed into other forms of energy;” “when subatomic particles collide with one another” (p. 201). We cannot deny our energy being.

As in everyday life, we say that a body has energy when it has the capacity for doing work” (Capra, 1975/1991, p. 200). “Physicists and mystics deal with different aspects of reality. Physicists explore levels of matters, mystics levels of mind” (p. 338). In “Tao,” science, philosophy, and spirituality unify to explain energy-flow in everyday life.

Carl G. Jung, one of the creators of modern psychology, invites, “Western scholars” to “cast off certain prejudices of the Western mind” (R. Wilhelm & Baynes, 1950/1997, Foreword by Carl G. Jung). He used the concept of yin-yang energy abstraction as a “method of exploring the unconscious, for it has seemed to me of uncommon significance” (Jung). Jung urges us to give up our futile attempts insisting on certainty, exerting energy “combating” perceived “danger” associated with “chance” (Jung). “If we leave things to nature, we see a very different picture” (Jung). Jung says in an event, “the moment encompasses everything down to the minutest nonsensical detail, because all of the ingredients make up the observed moment” (Jung)

that leads to differing event patterns viewing from the mind's eyes. "The ancient Chinese [sage's] mind contemplates the cosmos in a way comparable to that of the modern physicist, who cannot deny that his model of the world is a decidedly psychophysical structure" (Jung).

A Conceptual Scheme for Leadership Practice

This exploration employs two tools in the conceptual scheme. One is using the concept of elemental yin-yang energy-flow in the Tao to set context to fathom Burns' *Transforming Leadership* theory. It is to induce the Tao consciousness. The other is to use the *essential energy-flow* for studying transforming leadership instances. The two tools work in concert as one.

To recap, the essential energy-flow consists of eight leadership energies, they are Founding, Sustaining, Innovating, Responding, Anchoring, Influencing, Strategizing, and Implementing. They represent the transformational nature and attributes of leadership. *Table 2-2*, where I have summarized the energy-flow in nature and leadership phenomena. *Figure 2-3* illustrates the cyclic nature of transformation; the Loop of Virtuous Leadership (the green loop in the center) captures the leadership phases involved in transformation in the order, which I experienced to be most often associated with success. Prior to a transforming effort, a leader would have a vision of the desired future, identify a gap between current reality and the vision, communicate motives and initiate transformation. The transformation cycle from Founding to Implementing varies in duration and scope. The end of one transforming leadership cycle marks the beginning of new state of being. Each cycle takes the people to a higher level of morality, which is the foundation for new being. It seems complex, yet there are simple governing rules.

Leadership Theories Pertinent to Transformation

To understand the nature of leadership requires understanding of the essence of power, for leadership is a special form of power. . . . Bertrand Russell called power the fundamental concept in social science, "in the same sense in which Energy is the fundamental concept in physics" (Burns, 1979, p. 12).

Burns (1979) and Russell (1938) sparked the idea of understanding leadership by exploiting fundamental energy-flow concept in physics. This section begins with an example of utilizing energy-flow to bridge the laws of nature and the abstraction in human thoughts by looking one attribute of leadership—power, which has direct relationship with energy-flow in both physics and social life. It then proceeds about choosing a leadership theory.

Leadership Power Explained as Energy-Flow and Transformation

Burns, in his earlier work (Burns, 1979), suggests we relate leadership power to laws of force in physics and leverage fundamental energy concepts in physics to understand the perplexity and complexity of leadership. He refers to Russell to explain the similarities between leadership power in social science, energy and force in physics: “the source of [leadership] power may lie in immense reserves of the wants and needs of the wielders and objects of power” (Burns, 1979, p. 12). There is a connection between leadership power, satisfying human needs and nature’s energy resources, “the winds and the tides, oil and coal, the atom and the sun have been harnessed to supply [human’s] physical energy” (p. 12). Leaders exploit energy needs to obtain power over people. Burns explains the link between human motive and resources, “The two essentials of power are motive and resource. The two are interrelated. Lacking motive, resource diminishes; lacking resource, motive lies idle” (p. 12). “Lacking either one, power collapses.” (p. 12) Satisfying people’s needs permit the leader to obtain and retain power.

Motive and resource form an energy-flow dynamic that manifests itself as conflicting forces and powers in leadership phenomena.

the processes of leadership must be seen as part of the dynamics of conflict and of power; that leadership is nothing if not linked to collective purpose; that the effectiveness of leaders must be judged . . . by intent and by the satisfaction of human needs and expectations (Burns, 1979, p. 3)

Historically, leaders should wield power with the expectation to tap into the different forms of

nature's resources to satisfy people's physiological and psychological needs. However, power expended for selfish gain could lead to detrimental consequences, as the person who seeks power for the sake of power, is the one who should not have it. Because, "Such people are apt to use power very badly; to overcome, overpower, use it for their own selfish gratifications" (Maslow, 1998, p. 152). Such leaders "may seek wealth as a means to power" (Russell, 1938, p. 12).

Bertrand Russell, the award recipient of the 1950 Nobel Prize for Literature, equates "power" in social science to "energy" in physics (Russell, 1938, p. 12). Russell advocates, it "should be the business of social science to seek the laws of such transformations" of energy as already defined in physics (p. 14). He indicates that, from ancient civilizations to modern societies, "love of power is the cause of the activities that are important in social affairs" (p. 12). Power has many forms; "power, like energy, must be regarded as continually passing from any one of its forms into any other" (p. 13). When applying that concept to leadership power, which flows and continually transforms from one form to another; the "attempt to isolate any one form of power . . . has been, and still is, a source of errors of great practical importance" (p. 13).

Describing "leadership power," using the laws of nature in "physics," Burns, French, and Russell suggest using "energy" (Russell, 1938, p. 1), "force" (Burns, 1979, p. 12), and "point of equilibrium" (French, 1956, p. 183), in physics to describe leadership power. Perceiving leadership power as energy-flow enables us to see how power and empowerment instigate rippling effects, perturbs and escalates, causing positive and negative entropic effects.

As an example, there are situations where leadership empathy and followership receptivity flow and transform into each other to form "a force field" (French, 1956, pp. 182-3). When "influence" and "resistance" emerge near an "equilibrium point," they manifest the power to maintain balance in society (p. 183). If influence spent is to eliminate resistance, then the

energy generated is entropic; if the influence turns resistance into a complementarity, then the effort generates reverse entropic energy. In other words, the former depletes the organizational energy; while the latter enhances it enabling the capability in dealing with higher complexity.

Russell makes an averment that resonates with the idea of seeking complementarity:

THE POWER impulse has two forms: explicit, in leaders; implicit, in their followers. When men willingly follow a leader, they do so with a view to the acquisition of power by the group which he commands, and they feel that his triumphs are theirs. (Russell, 1938, p. 16)

In the *Book of Tao (Tao-Te-Ching)*, Lao-Tze addresses the same effect,

Very great leaders in their domains are only known to exist. Those next best are beloved and praised. The lesser are feared and despised. Therefore when faith is insufficient and there is disbelief, it is from the high value placed on words. Works are accomplished, tasks are completed, and ordinary folk all say they are acting spontaneously. (Cleary, Lao-Tze, & Chuang-Tze, 1993, Ch. 17)

Bennis says, “there is something missing—one issue that has been systematically neglected without exception” (Bennis, 2000, p. 162). His restatement indicates, “POWER, the basic energy to initiate and sustain action translating intention into reality, the quality without which leaders cannot lead” (p. 162). Ultimately, the quality leaders seek is the ability to induce reverse entropic energy, which is essential for achieving long-term sustainable change.

Rationale in Selecting Burns’ Transforming Leadership Theory

This question about using leadership power to achieve short-term goals versus long-term sustainable change is at the heart of the quandary about what leadership is:

Is leadership simply innovation—cultural or political? Is it essentially inspiration?
Mobilization of followers? Goal setting? Goal fulfillment?
Is a leader the definer of values? Satisfier of needs?
If leaders require followers, who leads whom from where to where, and why?
How do leaders lead followers without being wholly led by followers?”
(Burns, 1979, p. 2)

Such questions confound us. We all have our preferred answers at the tip of our tongues; such as

“Yes, I think it is political innovation!” or “No, I think it is more cultural than political.” Why are there so many types of leadership? Should all the leadership theories share the same aspired vision of the ultimate goals? Our beliefs genuinely endorse our responses about what is right. Burns identifies, from all the various theories of leadership, “two basic types of leadership: the *transactional* and the *transforming*,” which, I believe, are short-term and long-term.

The relations of most leaders and followers are *transactional*—leaders approach followers with an eye to exchanging one thing for another: jobs for votes, or subsidies for campaign contributions. . . . The *transforming* leader looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower. . . . a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents. (Burns, 1979, p. 4)

Short-term *transactional* leadership aims to achieve immediate goals, regardless of what that may be leading into, while long-term *transforming* leadership is the ability needed to sustain the momentum into the future. Although, a transaction could lead to a long-term relationship, the immediate objective is short-term and its energy-flow is entropic. I came to understand leader-follower orientations and relationships being either material *transactional* or spiritual *transforming*. I soon realized the linkage to leadership could not be both transactional and transforming at the same time, as there would be conflict in intention, purpose, and values.

Burns (1979) stipulates the difference between *transformational leadership* and what a *transforming leader* attempts to accomplish:

Transformational leadership is more concerned with *end-values*, such as liberty, justice, equality. Transforming leaders “raise” their followers up through levels of *morality*, though insufficient attention to means can corrupt the ends. Thus both kinds of leadership have moral implications. (Burns, 1979, p. 426)

Burns (1979) indicates there are means to obtain the *end-values*. Perhaps there is a hidden message, the means and *end-values* form an inseparable intertwined oneness—the moral implication. Thus, even with the well-intended *end-values*, without effective means, leaders

could be “doing right things wrongly.” That brings up a pertinent question about what those *end-values* meant to people and what transformation is to achieve to attain the *end-values*. If the ultimate purpose of leadership is to lead people in a pursuit of happiness collectively then we have identified a common ideal that appeals to me for study from an energy-flow perspective.

The premise of this dissertation is energy-flow can help us understand such common ideals. I chose transforming leadership by eliminating the other two. *Transactional* leadership offers evidence of entropic energy-flow, which does not last long enough for us to discern its long-term effect. *Transformational* leadership focuses on the end values that may not reveal the full scope of the means by which we can observe the transition states of energy-flow. For this dissertation, I have selected *transforming* leadership, which focuses on *pursuit of happiness* as a *common ideal*; it allows me to analyze an idyllic attainment using my energy-flow theory.

This chapter presents the foundation for my energy-flow theory, which is built on the laws of physics and Chinese philosophy and cosmological science to provide a frame of reference to fathom leadership theory and practice. Next, Chapter III focuses on using the works of the six exemplar/theorists in six traditions in philosophy, physics, physiology, psychology, and theories of leadership/ management to support my energy-flow theory. For example, it expands from Wilhelm and Jung’s notion of “chance” and “observed moment” into Whitehead’s “specious present,” Siu’s “virtual presence,” and Maslow’s “unconscious impulse.” I show how Jung’s “exploring” energy-flow in “the unconscious” mind echoes Csikszentmihalyi’s FLOW state of psychic energy. I look at how leaders stay balanced with energy-flow in accord with the Tao using Gerber’s vibrational medicine and etheric energy, Prigogine’s energy conservation, transformation, perturbation and bifurcation, and Maslow’s motivational impulse and human potential, and Siu’s Singularly Essential Art.

Chapter III: Corroboration by the Exemplar Theorists in Six Different Traditions

This chapter presents a virtual dialogue with six exemplar theorists and thinkers from six different traditions intending to unfold meanings of leadership and corroborate the *Leadership as Energy-Flow* model illustrated in Chapter II. This dialogue elicits contributions from their works: Alfred North Whitehead, Ilya Prigogine, Abraham H Maslow, Mihaly Csikszentmihalyi, Richard Gerber, and Ralph H.G. Siu. My goal is, to find in their works evidences that energy-flow abstractions captured in thought represent concrete events in everyday life for confirming the energy-flow theory. These evidences convey that there is something to the theory and its relevance to leadership that merits further study.

A “dialogue” is a practice with “a basic feature of communication at the metaphysical level” (Bohm, 1985, p. 22). It is an abstract discussion, during which meanings about specific topics of interest unfold into the collective consciousness (virtually at the center of a conversation circle to which participants speak), rather than debating reactively.

This dialogue consists of six major discourses about the works of the six theorists. Each discourse contains both theory and practice that I found relevant and contributing to support the energy-flow theory. Following each discourse is a conversation consisting of the insights that inspired my learning and how those insights corroborate or challenge my energy-flow idea.

I chose four of the six theorists because their works became meaningful to me during my time in corporate management, when I involved myself in corporate change, and during my study leading up to this dissertation. My sister, P. Y. Lin, taught philosophy and introduced me to Whitehead. And, then there is Siu . . . Peter B Vaill saw a link between my philosophy and my physics, and recommended I study Siu’s work—a most remarkable experience. Siu’s Tao work reminded me of what I had learned from Whitehead and encouraged me to return to see him as

the link between leadership, science, and energy-flow.

Whitehead is relevant to this dissertation for two reasons: First, he saw that Einstein detached classical physics from its moorings in matter and set it afloat on streams of energy. Furthermore, Whitehead saw that society had taken an exclusive focus of classical physics on matter and translated that into a materialistic view of institutions and the roles people play in them. Second, Whitehead saw that with energy now either primary or viewed as a transform of matter, it now became possible to see energy in human institutions and roles as well. That made possible a bridge to people's spiritual needs and values, which had always before been in opposition to material-based institutions and roles. Vaill's shedding light on energy-flow in connection to Whitehead's process philosophy where I found energy-flow to be the key to revealing the roles materialistic thinking plays in the spirituality and other aspects of social life.

Energy-flow in the Reality of a Non-obvious Realm by Alfred North Whitehead

Alfred North Whitehead (1861 - 1947) was a British mathematician, logician and philosopher best known for his work in mathematical logic and philosophy of science (Kline, 1963). Whitehead contributed significantly to twentieth-century logic and metaphysics, including the development of a comprehensive metaphysical system, which has become known as *process philosophy* (Sherburne, 1966). He was a "polymath whose . . . approach to life and science provides a compass for the modern world" (Price, 1954/2001). He was a mentor to Bertrand Russell and collaborated with Russell to co-author the landmark three-volume *Principia Mathematica* (Whitehead & Russell, 1910/1999).

Whitehead's sagacious writings⁸ reveal intensive thoughts about philosophy, religion,

⁸ Sherburne says, "Whitehead, as I understand it, refused to have anything to do with the publishing process once he had completed a manuscript . . . the result is that PR [process reality] in particular is shot through and through with irritating typographical errors" (Sherburne, 1966, p.5). Thus, I have paraphrased in attempt to reduce confusion.

science, statesmanship, education, literature, and art in relation to events and conduct of life.

This discourse draws upon Whitehead's insights into philosophy and modern physics that mostly came from his lecture series at Harvard University (Whitehead, 1938, 1925/1953, 1929/1957, 1933/1961, 1929/1967). His intricate scientific theories reveal insights to the understanding of process philosophy, thought, and reality in social life; and bring two major threads of theory and practice into intertwining unity. The practice thread presents first the thought of how energy-flow represents abstractions of concrete facts in physics and human affairs. The theory thread supports the practice and reveals his theoretical bases of science and logic to show how process philosophy explains energy-flow.

Energy-Material Paradox in Modern and Classical Physics

Whitehead⁹ says, "Both the material and the spiritual bases of social life were in process of transformation" (Whitehead, 1925/1953, p. 101). He postulates, the "notion of energy being fundamental, thus displacing matter [material] from that [fundamental] position" (p. 102) as all matter and mass transform to energy when they travel at "the speed of light" (p. 118). He compares the laws of physics: the classical Newtonian worldview of "materialistic theory" and the Einsteinian energy worldview of "quantum theory" (p. 131), saying that they might present a "paradox" (p. 35). Whitehead assures us, however, that "There is no difficulty in explaining the paradox" as they are two views of the same event (p. 35).

Whitehead explains the paradox using examples of "sound" and "light" to demonstrate how the two paradoxical views are complementary from the perspective of "flow of an underlying energy" (Whitehead, 1925/1953, p. 35). He says, if "we consent to apply to the

⁹ Whitehead's British spellings of many words have been retained in quotations made by him, such as, "colour," "behaviour," "endeavour," "analyse," "realisation," and the like. Kline has assembled a "Corrigenda for *Process and Reality*" in *Alfred North Whitehead Essays on his Philosophy* (Kline, 1963, pp. 201-7).

apparently steady undifferentiated endurance of matter the same principles as those now accepted for sound and light” (p. 35), we find the paradox resolved. When plucking or bowing a violin string, “A steadily sounding note is explained as the outcome of vibrations in the air” (known as sound frequency, time beat, vibration node, or sound period) in classical physics (p. 35). The various notes when played become music, a stream of inter-resonating sound energies. Similarly, when observing an object, “a steady colour [sic] is explained as the outcome of vibrations in [hypothetical] ether,” the light energy frequencies radiated from various colors differentiate objects (p. 35). Sound and light share the same “vibratory” frequency attributes of energy (p. 35). Both are “the steady endurance of matter on the same principle, we shall conceive each primordial element as a vibratory ebb and flow of an underlying energy” (p. 35).

Quantum physics confirms the vibratory attributes of energy, “The whole theory centres [sic] round the radiant energy from an atom, and is intimately associated with the periods [or vibratory frequencies] of the radiant wave-systems” (Whitehead, 1925/1953, p. 36). The “hypothesis of essentially vibratory existence is the most hopeful way of explaining the paradox of the discontinuous [electron] orbit” (p. 36). That reflects with Einstein’s claim that everything is energy (p. 28), “the ultimate elements of matter are in their essence vibratory” energies (p. 36).

Whitehead draws “a metaphor from the ocean tides, the system will sway from one high tide to another high tide” (Whitehead, 1925/1953, p. 35). Ocean tides, forming waves in nature and exhibiting long wavelength vibratory frequency attributes of energy. There is “a definite period associated with each element; and within that period the stream system will sway from one stationary maximum to another stationary maximum” (p. 35). This “system, forming the primordial element, is nothing at any instant” (p. 35). Like all events “It requires its whole period in which to manifest itself” (p. 35). In an analogous way to ocean wave, “a note of music is

nothing at an instant, but it also requires its whole period in which to manifest itself” (p. 35). To illustrate the same point, Vaill has used the example of someone walking up to Pavrotti and saying, “Don’t bother me with all that other stuff. Just sing a high C for me.”

In “modern phraseology it is the sum through successive small lapses of time of the difference between the kinetic and potential energies of the particle at each successive instant” (Whitehead, 1925/1953, p. 62). Similar to waves, the activities in “the social life of modern communities” (p. 57) have “to do with the interchange between the energy arising from motion [kinetic] and the energy arising from position [potential]” (p. 62). Energy “reproduced in this temporal succession of these spatial parts of its own life” vibrates, ebbs, flows, fluxes, transforms, and conserves in “temporal order” in “its history” of social life (p. 119).

Whitehead suggests we describe an event in social life as energy the same way we experience sound notes and light (colors). If “we keep to the physical idea of energy: then each primordial element will be an organised [sic] system of vibratory streaming of energy” (Whitehead, 1925/1953, p. 35).

The “notion of physical energy, which is at the base of physics, must then be conceived as an abstraction from the complex energy” (Whitehead, 1933/1961, p. 186). Energy is “inherent in the subjective form” of the “total vigor of each activity of experience” (p.186). He emphasizes that the subjective experience of an occasion or event is the “general system of relations binding the past to the present” (p. 186). We “should expect a doctrine of quanta [energy], where the individualities of the occasions are relevant” and the “conformal transference of subjective form is the dominating fact” (p. 186). It is “the business of rational thought to describe the more concrete fact from which that [energy] abstraction is derivable” (p. 186). With this odd phrase, “conformal transference,” I believe Whitehead is saying social life is an energy-flow continuity

of “individualities of occasions,” which transform into energy, flow and connect one to another. If not, social life would be a set of disconnected ‘blips’ that did not make up a coherent whole.

Whitehead believes we are ready for “the new doctrine of organism which may take the place of the materialism with which, since the seventeenth century, science has saddled philosophy” (Whitehead, 1925/1953, p. 36). “The new formula [Einstein’s $E=mc^2$] introduces various small effects which are absent in Newton's law” (p. 122). Most importantly, Whitehead explains, “for the major effects Newton's law and Einstein's law agree” (p. 122). The energy “paradox only arises because we have mistaken our abstraction for concrete realities” (p. 55).

Energy as an Abstraction of Concrete Fact of Life

Social life is an abstraction in thought of actual social activities and physical events, as energy is an abstraction of concrete fact, “It must be remembered that the physicists' energy is obviously an abstraction. The concrete fact, which is the organism, must be a complete expression of the character of a real occurrence” (Whitehead, 1925/1953, p. 36). A real occurrence of an observable social event captured in thought is also an abstraction, explainable as material or mass in classical physics. However, “the adequacy of scientific materialism as a scheme of thought for the use of science was endangered” (p. 101). Because the “conservation of energy provided a new type of quantitative permanence,” we now can use it to explain the non-observable realm of social dynamics (p. 101). Energy abstraction in thoughts is displacing “the notion of *mass*” (material) from its “unique preeminence as being the one final permanent quantity” and “we find the relations of mass and energy inverted” (p. 102). Material or “mass now becomes the name for a quantity of energy [as in $E=mc^2$] considered in relation to some of its dynamical effects” (p. 102). That thought compels us to perceive abstractions of “energy being fundamental;” thus, “displacing matter [material]” in its importance for describing the

dynamical effects of social life (p. 102). Thus, Whitehead goes to excruciating lengths in order to explain how continuity is possible among blocks of matter and events, which classical physics could not satisfactorily connect. Whitehead is emphasizing that the same idea holds for social life as in the physical realm.

“The convergent effect of the new power for scientific advance,” which resulted from the energy concept in quantum physics has resolved many anomalies in physics (Whitehead, 1925/1953, p. 101). Resolving the anomalies of “electromagnetism,” “the waves of light,” and the fallacious assumption of “elastic ether,” which was the best classical physics could do for a connective medium, has led us to new perspectives (p. 101). Thus, light as energy-flow does not require a connective medium. The “consideration of the general flux of events leads to this analysis into an underlying eternal energy in whose nature there stands an envisagement of the realm of all eternal objects” and stimulates seeing social life as an eternal energy-flow (p. 105).

“The science of physics conceives a natural occasion as a locus of energy. Whatever else that occasion may be, it is an individual fact harboring that energy” (Whitehead, 1925/1953, p. 185). Transformation from “material” to “energy” is about transforming a “concrete fact” into the “Flux of Energy,” whether as sound, image or other sensed phenomenon, it is “An occasion of experience which includes a human mentality” and thought (Whitehead, 1933/1961, p. 184). At one end of the stream continuum are “those happenings which constitute nature” while the other end, is the “human experience outside nature” (p. 184). For example, at one end is a blooming flower while the other end is a human observer experiencing seeing the image of the flower. The experience “must then be conceived as an abstraction from the complex energy, emotional and purposeful, inherent in the subjective form of the final synthesis in which each occasion completes itself” (p. 186) and retained in thought. Thus, Whitehead is trying to show us

Modes of Thought (Whitehead, 1938) through *Science and the Modern World* (Whitehead, 1925/1953) that thought is a form of energy. The physical world and reality are images in a form of energy we capture and retain in our thoughts; spirituality is mental energy in thought.

Transforming from materialistic based thinking to energy based thinking enables one to perceive the connections of spirituality to physical events in social life, beyond materialistic based thinking. Thus spiritual “value arises because there is now a real togetherness of the ideal aspects, as in thought, with the actual aspects, as in process of occurrence” of “events of the real world” (Whitehead, 1925/1953, p. 105). This complex “enhancement of energy presupposes that the abstraction is preserved with its adequate relevance to the concrete sense of value-attainment from which it is derived” (Whitehead, 1938, p. 169). Whitehead indicates that perceiving social events as energy abstractions makes it easier to discern a “subjective world” impression from other various “objective world” syntheses of the same event (Whitehead, 1925/1953, p. 146). Complementarily, the “mental cognition is seen as the reflective experience of a totality” of real occurrences (p. 148) emerging from subjective and objective worlds. “Both worlds shared in the general flux” of energy in abstract forms (p. 146).

Thus, to describe an event is a complex task because “any subjective judgment as to their relative interest” and human comprehension differs from person to person in so many aspects, dimensions, and depths (Whitehead, 1938, p. 12). In such thought process, an energy abstraction is not “the immediate intuition that we are usually concerned with” rather, the “recollection recorded in words,” sounds, or images (Whitehead, 1929/1967, p. 409). They are the “verbal record of a recollection recalls to our minds” (p. 409). The energy abstraction of an event consists of a mental perception of that event and a captured physical image of that same event. Thus, they both are the “consciousness derived from the various types of intellectual feelings”

intertwined in the thought (p. 409).

Energy abstraction as “the ground of the individualised [sic] thoughts” emerges from old “thought-aspects grasped within the life-history,” which continuously creates new “subtler and more complex enduring patterns” (Whitehead, 1925/1953, p. 105). The “total temporal duration of such an event bearing an enduring pattern, constitutes” and within “this specious present the event realises [sic] itself as a totality” (p. 104). The “specious present” carries event’s life-history that differs from person to person. Whitehead explains, “the qualitative energies of the past are combined into a pattern of qualitative energies in each present occasion” as the “specious present” (Whitehead, 1938, pp. 226-7). To perceive these attributes in materialism, the complexity multiplies many-fold; because “inconsistency is relative to the abstraction involved” (p. 76). Trying to explain inconsistency between abstractions led Einstein to the discovery of the *quantum* and *relativity theories*, in which, the mass-energy conversion resolved the anomalies of the light particle-wave paradox that had haunted physicists for decades (Whitehead, 1925/1953, pp. 62-3). Whitehead suggests, using relativity theory, “Metaphysicians,” “Mathematicians,” and “Experimental psychologists” bring “some of these standpoints [of inconsistent abstractions] into relation with each other” (Whitehead, 1929/1957, p. 155). It “necessitates a very cursory treatment of each point of view” from one relative space-time frame of reference (p. 155).

Energy-Flow in a Relative Frame of Reference

“Some form of the relativity theory seems to be the simplest way of explaining a large number of facts which otherwise would each require some ad hoc experiments which led to its origination” (Whitehead, 1925/1953, p. 116). Whitehead suggests the *relativity theory* be the “ground of the explanation” for energy abstractions of human events (p. 116). However, he cautions, the *relativity theory* poses “a direct challenge to common sense, because the earlier

science had only refined upon the ordinary notions of ordinary people” (p. 116). He says, the “radical reorganisation [sic] of ideas” (p. 116) presents “a heavy blow at the classical scientific materialism” (p. 118). It obliges people to shift from the “habitual fundamental assumption” of having a “unique meaning” to a paradigm of quantum energy with several meanings (p. 117).

Energy abstractions in thought are individualized sense perceptions of an event. An energy abstraction is complex as sensing carries value laden meanings involving aspects that are “emotional and purposeful, inherent in the subjective form” (Whitehead, 1933/1961, p. 186). Thus, a “subjectivist position” has been “popular among those who have been engaged in giving a philosophical interpretation to the recent theories of relativity in physical science” (Whitehead, 1925/1953, p. 90). Sharing subjective views by disclosing one’s frame of reference can enhance understanding and allow the collective whole to arrive at objectivity collectively, with “the exception of those who are content with themselves as forming the entire universe, solitary amid nothing” (p. 90). Whitehead reasons, the “dependence of the world of sense on the individual percipient seems an easy mode of expressing the [subjective] meanings involved” while the objectivists disclaim subjectivity and “struggle back to some sort of objectivist position” (p. 90).

Materialism may have been the underpinning of objectivism; “In the past, the objectivist position has been distorted by the supposed necessity of accepting the classical scientific materialism” (Whitehead, 1925/1953, p. 91). Objectivism is “a half-hearted position which falls an easy prey to subjectivist criticism” as such, “the sense-objects, are dealt with on subjectivist principles” (p. 91). Objectivism seems futile because it infers that “a common world of thought can be established in the absence of a common world of sense” without any “transcendence of thought” or “transcendence of the world of sense” (p. 90).

Whitehead founds his energy “transcendence of the world” argument on a “doctrine of

immanence” (Whitehead, 1938, p. 226); this doctrine of causation helps describe “the transference of character from occasion to occasion” (p. 227). “Each occasion presupposes the antecedent world as active in its own nature” and as a system of “a living subject with the unfolding of the subject's constituent energies” (p. 226). The members existent in the system “have a determinate status relatively [sic] to each other;” as such, “the qualitative energies of the past are combined into a pattern of qualitative energies in each present occasion” (pp. 226-7). Our “immediate occasion is in the society of occasions” (p. 227). The energy abstraction is “a two-fold unity with the observed data;” when perceiving events as energy-flow (p. 227). “This fact of observation, vague but imperative, is the foundation of the connexity [connectivity?] of the world, and of the transmission of its types of order” (p. 227). “We are in the world and the world is in us” (p. 227).

Whitehead’s energy abstraction agrees with Einstein’s theory of relativity—except the former’s multiple system conception conflicts with latter’s single generalized formula. Whitehead says, the “new theory of multiple space-time systems,” which “Einstein would probably reject,” as Einstein’s “mode of statement has the greater mathematical simplicity, and only allows of one law of gravitation, excluding the alternatives” (Whitehead, 1925/1953, p. 122). Whitehead’s contention reveals Einstein’s and Newton’s unrelenting assumption of a universal law of gravitation. The single generalization led to Einstein’s inability to fulfill his own “dream of unification” and scientists’ continuing “search for gravitational waves” in modern physics (Einstein, 1922/2005, introduction by Brian Greene).

Whitehead explains, “I cannot reconcile it with the given facts of our experience as to simultaneity, and spatial arrangement” (Whitehead, 1925/1953, p. 122). “The scheme of relationships as thus impartially expressed becomes the scheme of a complex of events variously

related as wholes to parts and as joint parts within some one whole” (p. 123). In other words, energy abstractions can represent complex event relationships. The “internal character of the relationship really shows through this impartial scheme of abstract external relations,” which are objectivistic views of an event (p. 123). The subjective “internal relatedness” to “the essence of an event” creates a clearer perception of multiple space-time system reality (p. 123). Using *relativity theory*, we perceive “the relatednesses [sic] of an event” (p. 122) in each individual internal space-time system as “vibratory ebb and flow” of a stream of “underlying energy” (p. 35) rather than as “a mere linear procession of discrete entities” (p. 93). Thus, an objectivist stance represents a collective interrelatedness of subjectivist views. The “effect of the abstraction stimulates the vividness and depth of the whole of experience” (Whitehead, 1938, p. 169).

As the “doctrine of energy, and the molecular theories were rapidly undermining the adequacy of the orthodox materialism;” the “simple security of the old orthodox assumptions has vanished” (Whitehead, 1925/1953, p. 113). The “new situation in the thought of today arises from the fact that scientific theory is outrunning common sense” (pp. 113-4). Better “instruments . . . due to the progress of technological processes” put our “thought on to a new level” (p. 114).

Whitehead’s “notion of energy being fundamental,” subordinating materialism (Whitehead, 1925/1953, p. 102) to unite with spiritual base in social life, I have labeled “energy-flow” in this dissertation. His concept of “multiple space-time” frames of reference (p. 122) postulates its application to describe human phenomena such as leadership. “Leadership is one of the most observed and least understood phenomena on earth” (Burns, 1979, p. 2) because our observations involve multiple subjective space-time frames of reference that induce diverse understanding of the same phenomenon. Viewing leadership phenomena as energy-flow eliminates the gap between physical material senses and spiritual based frames of reference.

Thought, Logic Process, Scientific Reasoning, and Fallacy Precaution

Whitehead cautions about a “*Fallacy of Misplaced Concreteness*” that is “the occasion of great confusion in philosophy” (Whitehead, 1925/1953, p. 51). The fallacy is a “distortion of nature due to the intellectual ‘spatialisation [sic]’ of things” (p. 50). This “spatialisation [sic] is the expression of more concrete facts under the guise of very abstract logical constructions” and is “merely the accidental error of mistaking the abstract for the concrete” (pp. 50-1). The logic fallacious is a result of specifying only spatial aspects without respect to time. When concluding and generalizing, there is the occurrence of an event, as an event “concerns time and so far as it is taken to be the fundamental fact of concrete nature” (p. 50). It is “not necessary for the intellect to fall into the trap;” although “there has been a very general tendency to do so” (p. 51).

Vaill illustrates the use of Whitehead’s logic error process, by applying it to detect a logical fallacy in the “*Theory of the Managerial Competency Movement*” (abbreviate as “CM”) (Vaill, 1989, p. 36). If “we identify the competencies possessed by effective managers, and then teach them to learners, these learners will become effective managers” (p. 36). Vaill explains, “The CM commits what Alfred North Whitehead called the ‘*fallacy of misplaced concreteness*’” (p. 45). We often forget that those lists of successful managerial leadership factors are “abstractions” of “a very tricky sort for they involve splitting action from consciousness” (p. 45). “Managing of any sort, let alone highly effective managing, is a very personal intertwining of consciousness and action.” (pp. 45-6) Vaill says, “The CM’s idea of what definitely *exists* is an abstracted statement of visible action-capability” (p. 46). It is “an abstraction twice-removed for in its creation of a competency,” which “has aggregated the visible action-capabilities of many actors, smoothing out the differences of energy-level, personal style, and cultural attunement which individual actors manifest” (p. 46). “You cannot think without abstractions; accordingly it

is of utmost importance to be vigilant in critically revising your *modes* of abstraction” (p. 46).

Whitehead’s (1953) *Fallacy of Misplaced Concreteness* and Vaill’s (1989) discussion of it became the reminder in my exploration as the fallacy is committed repeatedly in concept formation and utilization, even famous quotes not immune from it. I am cognizant of the need for a solid basis upon which to build my conceptual scheme and to challenge my inferences.

Energy Based Social Life in the Physical World

Whitehead (1953) believes modern physics has bestowed upon us evidence that challenges our commonsense assumptions based on materialistic thinking that social life consists of discrete building blocks of reality. The concept of “conservation of energy provided a new type of quantitative permanence”—energy—quantifiable in both Newtonian and Einsteinian physics (p. 101). We can no longer ignore the effect of energy manifests and the presence of spirituality in social life. Our commonsense tells us that “energy could be construed as something subsidiary to matter [or material]” (p. 101), but Whitehead indicates that the thought today arises from the new scientific theory is challenging Newtonian commonsense materialism (p. 114). “Both the material and the spiritual bases of social life” are transforming (p. 101). The notion of energy and spiritual aesthetic attainment are “interwoven in the texture of realisation [sic]” in new social life (p. 94).

The transformation in social life helps people eradicate apprehensions inhibiting “all thought concerned with social organisation [sic] expressed itself in terms of material things and of capital,” which excludes the “ultimate values” of the spiritual base (Whitehead, 1925/1953, p. 203). Because there is a division between the material and spiritual perceptions of social life that has been haunting humanity since ancient times, people struggle to choose between the two to find a base for satisfying their physical life (p. 101). In this dichotomy, if one were to pursue the

material-based life, one would lose the ability to pursue spiritual attainment; or vice versa.

Whitehead hopes the transformation would lead the world to “the notion of energy being fundamental, thus displacing matter [or material] from that position” of being a base for social life (p. 102). Perpetuating the river metaphor, an energy base would make uniting with the spiritual base possible, the two bases would “become a uniform way of dealing with circumstances” of social life (p. 202). Thus, if people can change to energy based thinking then they would no longer feel they have to choose between a “life of the mind” and a “life of the physical senses.” Life would always, and everywhere, have both.

Uniting the two bases helps us realize a dilemma that arises from having to subdivide and choose, as we “cannot subdivide life, except in the abstract analysis of thought” (Whitehead, 1925/1953, p. 202). Whitehead explains that perceiving energy as being one of the two fundamentals of social life helps us retain the “intrinsic energies, sustained by physical and spiritual adventure” (Whitehead, 1933/1961, p. 82). The unity of energy-spiritual base enables us to “transforms the soul into the permanent realisation [sic] of values extending beyond its former self” and “adds to the permanent richness of the soul's self-attainment” (Whitehead, 1925/1953, p. 202). We no longer must spend energy resolving conflicts between material and spiritual attainments. This united base enhances the “fertilisation [sic] of the soul” that justifies itself both “by its immediate enjoyment, and also by its discipline of the inmost being” as its discipline and its enjoyment support and justify each other (p. 202). Whitehead postulates, “Such a displacement of scientific materialism” by the concept of flow and transformation of energy—“if it ever takes place, cannot fail to have important consequences in every field of thought” and a shift in perception of what is social life (p. 36).

Whitehead indicates, “so many complexities have developed regarding material, space,

time, and energy,” that the world has long lost “the simple security of the old orthodox assumptions” and commonsense (Whitehead, 1925/1953, p. 113). There are other laws of nature that provide explanations for “the biological developments, the doctrine of evolution, the doctrine of energy, and the molecular theories” which are “rapidly undermining the adequacy of the orthodox materialism” (p. 113). His emphasis on the words “security” and “orthodox” is to help us realize how much we are relying on our perceived certainty. Commonsense, materialism and scientific energy theory all reside in our thought. However, we have to come to terms with “the new situation” in the thought that new science is displacing “commonsense” in everyday life (p. 113-4). I think he is saying that new scientific theory is leaving commonsense behind. Thus, commonsense rooted in the old materialistic certainty paradigm of the 17th century has become obsolete that we need to move forward in thought with the new scientific energy theory.

A “true proposition must always be a matter of great uncertainty” (Whitehead, 1929/1967, p. 409); because the “totality is characterized by a selection from its details” and that selection claims “attention, enjoyment, action, and purpose, all relative to itself” (Whitehead, 1938, p. 186). The abstraction is “the energizing of a state of mind” (Whitehead, 1925/1953, p. 3). In his words the proposition is but a cognitive event in which the “the mental cognition is seen as the reflective experience of a totality, reporting for itself what is in itself as one unit occurrence” (p. 148). He suggests we “describe the more concrete fact from which the abstraction is derivable” using “rational thought” (Whitehead, 1938, p. 186).

Whitehead's Insights on Energy-Flow and My Learning

Whitehead discerns a disconnection between the bases of thought in our social life, “material” and “spiritual.” The reason for the disconnection is we tend to base our commonsense on discrete materialistic thinking. Whitehead intentionally stays at a theoretical level and leaves

the explanation to others, as detailed explanations would distort the original thinking. Vaill says to understand Whitehead's thinking might require a "paradigm shift" from Aristotelian/Cartesian /Newtonian dualism to Whiteheadian monism (Vaill, 2008). For four centuries, our oscillating between materialistic and spiritual thinking has been "schizophrenic;" either we suppress one to elevate the other with great intensity, or, we switch between them without realizing the dualistic metaphysics this switch requires. Whitehead shows us how the energy base thinking unites with "spiritual" thus requires neither illogical dualism nor any frantic sacrificing of one for the other.

Whitehead's insight is to displace material based thinking with energy based thinking in people's perception of physical reality, as bases of social life are "in process of transformation" (Whitehead, 1925/1953, p. 101). He explains by showing Einstein's view of "everything is energy" to mean the "notion of energy being fundamental, thus displacing matter from that position" (p. 102). He says, "Such a displacement of scientific materialism, if it ever takes place, cannot fail to have important consequences in every field of thought" (p. 36). A consequence may be we perceive all social events as "vibratory" energy-flow abstractions of "concrete fact" (p. 36). This would enhance the spiritual aspect of social life and lead both individuals and society to congruency as people grasping for and attaining happiness ultimately displace materialism with an energy base.

Whitehead observes that the laws of classical physics explain the material-based dimension of social life while the laws of quantum physics describe the spiritual-based dimension. The two thinking bases seem to be dipolar opposites of each other; one is observable and tangible while the other is intangible and immeasurable without special equipments. Understanding the essences of their dipolar attributes is important, as paradoxes create natural forces of energy-flow resulting in complementary oneness or opposite separateness.

I drew a correlation with Burns' two basic types of "transactional leadership" as materialistic thinking while "transforming leadership" focus on spiritual thinking; but "transformational" entails both materialistic and spiritual end-value attainments. Just as Newton is materialistic, and Einstein, in resolving the particle/wave paradox with "energy," entails both materialistic and energy-based thought. Both are necessary, one serves short-term needs while the other long-term, thus they could be complementary or in conflict. For example, if the leadership intention in an organization is strictly transactional then conflict arises with any proposed transforming purpose, while if leadership intention is transforming then any transactional exchange consistent with the transforming intention becomes complementary. This affects energy-flow; in a transforming organization, transactions may either interrupt the flow or enhance the flow.

His work in science, thought, logic theory, and scientific reasoning profoundly inspired me. One of his central themes, "the energising [sic] of a state of mind in the modern world, its broad generalisations [sic], and its impact upon other spiritual forces" led me to perceive energy-flow in social life (Whitehead, 1925/1953, p. 3). As one experiences paradigm shifts to see the world from different frames of reference, one begins to perceive reality differently. His work helped me grasp that every event we encounter in social life radiates continuous energy-flow, which takes on characteristics of physics: color and sound frequencies. The image of a continuous stream of ebbs and fluxes of vibrating energy is enthralling.

Whitehead's notion that abstractions of potential energy induce kinetic energy to act or react is influential in keeping the flow moving through conversions and transformations. When observing, hearing, or reading about an actual event, the concrete facts radiate energy-flow, which become abstractions in our thoughts. However, the abstractions sensed from different

frames of reference yield differing opinions about the same event alter the perceptions of the intentions of the event. A “*Fallacy of Misplaced Concreteness*” or confusion might occur as the accidental error of mistaking or insisting on the abstract for the concrete. That great confusion is of a distortion of nature that affects actions between people—leaders and followers, driving the kind of energy-flow they perceive as appropriate to the situation.

Whitehead’s insights on the non-obvious realm of reality lay a philosophical foundation for the energy-flow theory. It is in the non-obvious realm that we find the essence of leadership. Prevalent research focuses on the extrinsic such as, behaviors, styles, and actions of leadership. However, it is in the intrinsic realm, the non-obvious, underlying dynamics between leaders and followers that we find the “true” meaning of leadership in how the leaders embrace the beliefs, needs, and values of their followers to achieve collective goals. The “true” meaning might imply that the extrinsic is somehow irrelevant, misleading, or invalid. However, just as Einstein incorporated Newton and went beyond him, and as transformational incorporates transactional and goes beyond it, so too does “leadership” actually incorporate extrinsic and intrinsic together; leadership is “both-and” not “either-or.”

Whitehead uses relativity theory to explain the intrinsic (individual’s) and extrinsic (others’) realities and the temporal dimension of social events in the space-time continuum, to help connect thoughts between those who hold different perceptions. He suggests energy based thinking can induce complementarity of energy-flow in a paradoxical dipolar entity. These concepts, unifying the energy and spiritual bases in social life, have been instrumental in filling gaps in my fragmented thoughts about the need for transforming leadership and encouraged me to pursue the *Leadership as Energy-Flow* concept.

His work in process philosophy and physics brings new perspectives to my energy-flow

conceptual scheme. His insights expand my understanding to encompass concepts of modern physics such as superstring theory and other dimensional realities to add clarity and depth to my *Leadership as Energy-Flow* theory. He clarified for me how subjectivist views about leadership theories surface and bring conflicting thoughts into complementarity to stimulate progress.

Whitehead's deep philosophical arguments, process and reality, reconciling permanence and change, and energy-flow abstractions, contributed to the thoughts of Russell, Prigogine, Maslow, and Siu. This dialogue moves on to the next discourse with Prigogine's work on energy-flow in physicochemical thermodynamics to add a new dimension to this pursuit of scholarship into the laws of energy-flow in physics as they apply to leadership.

Whitehead's philosophy influences Ilya Prigogine, a noted scientist who I came to know during my work heading a change effort in the corporate world. His work helped me reconcile the chaos in corporate initiatives that failed with the attempt to achieve organizational transformation.

Energy-flow: Dissipative Structure and Self-sustaining Nature by Ilya Prigogine

Ilya Prigogine (1917 – 2003), a Belgian-American scientist, the 1977 Nobel Laureate for his work on dissipative structures arising out of nonlinear processes in “nonequilibrium [sic]” systems (Prigogine & Stengers, 1984, Foreword by Alvin Toffler). His “contentious and mind-energizing” work is a “lever for changing science itself, for compelling us to reexamine its goals, its methods, its epistemology—its world view” and serves as “a symbol of today's historic transformation in science” (p. xii). Prigogine's work bridges natural (hard) sciences and social (soft) sciences. Being deeply interested in archaeology, art, and history, he brought to science “a remarkable polymathic mind” (p. xi). He spent most of his lifetime challenging the commonsense method of analyzing by dissecting problems. He advocates a return to studying the

science of nature as a whole—in its entirety. Thus, “‘put the pieces back together again’—the pieces in this case being biology and physics, necessity and chance, science and humanity” that we often left them separated in their dissected forms (p. xi).

This discourse emphasizes Prigogine’s theories on several key controversial views about the concept of energy-flow in nature. He asserts that “order and organization can actually arise ‘spontaneously’ out of chaos and disorder due to a process of ‘self-organization’” (Prigogine & Stengers, 1984, p. xv) and time “irreversibility” (p. 257). Thus, those concepts “undermine conventional views of thermodynamics;” because under “nonequilibrium [sic]” conditions, entropy may produce order, organization, and therefore create life and a future (p. xxi). Vaill (2008) explains that time irreversibility means a system cannot reset itself at “Time-zero” and try again to organize itself. It can only move forward from where it is. Even if one could reverse its process, it could not reverse time as time has moved forward. Vaill comments one reason why social science is different from natural science is natural sciences are experimental with definitive finite set of conditions. Each experiment can begin at “Time-zero” and see how it acts under various conditions. The social sciences cannot usually perform “Time-zero” experiments. Once we have tried something in the social world we cannot unwind it and start again. Thus, if we were to bring human beings, singly or in groups into a laboratory and perform experiments, each start at a “Time-zero,” we would run into problems. The problem is no two persons are exactly alike; there are always unforeseen factors that yield perplexing results. Moreover, whether we can apply the results to the natural world, since the natural world is always messier and full of contingencies than the laboratory experiment (Vaill, 2008, “Time-zero” experiments).

Most of Prigogine’s work and his theories presented in this discourse come from his book, *Order out of Chaos* (Prigogine & Stengers, 1984), which provides the energy-flow

“‘reference point’ for physics and the core model of science in general” (p. xiv). Prigogine’s later work (Prigogine, 1997) confirms his earlier work on his concepts of nature’s order, uncertainty, and time-irreversibility. This discourse touches upon my past work, in which Dr. Phyllis Kirk (Kirk, 2000) and I (C. Fu, 2000) applied Prigogine’s dissipative structure theory to explain the energy-flow dynamics of corporate climate change, spontaneity, and sustainability in an aerospace company (C. Fu & Kirk, 1999).

Returning to Nature’s Spontaneity and Reunifying Sciences in Philosophy

Prigogine describes human affairs using energy-flow and transformation in terms of “macroscopic physics, which comprises the physics and chemistry” (Prigogine & Stengers, 1984, p. xxviii). He points out there are interrelationships between all sciences, through “conceptual experimentation it [science] must construct a consistency that can accommodate all dimensions of experience, whether they belong to physics, physiology, psychology, biology, ethics, etc” (p. 95). “While each scientific theory selects and abstracts from the world's complexity a peculiar set of relations, philosophy cannot favor any particular region of human experience” (p. 95). He echoes Whitehead in using energy-flow abstractions to provide the philosophical linkage to put the pieces of all sciences back together again (p. xi).

Prigogine finds Whitehead’s philosophy and logic most supportive. In *Order out of Chaos* (Prigogine & Stengers, 1984), he refers to “Whitehead, Alfred North” (pp. 10, 17, 47, 50, 79, 93-96, 212, 216, 258, 302, 303, 310, 322n), and dedicates a chapter section on Whitehead’s *Process and Reality* in support of Hegel and Bergson’s philosophy of nature (pp. 89-93). In *The End of Certainty* (Prigogine, 1997), Prigogine says, “I also quoted Alfred North Whitehead from *Process and Reality*, for whom the ultimate goal was to reconcile permanence and change, to conceive of existence as a process” (p. 59). Prigogine delves deeper into Whitehead’s

philosophical arguments: on “compromise between science and freedom” (p. 10), “creativity of nature” (p. 62), “existence as process” (p. 59), “intelligibility of nature” (pp. 17, 29); “nonequilibrium [sic] thermodynamics” (p. 72), “philosophy as time centered” (p. 13), and “slipping through the scientific net” (p. 189).

Connecting philosophy and science, Prigogine remarks, “We must not forget the words of Whitehead, words constantly confirmed by the history of science: a clash of doctrines is an opportunity, not a disaster” (Prigogine & Stengers, 1984, p. 216). “Whitehead's philosophy . . . being is inseparable from becoming” (p. 303) and “elucidation of the meaning of the sentence ‘everything flows’ is one of metaphysics' main tasks” (p. 303). Prigogine compares “the elimination of time-irreversibility from physics, advocated by Einstein” to “the emphasis on the importance of irreversibility, as in Whitehead's concept of process” (p. 258). Prigogine postulates, “there must be something in the microscopic world of which macroscopic irreversibility is the manifestation” (p. 258). Prigogine concludes, “Whitehead saw no basic contradiction between science and philosophy,” rather, there is complementarity (p. 94).

In the same train of thought, Whitehead disagrees with Einstein's belief that the “mode of statement has the greater mathematical simplicity” (Whitehead, 1925/1953, p. 122). Mathematically, we have real numbers and imaginary numbers. We use the former to represent some sense-perceptible, physical measurements while we use the latter to identify something not physical, such as processes in thought. We can travel in thought back and forth in time, but not physically. In a thought process, for example, we say, “if we could start all over, we would do it differently.” That is, we imagine in thought, we could reverse to a time zero and restart the event. While in the physical world time has moved on even when that imagined event occurs. I believe Whitehead's process philosophy and logic fallacy of concreteness are crucial for us to avoid

making mistakes in equating our thought process with the concrete physical process. Thus, Einstein's time-reversibility is only possible in thought reality while Prigogine's time-irreversibility is true in the physical-world reality.

Prigogine agrees with Whitehead's philosophical stance about energy abstraction as process for dealing with reality and events in human systems; and suggests we "conceive of things as processes" of energy-flow and flux (Prigogine & Stengers, 1984, p. 95). Both thinkers seek to unify sciences and social life, "open new channels of communication between science and society" (p. 22). They opine classical physics should remain as "the natural reference point" at the microscopic level (p. 68). Although, "the laws of classical mechanics have been replaced by those of quantum mechanics," at the level of "the universe, relativistic physics has displaced Newtonian physics" (p. 68). Prigogine echoes the notion of displacing materialism with energy and unifying energy with "spiritual reality" in social life (p. 86). "His [Whitehead's] purpose was to define the conceptual field within which the problem of human experience and physical processes could be dealt with consistently." (p. 94) Prigogine substantiates complementarity by drawing upon laws of nature. "The results of nonequilibrium [sic] thermodynamics are close to the views expressed by Bergson and Whitehead. Nature is indeed related to the creation of unpredictable novelty, where the possible is richer than the real" (Prigogine, 1997, p. 72). Vaill comments, however, there is a problem with "the natural reference point," which cannot be studied without some kind of "observing mind" (Vaill, 2008, observing mind). In the social world and perhaps in the physical world also, the observing mind frequently disturbs the natural process. That is the point of the Uncertainty Principle—that an observing mind can never know what the natural process was independent of any act of observation (observing mind).

Energy-Flow and Transformation in a Physicochemical Abstraction

Prigogine illustrates energy-flow and transformation as abstractions in human affairs from a physicochemical transformation frame of reference (Prigogine & Stengers, 1984, p. 108). He uses fire to illustrate energy transformations in nature's phenomena. "Fire transforms matter," which is quantifiable as mass or material. Fire "leads to chemical reactions, to processes such as melting and evaporation" and fire "makes fuel burn and release heat" (p. 103). Heat energy transforms into mechanical energy, "heat may lead to an increase in volume; as a result, combustion produces work [energy]" (p. 103). That energy transformation may indirectly render societal impact; "Fire leads to a new kind of machine, the heat engine" of a train, and many other "technological innovation on which industrial society has been founded" (p. 103).

Besides fire energy, people also convert wind, water, and solar into mechanical, electrical, biological energy or other "sources of [energy] power" (Prigogine & Stengers, 1984, pp. 103-4) to satisfy basic human needs in everyday life. Prigogine urges us to make the paradigm shift to unify natural and social sciences. Using energy-flow abstraction and tapping into ancient wisdoms, we "discover in the midst of the extraordinary diversity of the sciences some unifying thread" (p. 22).

Quantitative and Qualitative Abstractions of Energy-Flow

The ancient wisdoms of the East and of the West have led to differing ways of perceiving phenomena in nature. In the West, the quantitative perceptions and scientific progress led to "reversibility and determinism" in the form of cause-effect experimental reasoning (Prigogine & Stengers, 1984, p. 8). In the East, the qualitative thoughts of "irreversibility and randomness" opened to possibilities and stoicism (p. 8). One of the fascinating questions of intellectual history is why Western science led to a technological "explosion" whereas Chinese science did not.

Although science has made great progress in the West, “science is debasing our world” and “Everything it touches is dehumanized” (p. 31). Vaill comments, “This is a point William Barrett made forcefully in *The Illusion of Technique*” (Barrett, 1978, Vaill, 2008).

Prigogine cautions us to maintain our epicenter with the nature’s original spontaneity (Prigogine & Stengers, 1984, p. 31). He hopes, “Perhaps we will eventually be able to combine the Western tradition, with its emphasis on experimentation and quantitative formulations, with a tradition such as the Chinese one, with its view of a spontaneous, self-organizing world” (p. 22). Vaill (2008) indicates, “An alternative focus is to come to terms with what might be called, ‘the romance of technology,’” such as in “*The Re-enchantment of the Earth* by Berman.” It is an approach “taken by many science fiction writers, as well as dramatically presented in Robert Pirsig’s, *Zen and the Art of Motorcycle Maintenance*, and Norman Mailer’s amazing account of the Apollo space program, *Of a Fire on the Moon*” (Vaill, 2008, the romance of technology).

Prigogine refers to Chuang-tze (500 b.c.e.), a profound Chinese philosopher and a student of Lao-Tze, who took Taoist philosophy to a deeper level (Prigogine & Stengers, 1984, p. 22), wrote many insightful observations about nature and human affairs. One translated verse says:

How [ceaselessly] Heaven revolves! How [constantly] Earth abides at rest! Do the Sun and the Moon contend about their respective places? Is there someone presiding over and directing those things? Who binds and connects them together? Who causes and maintains them without trouble or exertion? Or is there perhaps some secret mechanism in consequence of which they cannot but be as they are? (Needham & Ronan, 1978, p. 87)

Referencing the above ancient writing, Prigogine says, “The concept of a passive nature subject to deterministic and time-reversible laws is quite specific to the Western world. In China and Japan, nature means ‘what is by itself’” (Prigogine, 1997, p. 12). In the West, we speculate the answer to most of these questions is “gravity.” The problem is we are able to detect it and measure it using devices, yet unable to control it. So, it remains as a hypothesis. Regardless of

what people think or how they try to label, categorize, or clock it, “nature is governed by simple, knowable laws” and according to “Chinese tradition, nature is spontaneous harmony” (pp. 12-3).

The reason for combining the Western and Chinese traditions is, “Chinese science, so successful in many areas, did not produce a quantitative formulation of the laws of motion” (Prigogine & Stengers, 1984, p. 57). Chinese science did not offer quantitative measurements for energy-flow. In Western science, laws in physics and chemical experiments quantify energy, “total energy is conserved with potential energy converted into kinetic energy, or vice versa” (p. 108). Having quantitative measurements makes it “possible to measure the quantity conserved” in energy-flow, while without it, makes grasping Chinese science difficult and advancing its technology beyond original invention almost impossible (p. 108). Prigogine combines Eastern and Western thinking when he “postulates that ‘something’ is quantitatively conserved while it qualitatively transformed, generalizes what occurs during mechanical motion” and offers a more definitive grasp of the energy-flow abstraction (p. 108).

In materialistic cultures, being able to communicate succinctly with some quantitative measurements eliminates ambiguity. Laws in classical physics “defined a general *equivalent* for physicochemical transformations” the “quantity was to become known as ‘energy’” (Prigogine & Stengers, 1984, p. 108). Prigogine concurs with Einstein, Freud, and Whitehead (Prigogine & Stengers, 1984, p. 17), recommending we “shift away from concrete experience toward a level of abstraction” of energy-flow. Eschewing materialism, we can find a “kind of interpretation” of a social event and employ energy-flow in our “reflection, at the epistemological level” (p. 19).

Sustainability, Nature’s Order, and Physiological Energy-Flow

Mayer, a young Dutch doctor in Java, discovered one of the most remarkable finding from physiological experiments on thermal energy, “noticed the bright red color of the venous

blood of one of his patients” (Prigogine & Stengers, 1984, p. 109). That discovery led his research to conclude, in “a warm, tropical climate, the inhabitants need to burn less oxygen to maintain body temperature; this results in the bright color of their blood” (p. 109). Mayer went on to establish the “balance between oxygen consumption, which is the source of energy, and the energy consumption involved in maintaining body temperature despite heat losses and manual work” (p. 109). Though “the object of physiology would nonetheless be purely physicochemical in nature,” Mayer inferred the balance “between oxygen consumption and heat loss was merely the particular manifestation of the existence of an indestructible ‘force’ underlying all phenomena” (p. 110). In Prigogine’s interpretation, the relationship of oxygen consumption and heat is only a manifestation of some “vital” life “force” or the physiological energy-flow underlying the function of beings that keep people alive (p. 110).

Prigogine agrees with Mayer, “energy conversion cannot be the whole story,” that “below there must be another, more ‘active’ level,” which is “beyond equivalences and conservation of energy” (Prigogine & Stengers, 1984, p. 111). “The power of nature is thus concealed by the use of equivalences” as nature destroys old while creates new (p. 111). That is, “energy although being conserved, also is being dissipated” (p. 111). This means, total energy conserved includes dissipated energy, which is difficult to reconstitute and recreate the material from which it originated (p. 111). Prigogine says time-irreversibility makes reverting energy back to material impossible (p. 111). That is, one cannot gather back the fire energy and recreate a log.

Classical physics does not accept the concept of irreversibility; it tends to “emphasize stability, order, uniformity, and equilibrium” that are based on mass or material (Prigogine & Stengers, 1984, p. xiv). Now, we realize that certainty and time-reversibility are illusions, as “cultural implications were far-reaching, and they included a conception of society,” in which

chaos, uncertainty, and non-equilibrium are the norm (p. 111). Prigogine echoes Whitehead's ideal of moving toward an energy-spiritual based social life. We are in transition from "an industrial society, based on heavy inputs of energy, capital, and labor" materialism, to "a high-technology society in which information and innovation are the critical resources" (p. xiv).

Prigogine explains that "nature is governed by simple, knowable laws" (Prigogine, 1997, p. 12), and the "laws of nature, which no longer deal with certitudes but possibilities, overrule the age-old dichotomy between being and becoming" (p. 155). He cautions, even the idea that "speaking about 'laws of nature'" would "subject nature to some external authority," which humans do not have (pp. 12-3). While there may be "other universes" or realities which have "followed other paths," our universe has "followed a path involving a succession of bifurcations" (p. 72). These bifurcations are what create unpredictability in both our social and nature's systems that lead to "the creation of unpredictable novelty," where expecting uncertainty enables us to synchronize with nature's spontaneity to realize potentiality (p. 72).

Dissipative Structures and Higher-Order Complexity

The dissipative structure resembles energy-flow as seen in nature such as river turbulence, tumbling waterfalls, and storms at sea; and seen in organizations as chaos (Prigogine & Stengers, 1984, p. 141). The "energy flow . . . somewhat resembles the flow of a river that generally moves smoothly but that from time to time tumbles down a waterfall, which liberates part of the energy it contains" (p. 156). For a long time tumbling "turbulence was identified with disorder or noise," Prigogine says, "Today we know that this is not the case" (p. 141). While "turbulent motion appears as irregular or chaotic on the macroscopic scale," it is, "on the contrary, highly organized on the microscopic scale" (p. 141).

In the field of hydrodynamics and fluid energy-flow, when a "certain flow rate of flux has

been reached, turbulence may occur in a fluid” (Prigogine & Stengers, 1984, p. 142). “The multiple space and time scales involved in turbulence correspond to the coherent behavior of millions and millions of molecules” in a process of self-organization (p. 141).

Prigogine describes the turbulence in a thermodynamic laboratory experiment, in which one observes heating layers of different densities of liquid, one layer on top of another, in a glass pot on a burner (Prigogine & Stengers, 1984, p. 144). The liquid in the pot maintains an order of heat transfer calmly from the bottom layer to the top “the liquid layer from below, the lower part of the fluid becomes less dense, and the center of gravity rises” (p. 144). As heating continues, when the bottom layer reaches a boiling point “beyond a critical point the system tilts and convection sets in” (p. 144). It starts to create turbulent bubbles and stirs up the whole pot. “The convection motion produced actually consists of the complex spatial organization of the system. Millions of molecules move coherently, forming hexagonal convection cells of a characteristic size” (p. 142). “Part of the energy of the system, which in laminar flow was in the thermal motion of the molecules, is being transferred to macroscopic organized motion;” the structure change from the calm heat transfer to the boiling turbulence in a self-organizing manner (p. 142).

Nature’s phenomena are like living organisms of systems that “contain subsystems,” which are continually making structural change, “fluctuating” (Prigogine & Stengers, 1984, p. xv). A single fluctuation or a combination of them “may become so powerful, as a result of positive feedback, that it shatters the preexisting organization” of the evolving system (p. xv). At “a ‘singular moment’ [a singularity point] or a ‘bifurcation point’—it is inherently impossible to determine in advance which direction change will take” in a system (p. xv). That is, whether it “will disintegrate into ‘chaos’ or leap to a new, more differentiated, higher level of ‘order’ or organization” (p. xv). Prigogine calls this singularity process of a living organism, a “dissipative

structure” as opposed to the concept of “equilibrium structures” such as the molecular structures in crystals (p. 143). Vaill comments, a problem is in reasoning from the observance of dissipative structures in the natural world leading to a bifurcation point, to applying the idea in the human world in social organizations. He says, what we see in systems where consciousness is present is heroic efforts on the part of system members and/or stakeholders to avoid the stark bifurcation point. But, it appears in every organization that “begins to become chaotic as a result of its own growth and/or changes in its membership and/or changes in its environment [sic]” (Vaill, 2008, dissipative structure). I believe, social system must overcome one major obstacle that natural systems do not face—human’s attempts to control.

“Dissipative structures actually correspond to a form of supramolecular [sic] organization” with parameters “in particular from the range of their forces of attraction and repulsion,” causing disequilibrium (Prigogine & Stengers, 1984, p. 143). The notion of “dissipative structures” emphasizes that there is a close association “at first paradoxical, in such situations between structure and order on the one side, and dissipation or waste on the other” (p. 143). The formation of dissipative structures “is remarkable that near-bifurcations systems present large fluctuations;” Prigogine identifies the phenomena as “nonlinear systems far from equilibrium” calling it “the theory of bifurcations” (p. 14). “Such systems seem to ‘hesitate’ among various possible directions of evolution, and the famous law of large numbers in its usual sense breaks down” (p. 14); making certainty assumptions an illusion. A “small fluctuation may start an entirely new evolution that will drastically change the whole behavior of the macroscopic system” (p. 14). Far from equilibrium exists in nature; he says that both aspects, “chance” and “necessity” appear to be “essential in the description of nonlinear systems,” which bear a behavioral semblance “with social phenomena, even with history,” and are “inescapable” (p. 14).

Vaill says, In the 1960s there was a company in San Diego called, Non-Linear Systems. The CEO was a man named Andrew Kay. They dominated a then-specialty market for a machine called a “digital voltmeter.” The interesting connection is that Maslow spent a summer in residence observing how they did things in NLS, and that was the database for his book, *Eupsychian Management*; it later became, *Maslow on Management* (Vaill, 2008, NLS). *Energy Input, Perturbation, Bifurcation, and Transformation in the Evolution of Corporate America*

Throughout history, social phenomena seem to be getting more and more nonlinear with our increasing ability to comprehend the complex abstractions of psychological energy. Applying Prigogine’s dissipative structures, Phyllis Kirk, a humanist, futurist, social scientist, and “recovering” lawyer, conceived the *Kirk Model of Dissipative Structure* (Kirk, 2000), which was personally reviewed by Ilya Prigogine then critiqued by Fritjof Capra (p. 5). In her journal article, which was selected to lead the millennium edition of *Systems Thinker*, Kirk invites us to leap to a level of energy-flow abstraction to understand the evolution of corporate America.

Kirk says, “For many of us in the corporate world, our worst fear is organizational anarchy” (Kirk, 2000, p. 1). With our “skyrocketing budgets, plummeting productivity, lack of accountability, and overall confusion,” our organizations focus on fear of chaos (p. 1). Chaos “is to be shunned at any cost, because we view it as the harbinger of companywide disintegration and destruction” (p. 1). Without understanding the corporate life-cycle and the underlying dynamics, we often react to chaos by spending energy and resources maintaining stability that unintentionally drains the budget and worsens a situation (C. Fu, 2000). Kirk offers this model to discern the dynamic energy-flow underlying chaos in corporations (C. Fu & Kirk, 1999).

Kirk introduces the theory in the *Kirk Model of Dissipative Structure*, “All social

systems, including corporations, are living systems. As such, the components of an organization, including policies, cultural norms, job descriptions, and traditions, are continually changing” (Kirk, 2000, p. 2), they grow, so as mature. Although, Vaill says the living system assumption may be debatable, there is a controversy within the systems thinking world (Vaill, 2008). I think energy has both living/non-living attributes. Kirk describes a corporation as a social system:

As a living system receives energy-rich input from the environment, the system becomes increasingly chaotic. This process of increasing agitation is called “perturbation.” At “the bifurcation point,” the system will either break apart or it will leap to a higher, more complex order now able to handle even more challenges (Kirk, 2000, p. 1).

Nature’s cycles are always seemingly in equilibrium, constantly evolving as nature self-organizes—vacillating between near-, far-from, and non-equilibrium. “In nature, a system that thrives on chaos is dynamic and vital;” Kirk observes that, “a ‘stable’ system is closest to entropy, which is closest to death” (Kirk, 2000, p. 1). From her point of view, “chaos is actually desirable, and order, lethal” (p. 1). She says, “decay is an integral part of any ecosystem, serving to fuel growth of new forms of life” (p. 1). However, we all “prefer to help our companies prosper rather than become spare parts for the next generation of businesses” (p. 1). In corporations, information is energy that “flows through this structure on an ongoing basis, feeding and guiding the change process” (p. 2), maintaining a near-equilibrium state. “The enterprise grows and develops based on a certain pattern of organization” (p. 2) into maturity where stability becomes the desired state of being.

In *Learning as a Way of Being* (Vaill, 1996), Vaill comes to the same conclusion—that “permanent white water is a blessing!” (p. 183) He explains that in modern organizations, seeing chaos as a blessing is elusive; yet so important a point. Chaos “is our opportunity to rise above complacency and naiveté, to confront the deeper dilemmas of our existence, to be tempted by

cynicism and negativity and despair, but to see finally the truth that lies beneath our frustration” (p. 183). “The white water, however, is existential. It cannot be prevented from calling meanings into question, from opening new possibilities before us, possibilities that may be experienced as beckoning opportunity or yawning abyss” (pp. 186-87). Vaill invites us to shift our paradigms, from treating “white water more as yawning abyss than as beckoning opportunity;” to thinking of chaos “in light of the theme of perceived spiritual integrity that may progressively transcend itself” (p. 187). In such a way “we can see white water not as a disruptive horror but as the creative source of continued spiritual growth” (p. 187).

One CEO of a giant aerospace industry company echoes Vaill’s and Kirk’s sentiments when he challenges his company employees, “to shake off complacency and transform the successful aerospace company from top to bottom” (C. Fu, 2000, p. 6); he opines,

If they [companies] survive this entrepreneurial phase, they begin to mature. . . . Once a company matures, it begins the death process, which is what [the company] is now [1994] experiencing. Now, there are only about three ways to go once this death process has begun. The first is to die—the company just goes away. . . . The next is to get deep enough into a crisis state that it becomes apparent that if something isn't done, the company will die. . . . The third way—and one that has rarely been chosen—is to dismantle the bureaucracy and change the entire organization while the company is still on top” (“What It Will Take to Fulfill Our Vision,” Manager). [His] bold statement moved the company to pursue the third route. (C. Fu, 2000, p. 6)

The above is a transforming vision. A small “Quantum Shift Learning” team was formed in a 6000-person information technology division, aiming at transforming managers and leaders in a technical area (engineering and computer science) as part of the CEO’s large-scale transforming effort. One of the team’s strategies was to apply the *Kirk Model of Dissipative Structure* to illustrate the energy-flow’s effect to correct a problem of low morale and refocus them on values. The team “shifted some managers’ thinking about how to act in a changing environment” (C. Fu, 2000, p. 6). “The team discussed how ‘The Cycle of Dissipative Structures’ might serve as a tool

to guide us through the ups and downs of the change processes” (p. 6). In the dissipative structure, organizations have the choice to “handle energy in the form of input from their environment influences whether they thrive or collapse in the face of change” (p. 6). The team effort lasted four years; it came to a halt together with the company-wide transformation after an acquisition/merger of a rival, as the corporate attention shifted to focus on assimilation. Vaill comments, “Perhaps the ‘acquisition/merger of a rival’ can be seen as a concrete step past the bifurcation point” “to revitalize themselves by transforming competition into cooperation” (Vaill, 2008, acquisition).

A “balanced system—one that perceives challenges as opportunities and maintains open paths of communication—is more likely to thrive than one that rigidly seeks to control its environment” (C. Fu, 2000, p. 6). That is, “when a system disintegrates, its energy is dissipated and lost; when it successfully incorporates new input, it evolves to a higher form of complexity and is better able to fulfill its purpose” (p. 7). The learning is, “a corporation may hedge its bets in the direction of transformation” in the “flow of sustainability in chaos” embracing chaos in converting external energy input into learning. But, it first, “must overcome one major stumbling block that natural systems don't face—our own physiology and psychology” (Kirk, 2000, p. 4).

Prigogine's Insights on Energy-Flow and My Learning

Prigogine's work supports my *Leadership as Energy-Flow* concept with scientific experimentations and evidence and provides quantitative validation at both macroscopic and microscopic levels of energy. He points out that at the macroscopic level we sense physical, chemical, and biological energy effects in everyday life. He affirms Whitehead's philosophical arguments about energy-flow as abstractions of concrete facts in thought and explains them as energy interactions such as those at microscopic level molecular energy. Both Prigogine's and

Whitehead's works advocate energy as a basis for perceiving social events inclusive of leadership phenomena. By displacing the material base in social life with energy and by unifying spirituality and energy into one, we perceive reality differently. Perhaps, with new discovery in modern physics, we will find a way enabling us to measure quantitatively frequencies of energy-flow abstractions in our thought realities as we do with quantum energy field.

Prigogine explains that energy-flow exists in nature as dissipative structures that are self-sustaining, even in non-equilibrium or chaotic situations. Nature and society are both time-irreversible and uncertain, and entropy does not necessarily degrade, but creates new order. His work shows us how energy-flow dissipates, transforms, and is conserved; how thinking in terms of energy-flow helps people bring order out of chaos. Instead of entropy and destruction, he shows how we use an understanding of energy perturbation and bifurcation to help individuals and organizations succeed in transformation and coping with a higher level of complexity in life.

His work helps us connect the methods of quantifying energy-flow in scientific advances by reacquainting us with the ancient wisdoms, which qualifies energy-flow in nature's order and spontaneity. Prigogine links Whitehead's philosophical arguments to the ancient Chinese wisdom about nature's spontaneity; he stresses the importance of being able to quantify energy to advance Chinese science. Although, he did not specifically go into yin-yang energy-flow and Tao philosophy, he does refer to the ancient Taoist philosopher, Chuang-Tze, on cosmic energy-flow in "Chinese tradition" (p. 12). He indicates that Taoist's "spontaneous, self-organizing" nature (Prigogine & Stengers, 1984, p. 22) shows that indeterminacy brings possibilities and future potentials that are more important than dwelling within current limitations of reality.

Prigogine's work takes us into a new paradigmatic realm of unified science, where humans have a new dialogue, which engages "from Earth to Heaven the reenchancement [sic] of

nature” (Prigogine & Stengers, 1984, p. 291). A unified science coincides with nature’s laws of self-sustainability and time-irreversibility. Both Csikszentmihalyi (1990) and Gerber (1996) refer to Prigogine’s energy-flow theory to explain their works in the dissipative structure of mind and dissipative structure of physiology. The next discourse is about Maslow’s work.

Maslow is a paragon in the study of management. I learned of his work in my early experience in change, motivation, and human potential during my Whole Systems Design master’s degree in the Organization System Renewal program.

Human Potential, Motivation, and Management Theory by Abraham H Maslow

Abraham (Harold) Maslow (1908 – 1970) was an American psychologist gained his reputation for his pioneering work on human potential and his human need hierarchy. He developed the concept of self-actualization and launched the research into human behavior and motivation. Maslow's deep thought on human potential extends far beyond the need hierarchy. Many practitioners reference his work as the ideal management and exemplar leadership concept

This discourse with Maslow’s work extends into other works that he greatly influenced. An enormous exposure given his work by Douglas McGregor (McGregor, 1960) created what became world famous, the two radically different philosophies of managerial leadership “Theory X” and “Theory Y.” Those are recognized as the inferred mental models managers hold of employees (Vaill, 1998a, pp .152-3). Based on Maslow’s notion of human potential, McGregor also built his theories around what he called the “principle of integration.” That principle was managers should conduct the organization in such a way that employees can fulfill their own goals best by pursuing the goals of the organization. It is impossible to calibrate “McGregor's influence, but it has been immense as the key to organizational America and in management textbooks” (Vaill, 2007, about Maslow). McGregor “built on Maslow’s theory by adding another

central idea about . . . self-fulfilling prophecies . . . that most managers harbor ‘Theory X’ assumptions” (Bolman & Deal, 2003, p. 118). He advocated another view, “Theory Y. Maslow’s hierarchy of needs was the foundation” (p. 118).

Maslow's groundbreaking principles have withstood the test of time. Today his concepts of human systems are integral components of current management practice. He translated the science of the mind into the art of management—an important interpretation first published in the far-sighted treatise, “*Eupsychian Management*” and his impact continues to be felt. Thirty-seven years after its first printing, it was reprinted under the title: *Maslow on Management* (Maslow, 1998). In the book, Bennis says, “Two big things that Abe gave to all of us: the art and science of becoming more fully human and the democratization of the soul. For these we will be forever indebted” (Maslow, 1998, Foreword by Warren Bennis). Maslow’s insights into human potential continue to inspire new tools to tackle present-day business situations effectively.

Maslow’s work on leadership in the realm of management science is based on his theory of human motivation and potential (Maslow, 1998) and is greatly influenced by Freud’s theory on id impulse and ego. He agrees, “as Whitehead has repeatedly pointed out, to base our theories and philosophies of science and common sense squarely on this basic and unavoidable fact” in human minds about the needs to displace materialism (Maslow, 1954/1987, p. 200). Maslow expresses his frustration that materialism is still the “basis for all our less intellectual reactions” (p. 200). He observes, we are “still deeply Newtonian” rather than—Einsteinian (p. 200).

Basis of Maslow’s Human Motivation, Potential, and Management Theories

Maslow relates his theories of management, human potential, and need to the concepts of unconscious impulses that trigger energy-flow in human motivation. “Motivation” itself is potential energy, “need” could be seen as the desire for inducing new energy of some kind (Vaill,

2008). Maslow conveys the unconscious impulses as elements inherent in the non-obvious realm of reality. He quotes Whitehead's philosophical argument. "Transcendence of mere clarity and order is necessary for dealing with the unforeseen. . . . A power of incorporating vague and disorderly elements of experience is essential for the advance into novelty' (Whitehead, 1938, p. 108)" (Maslow, 1954/1987, pp. 203-4). Maslow describes those elements reside under the "influence of reality" as energy of "unconscious impulses" (Maslow, 1954/1987, p. 12).

Maslow clarifies his concept of unconscious impulse quoting Freud's explanation of "id impulse" (Maslow, 1954/1987, pp. 12-3). Freud says, "an id impulse is a discrete entity having no intrinsic relatedness to anything else in the world, not even other id impulses" (Freud, 1933, pp. 104-6) (pp. 104-6). "These instincts fill it with energy [sic], but it has no organization and no unified will, only an impulsion to obtain satisfaction for the instinctual needs, in accordance with the pleasure principle" (pp. 104-6). Freud points out that, "The laws of logic—above all, the law of contradiction—do not hold for processes in the id [impulse]." He offers his observations, "Contradictory impulses exist side by side without neutralizing each other or drawing apart; at most they combine in compromise formations under the overpowering economic pressure towards discharging their energy." The "id impulse" is activated in an "economic" pressure in an energy field (pp. 104-6), manifesting as an attribute of energy-flow.

Maslow relates the id impulses to ego, where we find psychological, emotional energy. "To the extent that these impulses are controlled, modified, or held back from discharge by reality conditions, they become part of the ego rather than the id [impulses]" (Maslow, 1954/1987, p. 13). The "ego controls the path of access to motility, but it interpolates between desire and action, the procrastinating factor of thought, during which it makes use of the residues of experience stored up in memory" (Freud, 1933, p. 106).

Maslow speaks of a different, but transcendent form of impulse in thought as, “an education in spontaneity and eager abandon, in being natural, nonvoluntary [sic], noncritical, and passive in the Taoist style, trying not to try” (Maslow, 1954/1987, p. 66). He quotes a verse attributed to Lao-Tze, “When once you are free from all seeming, from all craving and lusting, then will you move of your own impulse, without so much as knowing that you move” (p. 66). For such purposes one must “learn” to “drop inhibitions, self-consciousness, will, control, acculturation, and dignity” from the ego and become spontaneous with nature’s accord (p. 66). The unconscious impulse, free from ego, is central to Maslow’s utopian management theories.

Aspects of Leadership in Eupsychian Management

Maslow may have been one of the first to suggest the leadership goal is to pursue happiness. Although, there are enumerable suggestions for what Maslow calls “ideal-must-be” leadership, Maslow is dissatisfied with the material based leadership in the management literature (Maslow, 1998, p. 152). He proposes *Eupsychian Management*:

This is the simplest way of saying that proper management of the work lives of human beings, of the way in which they earn their living, can improve them and improve the world and in this sense be a utopian or revolutionary technique (Maslow, 1998, p. 1).

Comparing eupsychian management to authoritarian management, “Theory Y management (or eupsychian management) definitely turns out a better kind of human being, . . . more admirable kind of person than does the Theory X or authoritarian management” (pp. 99-100). This “eupsychian improvement” of management implies “only real possibility and improvability rather than certainty” (p. xxiii). He hopes *eupsychian management* “could make people better en masse” and thereby “tending to influence in principle all human beings” (p. 2).

Maslow associates the impulse to exercise power with the human motivation to self-actualize. He commences *Notes on Leadership* chapter with his observation on leadership power:

. . . the person who seeks power for power, is the one who is just exactly likely to be the one who shouldn't have it. Such people are apt to use power very badly; to overcome, overpower, use it for their own selfish gratifications (Maslow, 1998, p. 152)

What emerged is about the leadership paradigm of getting the job done effectively, rather than positional leadership: “Blackfoot Indians tended not to have general leaders with general power;” but to “have different leaders for different functions” (p. 153). He is saying functional leadership provides opportunity for self-actualization and happiness for all:

This business of self-actualization via a commitment to an important job and to worthwhile work could also be said, then, to be the path to human happiness (by contrast with the direct attack or the direct search for happiness—happiness is an epiphenomenon, a by-product, something not to be sought directly but an indirect reward for virtue). (Maslow, 1998, pp. 8-9)

Happiness is beyond physiological or physical feelings; rather it is psychological “unconscious impulses,” which offers an indirect reward for one’s virtue (pp. 8-9).

Basic Need Hierarchy: Physiological and Psychological

Maslow’s basic human need hierarchy, a “pyramid” (Maslow, 1998, p. xx) consists of, from most primal to the most complex (from bottom to top of the pyramid): Physiological, Safety, Social, Esteem, and Self-Actualization (Maslow, 1998, p. xx). He explains that there is a dynamic upward transition between the levels in the need hierarchy: “the basic human needs are organized into a hierarchy of relative prepotency” (Maslow, 1954/1987, p. 17). When the needs at one level are “continuously met they cease to exist as active determiners of behavior” (Maslow, 1943/1987, p. 107). Thus, the needs “emerge into a higher level to dominate the organism;” when these in turn are satisfied, the new higher need emerges, and so on (p. 107). The progression is not stepwise but a flow in which spiritual attainment increases as one rises to a higher level needs (p. 107). The highest level, self-actualization needs, is not often achievable “since their emergence depends on satisfaction of the other four categories of needs” (p. 107).

There are conditions that are immediate prerequisites for the basic need satisfactions at this level, such conditions being “freedom to defend oneself, justice, fairness, honesty” (Maslow, 1954/1987, p. 22).

Physiological needs rank first: “usually taken as the starting point for motivation theory are the so-called physiological drives” (Maslow, 1954/1987, p. 15). The human “body's automatic efforts to maintain a constant, normal state of the blood stream” is a balancing process known as “homeostasis” (p. 15). Maslow considers the hierarchy of human needs to follow two paths; one hierarchy includes “conative” needs, such as homeostasis, while the other, “the basic cognitive needs,” consists of “the desires to know and to understand” and “the aesthetic needs” (pp. 23-5). He stresses that the two need hierarchies, “cognitive” and “conative,” are “synergic rather than antagonistic” and “interrelated” (p. 25) and flowing, like river of two sources.

Maslow's Insights on Energy-Flow and My Learning

Maslow fills in some of the gaps that Whitehead intentionally left out for us to fill, that is, Whitehead's notion of displacing the material base with an energy base to establish a unifying spiritual base in social life. Having strong feelings about the lack of progress in displacing materialism, Maslow says that we still dwell deeply in “Newtonian” rather than “Einsteinian” thinking. His need hierarchy illustrates a scale of continuum of needs ranging from material acquisition at the bottom to spiritual attainment at the top. We can identify where we each are in that continuum. The important point is, in this continuum, the material needs are the objective physiological commonsense needs and spiritual needs are the more abstract transcendent needs. We have more in common at the physiological level than we do at the higher levels.

Maslow relates the human need hierarchy to the management-leadership continuum, which ties in with the *Leadership as Energy-Flow* concept. The energy-flow theory is to address

needs at all level and constantly aligning those needs with the transforming purpose and values of an organization. Both Maslow's motivation theory and his need hierarchy are guides for leaders to focus their attention on people and spirituality in organizations.

Maslow's Eupsychian Management work offers guidelines for building on human potential while leading people to happiness. He echoes Taoist leadership explaining the paradox of uncertainty in life (the dualistic nature of life being the struggle between order and chaos) as the product of unconscious impulses. In this impulse domain, we come to the synergy of power and empowerment. We find it equally empowering for followers to empower leaders as it is for leaders to share their sense of power with followers. Vaill comments, "McGregor's Theory Y applies to one's leaders even as it applies to one's followers" (Vaill, 2008, Theory Y). Maslow's notion of physiological and psychological unconscious impulses between leaders and followers provides interesting waypoints to further discourses in our dialogue.

Maslow talks about different leadership unconscious impulses quoting Freud's explanation of id impulse as energy-flow. This raises questions that require further contemplation: How do unconscious impulses affect the flow of energy through the eight trigram energy states of my conceptual scheme? Does each trigram possibly have a conscious and an unconscious mode or level? Do unconscious impulses vary from leader to leader, or are they similar essentially among all or most leaders?

I came to know Mihaly Csikszentmihalyi's *FLOW* concept when I was co-authoring with Dr. Phyllis Kirk during my corporate years. Then, during my Ph.D. Leadership and Change studies, I had the opportunity to attend a conference where he was a keynote speaker. His *FLOW* concept renewed my curiosity because he links leadership to psychic energy.

FLOW of Psychic Energy: the Path to Happiness by Mihaly Csikszentmihalyi

Mihaly Csikszentmihalyi (1934 -), his name “pronounced ‘CHICK-sent-me-high-ee’” (Csikszentmihalyi, 1997, book cover) devotes his life's work to the study of what makes people truly happy, satisfied and fulfilled. His decades of empirical research led to the concept of what he calls “*FLOW*” (Csikszentmihalyi, 1990, p. xi). The aspects of “human experience—joy, creativity, the process of total involvement with life” shows how people “transform boring and meaningless lives into ones full of enjoyment” (p. xi).

As a leading researcher on creativity, he explored the lives of world acclaimed creative people interviewing “ninety-one artists, scientists, political and business leaders” (Csikszentmihalyi, 1997, p. 153). He concludes that being “good at ordering their lives” with “rhythms” and governing the “relationship between flow and creativity” are what they have in common; they require psychic energy attention (p. 41).

This discourse focuses on Csikszentmihalyi’s work which describes the concept of “*FLOW*” (Csikszentmihalyi, 1990), a psychological energy-flow discipline that enables people to embark on their paths to happiness. The discourse touches on his later work (Csikszentmihalyi, 1997) which shows how to discern the rhythm and order in a chaotic world, and find “*FLOW*.”

Dissipative Structures of the Mind—Psychological Energy-Flow

“*FLOW*” is a psychological process (Csikszentmihalyi, 1990, p. 201). Using the theory of evolution as a basis, Csikszentmihalyi refers to Prigogine on the concepts of energy conservation and dissipative structures, and nature’s spontaneity and self-sustainability. Csikszentmihalyi says, “complex life forms depend for their existence on a capacity to extract energy out of entropy” to recycle waste energy back to the nature’s order for renewal (p. 201). He says, “Prigogine calls physical systems that harness energy which otherwise would be dispersed and

lost in random motion ‘dissipative structures’” (p. 201). Csikszentmihalyi uses example that “the entire vegetable kingdom on our planet is a huge dissipative structure because it feeds on light, which normally would be a useless by-product of the sun's combustion” (p. 201). Thus, “Plants have found a way to transform this wasted energy,” so as “all life on earth is ultimately made possible by dissipative structures” (p. 201). “Human beings have also managed to utilize waste energy to serve their goals” (p. 201). Human minds have the “ability to make order out of chaos;” the minds can “capture chaos and shape it into a more complex order” (p. 201).

At a bifurcation point in “the dissipative structures of the mind,” an event can result in either a positive or negative energy state (Csikszentmihalyi, 1990, p. 202). When an event triggers a negatively reinforcing feedback loop, as negativity exacerbates, it “produces disorder in the mind” that “threatens the self and impairs its functioning” (p. 202). Psychological disorder or physiological impairment may perturb the mind until it exceeds its tolerance limit, possibly resulting in trauma (p. 202). “In less severe cases the threatened self survives, but stops growing; cowering under attack, it retreats behind massive defenses and vegetates in a state of continuous suspicion” (p. 202). When the “trauma is severe enough, a person may lose the capacity to concentrate on necessary goals” (p. 202). In serious cases, the self is no longer in control; “If the impairment is very severe, consciousness becomes random, and the person ‘loses his mind’—the various symptoms of mental disease take over” (p. 202). However, the dissipative structure of the mind resulting from the bifurcation randomness also presents opportunities. That is, if one were prepared, one would be able to reverse negative energy into positive one. Csikszentmihalyi suggests it is within our ability to program our minds (p. 202).

FLOW, attending to creating a positive perception, is central to Csikszentmihalyi’s (1990) work. His research illustrates how one can develop “such positive strategies” to defend

oneself; “those who know how to transform a hopeless situation into a new flow activity that can be controlled will be able to enjoy themselves, and emerge stronger from the ordeal”

(Csikszentmihalyi, 1990, p. 203). Most negative events “can be at least neutralized, and possibly even used as challenges that will help make the self stronger and more complex,” (p. 202)

moving the self into a higher level of existence. Csikszentmihalyi emphasizes that, “courage, resilience, perseverance, mature defense, or transformational coping” are essential to life (p. 202), without them, one would be “constantly suffering through the random bombardment of stray psychological meteorites” (p. 202). He urges us to be with the FLOW—direct our psychic energy attention toward transcendental happiness.

FLOW—Attention as Psychic Energy Transcending People to Happiness

Attention is “like energy in that without it no work can be done, and in doing work it is dissipated” (Csikszentmihalyi, 1990, p. 33). Attention “determines what will or will not appear in consciousness” and performs other mental events; “it is useful to think of it as *psychic energy*” (p. 30). “We create ourselves by how we invest this [attention] energy” (p. 33); our memories, thoughts, and feelings “are all shaped by how we use it. And it is an energy under our control, to do with as we please” (p. 33). Vaill points out that statement seem to be in contradiction “with Maslow quoting Freud about unconscious impulses of the id” (Vaill, 2008, unconsciousness). Perhaps, Csikszentmihalyi’s “attention” to “intention” in the consciousness can bring awareness to one’s unconscious impulses of the id into one’s consciousness. As information “enters consciousness either because we intend to focus attention on it or as a result of attentional [sic] habits based on biological or social instructions” (Csikszentmihalyi, 1990, p. 30), it will stay if we allow it. The information we “allow into consciousness becomes extremely important;” to some extent, it “determines the content and the quality of life” (p. 30). Directing our attention to

bring superlative information into consciousness is “our most important tool in the task of improving the quality of experience” and learning in life (p. 33).

Interestingly, Vaill says, Elton Mayo, architect of the seminal “Hawthorne researches” seventy-five years ago, also thought that the principal damage of industrial society was to the worker’s processes of attention. Mayo said that “repetitive work in a repressive organizational climate produces obsessive thinking, which is a disorder of attention” (Vaill, 2008, attention).

There is psychic energy-flow between attention and intention. The so-called “intention” is the “force that keeps information in consciousness ordered” to shape our “attention” (Csikszentmihalyi, 1990, p. 27). Intentions rise to the level of consciousness as a wanting to accomplish something. Those bits of information, “shaped either by biological needs or by internalized social goals,” act as “magnetic fields, moving attention toward some objects and away from others, keeping our mind focused on some stimuli in preference to others” (p. 27). Intentions (potential energy) direct our attention toward our goals (p. 20) and induce us to take actions and behave (kinetic energy) in a certain manner (p. 76); foster a psychic energy re-enforcing cycle until it reaches a *FLOW* state. When, “goals are clear, feedback relevant, and challenges and skills are in balance,” people’s attention “becomes ordered and fully invested” in adhering to intentions (Csikszentmihalyi, 1997, p. 31).

Our view of the world “outside” is programmed by our psychic energy-flow (Csikszentmihalyi, 1990, p. 24). Research shows people can make themselves and others happy, or miserable, regardless of what is actually happening “outside” just by changing the content of “inside” consciousness (p. 24). The “inside” psychic energy-flow reprograms the “intention in consciousness” and shifts one’s effort to attending to the hopeful challenges rather than dwelling in hopeless, ennui, or dispiritedness (p. 24). Individuals who recognize meaning and purpose in a

situation are able to transform energy associated with hopeless stagnation into challenges-to-be-overcome by conditioning their psychic energy-flow to accept the challenges (p. 24).

Leadership as Energy-Flow in a Web of Meanings

In his “Leadership and the Evolution of Culture” keynote speech (Csikszentmihalyi, 2004), Csikszentmihalyi emphasizes that leadership is about creating and fostering a web of meanings across time and cultural space. This web of meanings continues to evolve with the concepts of leadership ranging from those about ancient kingship to modern leadership and management, portraying leadership as a complex living system governed by nature’s laws and cultural or societal etiquette. It is vital to comprehend leadership as a web of interchanging meanings, intertwining leader’s vision, culture values, and societal power bases.

Encompassed in the web of leadership meanings, there is psychic energy-flow and transformation. In it, there are essentials. (1) Leaders have clear “unselfconscious self-assurance” in their intention to lead others (Csikszentmihalyi, 1990, p. 203). (2) Leaders focus “attention on the world” rather than selves—to form cultural norms (p. 206). (3) The collective as a whole embarks on creativity and “the discovery of new solutions” (p. 207). Vaill says, “the web ‘IS’ a web of energy-flow. There is no ‘web’ apart from the energy-flow” (Vaill, 2008, Web).

Csikszentmihalyi reminds us that our everyday life is defined by not only what we do, but also by whom we are with at that moment—those who lead us, and whom we lead. “Our actions and feelings are always influenced by other people, whether they are present or not,” as long as they appear as energy-flow abstractions in our thoughts (Csikszentmihalyi, 1997, p. 13). Our feeling and moods are “more amenable to direct change, and because they are also connected to how happy we feel, in the long run they might raise our average level of happiness” (p. 21).

Csikszentmihalyi’s Insights on Energy-Flow and My Learning

I became fascinated with Csikszentmihalyi's empirical research into cognitive science and his concept of *FLOW*, an energy-flow state of intrinsic motivation that allows people to transcend to happiness; a guide for people on all walks in life. Although, he did not refer to Whitehead's material-spiritual aspects of life or Maslow's need hierarchy, Csikszentmihalyi's work delves into getting people to find meaning in life and attending to the spiritual realm of attaining happiness. Referencing Prigogine, Csikszentmihalyi explains the *FLOW* state as Dissipative Structures of the Mind, saying that bifurcation occurs when people reach *FLOW*, a physic energy state of creativity and happiness. His decades of research evidenced that one can program intentions in one's consciousness and direct one's attention to achieve those intentions.

His work supports the *Leadership as Energy-Flow* theory. Its focus on individual attainment presents an order seems not exact match of need hierarchy described by Maslow or the *essential energy-flow* that I suggested in Chapter II. A conjecture is individual transformation may not be the same as organizational transformation, hinting transformational paths may differ.

This dialogue moves to the next discourse on Gerber's Vibrational Medicine, how psychological energy-flow affects physiological energy-flow complementing each other in shaping human wellness as being of energy. In my personal contemplative study of Chinese herbal medicine and acupuncture, I discovered the work of Richard Gerber's first book.

Physiological Energy-flow: Vibrational Medicine by Richard Gerber

Richard Gerber, M.D. (1954 -) "received his medical degree from Wayne State University School of Medicine, and currently practices internal medicine in a suburb of Detroit" (Gerber, 1988/1996, p. 559). Dr. Gerber "is currently working with World Research Foundation in Sherman Oaks, California, a nonprofit public benefit foundation" to create and sustain a multidisciplinary healing research center. Such a center "would tie together many different

academic research centers and clinics throughout the world in cooperative healing studies and information exchange” (p. 559). He has become the definitive authority on energetic medicine.

Gabriel Cousens, MD says “*Vibrational Medicine*” is the “new scientific paradigm” of multidimensional medical science (Gerber, 1988/1996, Introduction). He says Gerber makes a graceful transition from the atomistic fragmented Newtonian understanding of health to the unbroken wholeness of the Einsteinian quantum mechanical worldview involves a paradigm shift in understanding human physiology. William A. Tiller, Ph.D., a professor at Stanford University says, this book “is an attempt to present a conceptual bridge between current allopathic¹⁰ medicine and future subtle-energy medicine¹¹” (Gerber, 1988/1996, Foreword). Gerber’s “*Vibration Medicine*” deals with “a series of interacting multidimensional subtle-energy systems, and that if these energy systems become imbalanced there may be resulting pathological symptoms which manifest on the physical/emotional/mental/spiritual planes” (p. 28).

Energy healing is a groundbreaking concept that has become “a revolutionary bridge between the metaphysical and medical communities” and “provides resolution to Gerber’s long-standing sense of paradox between those two fields” (Gerber, 1988/1996, p. 559). It marks a transition from seeing human physiology as fragmented parts to seeing it as a totality of interrelatedness. His research brings together “scientific evidence,” “clinical observations,” and “experimental findings” that substantiate the “existence of an extended subtle-energy human anatomy” (p. 34). He perceives human physiology as energy-flow that enables a new way of

¹⁰ Allopathic medicine—conventional, traditional Western medicine “deals directly with the chemical and structural components of the physical body” with “direct laboratory evidence to support its physiochemical hypotheses” (Gerber, 1988/1996, p.23). Tiller says, when “an organism was not functioning properly, the cause has been ascribed to structural defects in the system arising out of chemical imbalances” (p. 21).

¹¹ Subtle-energy medicine—future medicine that deals with energy of “magnetic in nature and travels at velocities greater than that of electromagnetic light” as oppose to energy of “electrical in nature and travels at velocities less than that of electromagnetic light” (p. 25). Cousens, M.D. says, the former is the “etheric” or “magneto-electric” energy; the latter “physical” or “biological” energy (p.28). I believe, that the former is what Chinese call “ch’i.”

practicing medicine, embracing ancient wisdoms of the East and the West (Gerber, 2000a).

Gerber's using physics to explain energy healing resonates with my academic training and interests in modern physics and electrical engineering. His employing the concept of meridian ch'i flow to explain the acupuncture and physiological connectedness within human body supports my understanding of Chinese cosmological science and its effects in human physiological well being. His philosophical underpinning agrees with the Taoist thinking about connecting subtle-energy anatomy or etheric energy to physical energy to achieve modern healthy lifestyle in maintaining body-mind-spirit oneness. I have personally experienced in my upbringing the concept of keeping yin-yang ch'i balance in Chinese herbal medicine and martial arts. I am enthusiastic about bringing those perspectives to the study of leadership, spirituality, and transformation of the collective in relation to organizational health.

This discourse on Gerber's *Vibrational Medicine* concept comes mostly from his landmark best-selling book (Gerber, 1988/1996). This book is "an exploration into the various mechanisms of healing" and "an introduction to a new system of thinking about health and illness in general" (p. 31). His later works (Gerber, 2000a, 2000b, 2001) update his research.

Basis of Gerber's Vibrational Medicine Mode—Human Physiological Energy-Flow

Gerber's "research in alternative methods of healing" led him to pursue "simpler, less invasive methods of healing illness than prescribing potent drugs with toxic side effects and performing surgery with its accompanying risks" (Gerber, 1988/1996, p. 31). His "vibrational healing systems hold the key to extending our current medical knowledge toward an improved understanding, diagnosis, and treatment of human ailments" (p. 31).

"Vibrational healing philosophies have the unique perspective that human beings are more than flesh and blood, proteins, fats, and nucleic acids" (Gerber, 1988/1996, p. 32). There is

a unique “form of subtle energy that has yet to be fully grasped by the scientists;” scientists now acknowledge, “the mind can influence the biomolecular mechanisms that regulate the body” (p. 32). The “conscious entity which uses this biomechanism of the brain and body is the human spirit or soul” making them “part of a series of higher dimensional energy systems” (p. 33).

Western technology has “the earliest of confirmations that subtle-energy systems do exist and that they influence the physiologic behavior of cellular systems” (Gerber, 1988/1996, p. 33). The human system is akin to a computer, having software programs and electric currents “feed directly into the computer hardware” (p. 33) to process information and regulate functions, such as translating and displaying pulsating energy patterns on a computer screen. Like software systems to a computer, the “higher dimensional systems, our so-called subtle energetic anatomy” or “the physical-etheric interface” (p. 173) are the ethereal¹² components of human physiology. There are special kinds of “scientific instrumentation” for measuring etheric energies (p. 28).

Paradigm Shift from Newtonian to Einsteinian

The new paradigm about “healing via systems that affect the elements of human subtle-energy anatomy” is “an extension of existing medical science” (Gerber, 1988/1996, p. 34). It is similar to how the “Newtonian paradigm of physics was extended by the Einsteinian viewpoint” (p. 34). Perceiving “the human body and mind from a diverse range of perspectives,” there must be “more to human beings than just their physical body” (p. 173). “As we evolve toward new paradigms in science, and embrace the Einsteinian understanding of matter as energy and physiological systems as interactive energy fields, doctors will begin to slowly replace older drug and surgical techniques with more subtle and less invasive methods of treatment” (p. 498).

Today, we find “there are certain pioneering researchers who have taken this matter to closer

¹² The word “ethereal components” is a Newtonian description Gerber uses to describe subtle-energy anatomy to human physiology as software system to a computer. We use software, but the work of software is subtle-energy.

scrutiny” embrace a new view of healing (p. 143).

Experiments of high-energy particles in quantum physics have proved that “at the particle level, all matter is really energy” (Gerber, 1988/1996, p. 34) leading to Einsteinian medicine. Einsteinian medicine is a viewpoint that puts the “Newtonian picture of biomachinery into the perspective of dynamic interactive energy systems” (p. 34). “Einsteinian medicine” is a way to comprehend humans from the “perspective of interpenetrating, interactive energy fields” as multidimensional beings (p. 34). Collectively, “like many small colored tiles assembled into a larger mosaic,” they give an “extended viewpoint of humans as multidimensional beings of energy” (p. 34).

Dissipative Structures of Human Physiology

Gerber uses Prigogine’s dissipative structures to explain the dynamics of healing. If “enough of the key components of a system are shifted into a new energy state, then this critical mass can catapult the whole system into a new energetic equilibrium” (Gerber, 1988/1996, p. 583). Applying the concept, Gerber illustrates it is possible that “Transcendental Meditation” practitioners “working resonantly en masse, created a localized geomagnetic-field effect that induced increased bioenergetic coherence” (p. 583). He found that “great number of meditators working together in peace and love created an energy effect that was able to shift the equilibrium of the whole system in a very nondirective way” (p. 583), similar to his analogy of tiles to mosaic as a whole. Their universal “healing intent” causes “energetic changes” (p. 593). This induced energy composure of “peace and tranquility shifted the chaotic equilibrium of life toward a slightly more peaceful side” (p. 593). He offers the theory that “healers sending out coherent healing energy with great intention” might have similar, “if not more powerful, effects upon local planetary fields and their inhabitants” (p. 593).

A hypothesis to explain how the energetic changes are induced is: healing energy perturbation and bifurcation may be “tapping into the geomagnetic field through this magnetic grid system” (Gerber, 1988/1996, p. 582), which resonates at 7.8 Hz. The data from empirical studies show that “the 7.8 Hz resonance connection is likely a two-way street,” as healers “tap into the magnetic energy of Mother Earth” (pp. 582-3). This healing energy “begins to resonate with the earthfield, creating rippling, coherence-producing, subtle-energy effects in the planetary field” (p. 593). The “flowing stream of Earth's magnetic field and gridwork systems” carries “humanity's collective unconscious” (p. 594).

When “healing is done in a group, there is an important amplification effect that is more exponential than arithmetical in nature” (Gerber, 1988/1996, p. 592). That is, “two healers produce a much more powerful energy effect than if their individual energies were simply added together” (p. 592). This type of healing energy, using “negatively entropic, magnetoelectrical energy fields that produce patterns of high coherence in nearby living systems,” is “very fluid and nonlinear, something only recently understood in terms of modern chaos theory” (p. 592). I can relate the type healing energy to self-healing through meditation, synchronizing personal ch'i with cosmic ch'i, for example to regulate one's ch'i by deep breathing, releasing toxic and unhealthy energy accumulated in one's body and replenishing with fresh energy.

Energy bifurcations happen at an individual level. Researchers at “the Institute of HeartMath” indicate that “during times of focused inner love and peace, the heart center sends out a coherent energy pattern to the rest of the body, including the brain” (Gerber, 1988/1996, p. 589). The coherent energy enhances “immune functioning” and induces a measurable “energy-field system” referred to as “cardioneuroimmunology” (pp. 589-90). During a bifurcation, the “spectral analysis of the electrocardiogram” shows the change from a randomly chaotic

irregularly dense pattern to an orderly cascading pattern of harmonious frequency—a smooth sine-wave-like pattern (pp. 588-9). When people are at peace and content, the electrocardiograms show smooth sine-wave-like patterns. “Healing appears to be an innate human capacity;” Gerber says; it is learnable by focusing on peace and unconditional love in the heart (p. 594).

Tiller-Einstein Model and Measuring Energy-Flow

William A. Tiller of Stanford University developed *The Tiller-Einstein Model of Positive-Negative Space/Time* (Gerber, 1988/1996, Foreword by William A. Tiller, Ph.D.), which describes “the physical-etheric interface” and “matter-energy relationships in general” (p. 28). This Model uses the “true Einsteinian equation” rather than the more familiar form, $E=mc^2$ (p. 503). The true Einsteinian equation includes a “proportionality constant” to represent “how different parameters of measurement, from time distortion to alteration of length, width, and mass, will vary according to the velocity of the system being described” (p. 503). As the etheric energies are “negative space/time, faster-than-light magneto-electric energies,” they are not detectable by the “standard electromagnetic positive space/time instrumentation” (p. 503). These etheric energies are “currently being measured by biological systems such as enzyme function” and the “shifting of the water hydrogen-oxygen bonding angles” (p. 28).

Traditional medicine, with such instruments, has begun its “evolutionary progression toward the development of energy methods of treatment” (Gerber, 1988/1996, p. 24). Using “therapeutic radiation to treat cancer, electricity to halt pain, and electromagnetic fields to stimulate healing of fractures” are but the “first developments of a newly evolving perspective within the medical community” (p. 34). The “interface between the physical body and these higher energetic systems,” is a unique part of “our subtle anatomy” (p. 173). The most familiar “appears to be formed by the acupuncture meridian system” (p. 173).

Gerber explains the “analyses of energetic healing approaches by examining the mechanisms of acupuncture” (Gerber, 1988/1996, p. 173). *Vibrational Medicine* describes the “physical-etheric interface” in relationship to “acupuncture meridians,” in which energy can be detected using “Dr. Motoyama’s AMI device” which employs “Kirlian photography” in diagnosis (p. 27). The “etheric body” forms a “type of holographic magnetic grid which communicates with the electrically based matter and cells of the physical body” (p. 27). The meridian system is “the key interfacing system between the etheric [subtle-energy] and the physical” and is “diagnostically important because disease states can be detected at the etheric level before they manifest on the physical plane” (pp. 27-8). For example, it is like a cold warning, prior to the manifestation of cold symptoms, we usually feel feverish or exhaustion.

The “subtle energies which the Chinese refer to as ch’i are hard to measure” nonetheless, there is “indirect evidence for some type of electromagnetic energy circuit which involves the meridians and acupuncture points” (Gerber, 1988/1996, p. 178). The “acupuncture points along the superficial meridians in the skin demonstrate unique electrical properties which distinguish them from the surrounding epidermis” (p. 178). Experiments conducted to measure skin resistance at various “acupoints” via “a special direct-current (DC) electrical amplifier” show “electrical resistance measured in the skin overlying the acupoints is lower than the surrounding skin by a factor of approximately 10 to 1” (p. 178). Findings show correlations between the values of the skin resistance, indicating that, “the electrical parameters of the acupuncture points vary according to physiological and emotional changes within the organism” (p. 178).

Russian researchers have demonstrated “different states of consciousness, such as sleep and hypnosis, can produce significant changes in the electrical conductivity of the acupuncture points” (Gerber, 1988/1996, p. 178). Additionally, Russian research shows “disease states

produce characteristic disturbances in the electrical potentials of the acupoints along particular meridians” (p. 178). Gerber points out, these “disease-related electrical shifts in the acupuncture points have important diagnostic significance;” it is “possible to detect illnesses utilizing instrumentation which can measure these energetic changes in the meridian system” (p. 178).

Psychic energy healing has also contributed to new measurement of energy-flow. Gerber comments that while the energies employed on patients using vibrational methods of healing can be measured, however, “the energy delivered by these therapies exists in frequencies far beyond those measured with conventional detection equipment” (Gerber, 1988/1996, p. 34). He has discovered methods to measure psychic energy, and to capture and enhance energy signals.

Studies of psychic energy healing continue to confirm that there exists a very real energy exchange between healer and patient. Unusual anomalous “high-voltage surges” in the bodies of healers have been reported, such as in the “Copper Wall Experiment” designed to “enhance possible subtle-energy effects upon consciousness” (Gerber, 1988/1996, p. 587). The energy measurements were taken from the walls, patients and healers. They show evidence “healers were able to produce electrical surges upward of a hundred volts in their bodies during their healing work,” “over a thousand times the normal galvanic skin potential of the body” (p. 587).

Acupuncture and Yin-Yang Energy-Flow Philosophy of Healing

Acupuncture is “one of the most ancient and, until recently, mysterious methods of healing which is currently in therapeutic usage” (Gerber, 1988/1996, p. 173). Initially acupuncture was thought to work like an “endorphin” to block “pain pathways in the brain and spinal cord” (p. 174). Further scientific inquiry into this unique acupuncture system of healing that led to the “recent flurry of research within the growing field of neuroendocrinology has done much to add credence to these unusual therapeutic techniques which originated in ancient China”

(p. 175). Beyond the “acupuncture analgesia models,” the true potential is both a “unique system of diagnosis” and a “multidimensional healing modality” (p. 175). Gerber suggests we “examine some of the Chinese philosophy behind this ancient healing art” of acupuncture (p. 175).

The ancient Chinese philosophy underlying “acupuncture therapy” and other “aspects of Chinese Medicine” is an “outgrowth of viewpoints on our relationship to the universe around us” (Gerber, 1988/1996, p. 175). Chinese see “human beings as a microcosm within a universal macrocosm” in which the “inner workings of humans are reflected in universal relationships of energetic flow” (pp. 175-6). One of the primary concepts of energy-flow is the so-called “ch’i” (or qi), a “unique energetic substance that flows from the environment into the body” and “a type of subtle energy which permeates our environment” (p. 176). As humans, we are “continually bathed by the unseen radiations of a diverse vibrational environment;” such as television, radio, cell-phone frequencies, and solar energy “that permeate our local geocosmic setting” (p. 176).

One key basic concept of Chinese philosophy is “the idea of energy polarity, as expressed by yin and yang” that has the same magnetic characteristics as Earth. The “yin and yang represent an ancient Chinese predecessor to the modern-day concept of complementarity” (Gerber, 1988/1996, p. 176). The complementarity in the “wave-particle duality of matter is a kind of yin/yang puzzle of modern physics” (p. 176). In a Chinese historical recording, the *Book of Internal System*, “*Nei Ching*” states, “the entire universe is an oscillation of the forces of yin and yang” (p. 176). Yang is viewed as “the active, generative, associated with sun, light” while yin is seen as “passive, destructive, associated with the moon, darkness” (p. 176).

The “dualistic principle of yin/yang extends into all aspects of life cycles and cosmic processes” observed in nature, just as the day-night and season cycles (effects of planet rotations) affect Earth inhabitants (Gerber, 1988/1996, p. 176). The aspects of yin and yang exhibit “an

energetic oscillation between polar opposites” to reach a synchronized state of “dynamic equilibrium within a universe” and within an individual’s physiology (p. 176). An aspect of energy-flow consciousness is “expressed through the right and left cerebral hemispheres” (p. 177). The left-brain is the “seat of logical thinking” while the right brain, having “non-linear intuitive qualities,” is the “emotional half of the cerebral cortex” (p. 177). The “characteristic rhythmical flow demonstrated by the ch’i energy” is in the “meridians which supply energy to the internal organs” (p. 180). If the “ch’i energies within an organ are not balanced, that organ, unable to complete the natural meridian circuit, may adversely affect its adjacent organ in the meridian series” (p. 180). Gerber says, “acupoint stimulation may allow new energy to enter into meridian circuits” and “release excessive energy” from overloaded meridian circuits (p. 182).

The acupuncture meridian system distributes the “subtle magnetic energies of ch’i which provide sustenance and organization for the physical-cellular structure of each organ system” and is the “physical mechanism which allows this etheric energy transfer”(Gerber, 1988/1996, p. 177). Ch’i energy is “absorbed into the human body via portals of entry on the skin” (p. 176). The portals of entry are “formed by the acupuncture points, which are inlets along a specialized meridian system running deep below the integument to underlying organ structures” (p. 176).

There are “twelve pairs of meridian” through which, “the ch’i flows into the bodily organs to provide life-giving/sustaining energy” (Gerber, 1988/1996, p. 176). Each pair is “associated with a different organ system or function” (p. 176). There is a “characteristic rhythmical flow demonstrated by the ch’i energy as it passes through the twelve [pairs of] meridians which supply energy to the internal organs” (p. 178). This cyclic energy-flow “reflects innate biological rhythms and cycles of a subtle energetic nature” (p. 178). These cycles “describe the flow of energy within the body, are a reflection of the cyclic energy interaction

between the five earthly elements (as viewed by Chinese philosophy)” (p. 178). The “Five Element Theory is a primary relationship in the Chinese system. It relates all energy and substance to one of the five elements, labeled as: fire, earth, metal, water, and wood” (p. 178). These elements form a pattern of two basic cycles that are a function of energy-flow (p. 178).

The two basic cycles are the “Cycle of Generation” and “Cycle of Destruction” (Gerber, 1988/1996, p. 181). The importance of these two cycles is that “they form the rational basis for the application of acupuncture therapy” (p. 189). From a Western medical perspective, “it is now clear that there are actually homeostatic mechanisms which [for example] connect kidney physiology to pulmonary function” of the lung (p. 181). Modern-day “pathophysiology” or disease causation coincides with “ancient Chinese principles of energy flow as demonstrated by the Cycle of Destruction” (p. 181). The acupuncture theory adds “complementary insights to modern viewpoints of illness causation” (p. 181).

Gerber’s Insights on Energy-Flow and My Learning

Gerber’s vibrational medicine combines advances in medicine and health science and substantiates the energy-flow theory with empirical evidence at the personal physiological and psychological levels. His work provides a multidimensional perspective of life, interrelating physiology and psychology with philosophy and science. His work takes the mysticism of the ancient Chinese philosophical explanation of ch’i, connects to quantum theory showing energy-flow in life experiences. His work explains how yin-yang magnetic energy-flow underpins all matters on Earth and its inhabitants. Gerber’s *Vibrational Medicine* provides evidence that in human anatomy, the subtle-energy (ch’i or energy-flow) is the key element in keeping humans alive. Gerber’s work guides us to understand the functioning of energy-flow in human physiological wellness, the intrinsic ch’i, intermingling with the extrinsic cosmic ch’i or Ta-Ch’i.

Gerber's work with human physiology takes us on a revolutionary path to perceive humans as "beings of energy" rather than just a body consisting of loosely related parts. His *Vibrational Medicine* Model is conceived in an Einsteinian quantum paradigm rather than using the traditional Newtonian thinking model of assembled-parts. Referencing Prigogine, Gerber explains the human physiology systems as dissipative structures. He uses the Tiller-Einstein Model for measuring meridian energy-flow in the interface of physical and etheric bodies. He augments his medical practice in diagnosing and treating human illness with acupuncture, the yin-yang energy-flow philosophy, and psychic energy healing. His work echoes the leadership parallels made by Sun-Tze of 500 b.c.e. that show correlations between *The Art of War* and the battle strategies physicians use to fight for their patients.

Next, the dialogue delves into energy-flow as it is explained in the ancient wisdom of the Tao yin-yang balance and how it translates in the domain of leadership. Gerber's work became a strong life-influence years before I started this dissertation. It is an important precursor to the thoughts of the next thinker.

Energy-Flow: West Meets East, Modern Seeks Ancient Wisdom by Ralph H.G. Siu

Ralph H.G. Siu (1917 – 1998) was an Eastern sage and a Western scientist. Few polymaths have equaled his command of world literature and philosophy, or his ability to weave the separate strands together into a series of original and unique applications to practical affairs. His leadership practice, as a "Presidential [Lyndon Johnson] appointee," included directing research on "law and order" and other duties. The process "Ralph used to achieve this cultural harmony never varied. It involved two actions as opposite and seamless as the Ying [Yin] and Yang. Ralph would 'subsume and resonate'" (ISP, 1999, remarks by William Lanouette & Carl F. Stover). Being profoundly successful in his lifelong East-West synthesis, this Yin-Yang

balance constantly informed his thoughts about cheerfulness. He visualized it. Above all, he lived it. Nonetheless, he candidly admitted that his voluminous output was far from the last word on any subject that his objective was to provoke further thought, debate, and application.

“The greater the executive the more important it is to grasp the totality of the ramifications of one's policies and practices” (Siu, 1980a, p. 9). Vaill regards Siu as one who had so powerfully combined and integrated various traditions in managerial leadership theories “to bring together the full array of Western ideas that are compatible with Asian philosophy” (Vaill, 1989, p. 190). Vaill refers to Siu’s work in bringing traditions that existed in separate intellectual compartments into a totality. That notion of totality that executives should understand was inspirational to Vaill’s “metaphor of permanent white water,” which is, “not merely about a wild river; we are talking about an unpredictable wild river” (p. 3). Vaill’s *Taoist* management notion of “wu wei” (p. 178). Leaders “might be better at ‘going with the flow’ and ‘moving with the available energy’” in “cooperation” rather than in “contention” with nature (p. 178).

This discourse with Siu’s forty-five-year work reveals his attempt to unify the East and the West wisdoms in science. Siu authored a commanding “synthesis of East and West,” appearing as four trilogies “subsumed” under the title “*The Quantum and the Tao*” (ISP, 1999, Interview with Ralph Siu). That synthesis was something that had been “resonating” in his self, resulting in him a more natural avocation. The first component, “*Tao-Time Trilogy*” (Siu, 1957/1971, 1968/1972, 1974), is composed of essays on Western science and Eastern wisdom. The second, “*Management Trilogy*” (Siu, 1980a, 1980b), provides an explication of the Western emphasis on power and management. The third, “*Panetics Trilogy*” (Siu, 1993a, 1993b, 1993c), is a reflection on the Eastern stress on suffering and the alleviation of suffering; it is a practical integrated study of the infliction of suffering and of the reduction of suffering. This component

became the pivotal nexus for his long avocation. The last, “*Harmony Trilogy*” (Siu, 1999a, 1999b, 1999c) delivers a theory to unify the sciences and close the gap between cultural space and time. In this work, Siu brings together Democritus of Greece and Chuang-tze of China to shape thoughts about cheerfulness in the modern age.

Quantum, Science of the Tao-Time Philosophy, and Yin-Yang Complementarity

Physicists have led the way. Mass is fused with energy, space with time, cause with effect. In the biological sciences too we are witnessing a gradual cognizance of the unreality of atomic separations, such as the waning controversy in genetics concerning the effects of germ plasm versus environment (Siu, 1957/1971, p. 53).

“Science speeds on unabashed” (Siu, 1957/1971, p. 3). Time irreversibly advances science at a terrifying pace; it is not surprising that people “obviously cannot grasp the universe in one fell swoop” (p. 57). For instance, the cognition of the “unreality of atomic separation” in quantum physics led to the perception of mass as an abstraction of energy-flow rather than simply material (p. 53). In his *Tao-Time Trilogy*, Siu points out that language is part of our problem with up keeping, “We often permit the inferences from words to have an objective being in our subconscious” (p. 53). He suggests we begin to comprehend the world around us and to “treat things in the abstract,” as “Being abstract transcends concrete occasions” (p. 57). “Words are abstractions of things and inferences are abstractions of words” (p. 54). We “progressively extend the abstractiveness as we proceed along” from individual “life” to others (p. 57).

Vaill expands upon Siu’s sentiment saying that “Fostering transcendent experiences isn’t an engineering problem,” though we “try to engineer the magic, program it, make it happen” (Vaill, 1998a, p. 197). Vaill suggests we rethink and “move past the M-I [*Material-Instrumental*] model” to “a valuing system” (p. 197) or “a whole system of values” (p. 196), because “the M-I model views the organization as someone’s instrument, not as itself a valuing system” (p. 197). Most of all, “the M-I model leads us away from values and disguises them with words like

‘resources’ and ‘priorities’ and ‘constraints;’” furthermore, “it takes them out of the stream of time and treats them as fixed, static things” (p. 197). Vaill cautions us that the disguises of the “M-I model can only stand up as long as we accept this triple abstraction: single value out of the value manifold, value out of valuing, and value as object out of value as subject-object union” (Vaill, 1998a, p. 198). He suggests an “alternative to the M-I model is a view of the organization as this five-dimensional, intertwined stream” consisting of: “the *economic*, the *technical*, the *communal*, the *adaptive*, and the *transcendent*” (p. 199) existent in one amalgamation.

Vaill urges leaders to adhere to the “intertwined streams of valuing—a ‘five-way bottom line,’” where “the energy [sic] that keeps it all going comes from the individual and joint actions of people” (Vaill, 1998a, pp. 198-9). They work out “their sense of what is important” as they continue to “pursue their sense of who they are” (p. 199). They “think of each of these categories and their interrelations, and the myriad of specifics behind them, in spiritual terms” (p. 203).

Vaill Sketches the M-I model, expounding on Siu’s and Whitehead’s notions of unifying energy-flow and spiritual bases in social life. Despite centuries “of fulminating by the M-I model about the need for single-minded devotion to just one value, this manifold of values continues to appear and be felt as real and significant by us,” confirming “existential validity” (Vaill, 1998a, p. 203). Vaill says, “Remember, the five intertwined themes are themselves abstractions—the feelings and acts of valuing we actually see are much more concrete and specific” (p. 202). Leveraging the energy-flow resource of “our spiritual awareness,” “we interpret the meaning of events in the organization” and demonstrate “spiritual values, energy [sic], and faith are central to the organization's very survival and development” (p. 205).

Siu describes organizations’ reality as “Virtual Presences” and energy-flow abstractions that “constitute major ingredients of human thinking” (Siu, 1980b, p. 79). “A virtual presence is

something which is not real in the space-time sense, yet it exerts a practical effect as if it were” an imagery of an event captured in the thought (Siu, 1978, p. 88). An example of “a virtual presence in mathematics is the square root of minus one” which is a “purely imaginary number” (p. 88). An imaginary number is “used very effectively in calculations involving real events, producing very worthwhile and practical answers that cannot be obtained in any other way,” and is “critical to modern physics” and engineering (p. 88). Just as “psychological well-being is a function of virtual presences,” so, “social activities are driven by virtual presences” (p. 88).

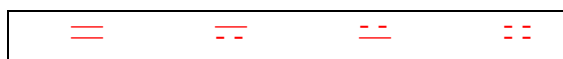
Siu’s notion of virtual presence echoes Whitehead’s energy-flow abstraction in physics: “Whitehead explains how the realm of eternal objects can be dissected into a series of grades of simple and complex eternal objects” (Siu, 1957/1971, p. 57). “Complex objects are regarded as those which can be analyzed into relationships involving eternal components” (p. 57). The “components begin with a simple eternal object as the base,” like the progression through a hierarchy of inverted pyramid, “successive tiers of increasing intricateness in the area of possibilities, an abstractive hierarchy can be constructed” (p. 58). Each level is “connected with the other by a common set of their members;” these groupings may be “depending upon when they stop in their progression” (p. 58).

In a hierarchy, “beginning with any complex eternal object as the vertex of a finite abstractive [inverted] pyramid,” there is one component in “a lower echelon” of an “analytical breakdown of components” (Siu, 1957/1971, p. 58). Through “successive steps,” we finally reach the “simple object which forms the base” (p. 58). Since we are dealing “with possibilities,” these “eternal objects retain their isolation” and there is “no overlapping among them” (p. 58).

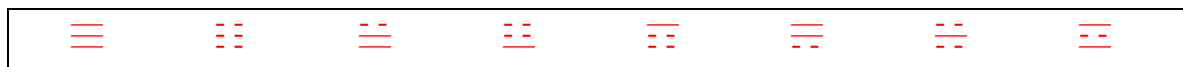
The simple eternal object components that Siu refers to are the yin-yang concept in the virtual presences. In the volume (Siu, 1968/1972), originally titled *The Man of Many Qualities: a*

Legacy of the I Ching, Siu says, to be with Tao when dealing with social affairs one would “subsume and resonate” in one’s “virtual presences” (p. 2). One would consider everything is “divided into the two respective modalities of the yin and the yang” (p. 2). According to the *I-Ching* (*I Ching* or *Yi-Jing*, also known as *The Book of Changes*), Siu notes “Yin originally pertained to shade and yang to light” (p. 2). The terms later “became expanded to encompass the two cosmic principles:” Yin stands for “cold, softness, contraction, wetness, femininity, and the like” while Yang stands for “heat, hardness, expansion, dryness, masculinity, and the like” (p. 2). On a “philosophically fundamental level,” one can “invoke the old generalization of the Yin-Yang” to say, “Everything is made of the Yin and the Yang. There is no Yin without a Yang and no Yang without a Yin. Everything is Yin-Yang” (Siu, 1999c, p. 29). As represented in the Tao symbol, yin and yang do not overlap, yet they contain each other. They are not absolute; each embraces attributes of the other, and fold into each other, like day into night and vice versa.

The wisdom and principle of *I-Ching* are “the grand generalizations of universal transformations” (Siu, 1968/1972, p. 2). “The simple interaction of the two influences is represented schematically by pairs of divided [- -] and/or undivided [—] lines, representing the yin and yang, respectively” (p. 2). The next tier up is “The four permutations” shown below:



The next-higher yin-yang tier consists of “eight trigrams of three lines each” (pp. 2-3):



According to legend, the trigrams “were devised by Emperor Fu Hsi in 2852 B.C.,” who gave each trigram a name, “symbolizing certain attributes and objects of nature in a state of continual transition” (Siu, 1968/1972, p. 3). “Doubling of the three lines into six yields sixty-four possible combinations,” which form the “sixty-four hexagrams” of the *I-Ching* that “represent

the sixty-four assemblages of events” (p. 3). The array of six lines, from the bottom to the top is “supposed to be inclusive of all human situations” one might encounter (p. 3).

“The yin-yang series can be expanded geometrically to provide an infinite progression,” namely 2, 4, 8, . . . 16,777,216, ad infinitum. The ancient originators of the *I-Ching* “judiciously stopped at the practical limit of sixty-four” (Siu, 1968/1972, p. 3). In “1143 b.c.e., King Wen” and “his son, the Duke of Chou” systematically organized “the sixty-four hexagrams into the cohesive scheme as we know it today” (p. 2). Confucius (551-479 b.c.e.) provided the “most important of these commentaries” (p. 4) and explanations. Over millennia, the thoughts of many contributors have gone into the “development of the full meaning” in the current *I-Ching* (p. 4).

In his book, *The Portable Dragon*, Siu labels the eighth hexagram (䷆) “leadership” (Siu, 1968/1972, p. 60); which consists of two essential trigram energies. The top trigram (䷊) focuses on strategizing energy interacting with the bottom (䷊), emphasizes sustaining. The two energy essences intermingle creating a combined essence; “people's progress results from union around a central figure. The true leader fortifies his sublimity, strength, and perseverance. The hesitant will follow gradually, but the late comers will be left out” (p. 63). R. Wilhelm translates that same hexagram as “Holding Together” (R. Wilhelm & Baynes, 1950/1997, pp. 35-9). That is, exemplar leadership stays truthful to its intention in uniting people.

The essential emphasis of the *I-Ching* is on “the intuitive grasping of the totality” (Siu, 1968/1972, p. 6) in dealing with situations in human affairs (p. 5). Siu found the *I-Ching* conveys several notions: “The whole is ever in continuous flux;” “Specific facts and figures are not constants;” and “No single constituent is without impact upon the others and vice versa” (pp. 5-6). “Nothing is constant, yet nothing secedes from the whole;” and One's “actions of the instant are but notes emitted from his ineffable harmony with the totality of nature” (p. vii).

The “ultimate purpose of the *I Ching*, goes far beyond practical attainments in the competitive world,” it is not meant to be used for “one-upmanship” (Siu, 1968/1972, p. vi-vii). The yin-yang “opposition, alternation, and interaction of these two forces” induce energy-flow that gives rise to “all phenomena in the universe, in a continuous advance and regression of the vital forces in nature” (Siu, 1968/1972, p. 2). Nothing remains static (p. 2). Good and evil are “forever moving against each other according to cosmic rules;” such as, when “the sun reaches the meridian, it declines,” and when “the moon becomes full, it wanes” (p. 2). As Lao-tze says, “Reversal is the nature of the Tao;” another translation says, “Returning is the motion of the Tao” (Vaill, 1989, p. 177). The “art of good living lies in the ordering of one's life in harmony with the cosmological movements of the yin and the yang” (Siu, 1968/1972, p. 2).

Siu suggests we think of yin-yang as movements like energy-flow and transformation in quantum physics (Siu, 1957/1971, p. 53). Energy-flow affects varying effects, to “minimize the resulting misunderstandings,” scientists have “substituted measurements for absolute terms,” however, one must keep in mind to “recognize the vagueness of language and not press the issue beyond its limits” (p. 53). “There are always variations about which we cannot verbalize decisively” (p. 53), so Siu advises we perceive the *I-Ching* messages in terms of “shades of gray” and not to “corral thought in divisions of black and white” (p. 53).

Concept of Yin-Yang Energy-Flow Transformation in the Tao of Leadership

To understand the concept of yin-yang energy-flow of leadership, we begin with the Tao, a 5000-year old symbolic abstraction, which represents the cyclic nature of yin-yang energy-flow—such as the day-night transformation cycle. It represents nature’s duality in personal being and human affairs of social life; “It is one of the oldest of Chinese generalizations” (Siu, 1980a, p. 17). In his *Management Trilogy*, Siu uses the Tao of virtual presences to describe “the path to great

personal power” and “to executive serenity” of leadership (p. vii). He addresses “the intuitive artistry of the Master Manager and the kinds of real people with whom he or she must deal” (p. vii).

Siu illustrates using the concept of yin-yang energy-flow as a method to analyze “three hundred sixty six mini case studies” in his portrayal of “Over 500 actual characters from all walks of life in many lands over thousands of years” (Siu, 1980a, pp. 103-302). He concludes, “what leadership and management is all about”— leaders and manager “deal primarily with people,” to “sense what makes them tick, and intuit how best to influence them”— balancing yin-yang energy-flow in accord with the Tao (p. 103).

Siu explains the essence of Tao management as being in dynamics of yin-yang energy-flow and its transient energy states. “The dictum of the Yin-Yang states: everything in the universe is made up of the Yin and the Yang;” he repeats, “There is no Yin without the Yang. There is no Yang without the Yin. Everything is Yin-Yang.” (Siu, 1980a, p. 17) “The Yin and the Yang represent opposite polarities. If Yin stands for softness, Yang stands for hardness. If Yin stands for darkness, Yang stands for light. If Yin stands for female, Yang stands for male, and so on.” (p. 17) “In real life, no person is absolutely right and another absolutely wrong; it depends on the circumstances. No one is 100% male or 100% female; he or she always has some hormones of the opposite sex” (p. 17). Yin-Yang is like the potential-kinetic energy transformation, “One should expect the presence of a dormant seed for a resurgence of what may appear as a dead issue” (p. 17). Thus, potential inactive yin energy resurges and transforms into kinetic yang energy; and vice versa, active yang energy fades away and ebbs into potential yin energy reserve. The energy transformation continues to cycle between the yin and the yang. The Tao concept of yin-yang energy-flow seems to be a natural way to explain the duality, paradox, perplexity, and transformational perspective in leadership theories, and to some extent, practice.

Quantifying Energy-Flow with QIMASS (ch'i-mass) and Panetics Formula

Like Gerber, Siu is interested in measurement, asking how one would go about “measuring the energy involved in mental processes?” Would we, he asks, not be soon pushed into “the circuitous assumption that mental operations involve nonmeasurable [sic] amounts of energy” (Siu, 1957/1971, p. 63)? A physiologist “investigates the reactions of the body by analyzing the metabolism of mass-energy molecules” and a psychologist “follows the changes of the personality by dissecting the transformation of the egos;” Siu proposes we measure the ch’i (or qi) in us, around us, and in the cosmos (Siu, 1999c, p. 30). We can integrate “both [physiological and psychological] classes of reactants, which give rise to the manifestations of life and behaviour [sic]” (Siu, 1957/1971, p. 63). As far as “the ingredients of change are concerned, mass-energy is now universally accepted as essential” (Siu, 1999c, p. 56). “Most natural scientists go further to explain all changes as transformations of mass-energy alone—be they animate or inanimate, human or plant, mental or physical” (p. 56).

In his *Panetics Trilogy*, Siu uses as an example “dukkha¹³” as unit to measure suffering in the study of Panetics, which is an effort to reduce human suffering (Siu, 1993a). The “total number of dukkhas of suffering is the product of the (number of persons) x (the intensity of suffering on a scale of 9, 9 being so intense that the sufferer would rather die) x (duration of suffering in days)” (ISP, 1999, Interview with Ralph Siu). According to this equation, “a single person experiencing a moderate toothache for eight hours suffers one dukkha, i.e., (1 person) x (intensity 3) x (1/3 day).” “A million dukkhas represent the approximate amount of suffering borne by 1,000 persons with flaring stomach ulcers without medication for an entire year.” Siu compares “Gross National Dukkhas (GND)” to “the GNP is the total market value of the goods

¹³ “Dukkha,” in Buddhism, it translates as “suffering;” others translate it as “frustration.”

and services of the national economy for a year, entailing . . . The GND then would be the total number of dukkhas from all sources sustained by the inhabitants of a country for an entire year” (Siu, 1993a, p. 27).

Though Siu indicates compounds in ch’i, but not formulas, it is possible that he sees it the same way as dukkhas. Siu postulates that there are two structural classes of ch’i (energy-flow), namely “elemental and compound” (Siu, 1999c, p. 36). These may “combine to produce” more complex ch’i; which may “exchange parts” with others, “rearrange itself internally to give rise to new forms,” or “disintegrate into elemental and / or simpler compound” ch’i (p. 36).

In his *Harmony Trilogy*, Siu says the elemental ch’i can be divided into two types: “some with a Yin orientation and others with a Yang orientation” (Siu, 1999c, p. 36). Since the yin-orientation ch’i is “naturally attracted” to the yang-orientation ch’i and vice versa, they form a compound of ch’i (p. 36). “Depending on the degree of extremeness in their respective polarities,” a single elemental ch’i combines with one or more elemental or compound ch’i to form a new compound ch’i. When balanced, thereby attaining a “higher order of overall Yin-Yang harmony” (p. 36); yet when yin-yang are not in balance, it causes suffering—panetics.

If we have a way to measure and communicate the elemental ch’i, like the atoms and molecules of mass-energy in physics and chemistry, perhaps we are able to fathom harmony:

The atoms are divided in the Periodic Table of elements into two kinds. Some of them possess a negative charge (Yin) and others a positive charge (Yang) . . . They combine to form mass-energy molecules with an overall neutral charge (Yin-Yang harmony). (Siu, 1999c, p. 36)

Siu postulates QIMASS. The metabolism of ch’i and “mass-energy within an integrated wholeness gives rise to and sustains a living organism” (Siu, 1999c, p. 31). The “living organism therefore is distinguished from the inanimate” and in the real world “the only system that assimilates” both ch’i and mass-energy into the living substance of QIMASS of “one kind” into

“the other kinds” (p. 31). We might even venture to “conceive of the living organism” as a single, more or less harmonious, QIMASS “complex” (p. 36). The elemental or compound ch’i can transform from one to another such as, “Elation may turn into ecstasy, anger into rage, sadness into melancholy, regret into remorse, and hope into desire” (pp. 36-7). It may be that QIMASS is a useful unit of measure for expressing the energy-flow abstraction in human affairs.

Craft and Transcendence of Leadership Power and Administrative Management

The discovery of directing the flow of energy from the wind to the sail in ships enabled the bringing of food to people living where there is timber but no food and of timber to people living where there is food but no timber. New social relationships and dependencies resulted. As societies became more high-energy in character, technical specialization increased (Siu, 1980a, p. 83).

Energy-flow is involved in fulfilling human needs. The flow of wind energy transforms into a ship’s motion energy as it carries goods across the water from one land to another, enabling merchant transactions and exchange to satisfy human needs (Siu, 1980a, p. 83). In *Management Trilogy*, Siu emphasizes that human need “has come the realization that the continuing creation and transformation of virtual presences” and exerted a great effect on the evolution of “human behavior,” “anatomy,” and “physiology” (pp. 35-6). Energy-flow abstraction may be seen as the “metabolism of the substance of virtual presences” as it is “intrinsically a part of human beings” and “of physical mass” (p. 36). We therefore “arrive at the basic axiom of social dynamics: the fashioning and controlling of virtual presences is the leverage of power” (p. 36) and empowerment for leader-follower relationship.

From “a practical standpoint, no one can retain [leadership] power for long without keeping the constituency happy by providing a satisfactory net service of some kind” (Siu, 1980a, p. 67). Siu defines “net service” as the “amount of benefit actually experienced by the constituency from all that is believed to be available less that used up in the leader’s exercise of

power” (p. 67). “If the constituency is convinced that they are receiving more as subjects of a given leader than they would otherwise,” then they gladly overlook the leader’s “occasional excesses, personal accretions, and even authoritarian behavior” (p. 67).

Leaders who are the “focus of American doing—may well be enriched by invoking the wisdom of sages of another clime and age,” a virtual presence of “reflective tradition of the Orient” (Siu, 1957/1971, p. iv). “A virtual presence pertains to the essence of leadership” (Siu, 1978, p. 88), it is like the “lubricant of social processes” invisible but effective (p. 88) and may be thought of as the art of skill management. Vaill describes Siu’s “Management and the Art of Chinese Baseball” (Siu, 1978) in *Managing as a Performing Art* (Vaill, 1989, pp. 3-13), saying that managerial leadership is not “*repeated practice*,” rather it should be viewed as “a learning process” (p. 109). Like Siu’s baseball game, “the very nature of the game requires continued discussion of what it is fundamentally about,” seeing “ourselves as perpetual learners” (p. 109).

Siu’s “Chinese Baseball” illustrates the science of Tao-time as a “Singularly Essential Art” (Siu, 1978, p. 83). Tao-time differentiates the Chinese Baseball game from the Western one:

There is one and only one difference—after the ball leaves the pitcher's hand and as long as the ball is in the air, anyone can move any of the bases anywhere.

In other words, everything is continually changing—not only the events themselves, but also the very rules governing those events. This kind of arena is alien to the scientific tradition of fixed boundary conditions, clearly defined variables, nonsubjective assessments, and rational consistency within a closed system. In the ball game of competitive actualities, everything is in flux, and all systems are open (Siu, 1978, p. 84).

Is the game playable? Siu says, “The secret of Chinese baseball is not only keeping your eye on the ball alone but also on the bases, and doing some fancy-footed kicking of the bases around yourself” (Siu, 1979, p. 179). Siu says the game illustrates how that “singularly essential art” of dealing with singularities happen in a typical executive’s life. I believe we encounter

singularity frequently in our lives, most of us readily recall situations in which “the carefully calculated projections of the major carriers had to be recalibrated” (Siu, 1978, p. 84). Vaill comments a friend of his observed that “batters would want to keep the ball on the ground, and fielders would want to keep the ball in the air” (Vaill, 2008, Siu's Chinese baseball).

Similarly, Prigogine describes such a undefined singular quality situation as a “singular moment” or “bifurcation point” in a dissipative structure that it is inherently impossible to determine in advance which direction system change will take (Prigogine & Stengers, 1984, p. xv). The system may make an evolutionary drastic change, the whole behavior of the macroscopic system from past “contracting fiber” of “equilibrium” to “the dilating fiber to the future” (p. 275). With “bifurcation theory,” this far-from-equilibrium energy state in a social setting “is close to us in its acute awareness of the singularity and the precariousness of life” (p. 84).

Vaill says Siu’s definition of a “singularity” captures “the feel of permanent white water conditions” in managerial leadership (Vaill, 1996, p. 10). There are “five intertwining characteristics:” it is “full of surprises;” “novelty;” it is “‘messy’ and ill-structured;” “often extremely costly;” and it raises “the problem of recurrence” (Vaill, 1996, pp. 10-3). Vaill notes that executives struggling in permanent white water conditions are unaware of this “unconscious double abstraction that has been made: first, singularity out of multiplicity, and second, fixity out of flow and change” (Vaill, 1998a, p. 198). “We create single values out of the infinite permutations and shadings of values” then “freeze these single values into things that we treat as timeless and unchanging” (p. 198). That is mistaking “a” single value as “the” only fixed value.

Singularity contains the essence of both the definitive and the infinitive. Whitehead explains mathematically, “It stands for the singularity of an entity” (Whitehead, 1929/1967, p. 31). For example, “The term ‘one’ does not stand for ‘the integral number one,’ which is a

complex special notion. It stands for the general idea underlying alike the indefinite article ‘a or an,’ and the definite article ‘the,’” and “the demonstratives ‘this or that,’ and the relatives ‘which or what or how’” (p. 31). When singularity occurs, it upsets our expectations and assumptions of definitive values in life; it could induce mental crises in having to deal with uncertainty. Siu offers, there is a “subsuming-and-resonating principle” which is the art of Tao-time that we can employ to acclimatize ourselves and to recalibrate the energy-flow in virtual presences to enable effective actions (Siu, 1978, p. 86). Siu labels the artistic discipline of dealing with singularity or bifurcation as the “singularly essential art” (p. 83).

Synthesizing Eastern and Western philosophies and psychologies, Siu blends the best power strategies from two very different worldviews to create an integrated strategy applicable to everyday reality in business, politics, and other fields. Siu says the crux of “effective management is getting the desired things done by acting, quasi-acting, and nonacting” (Siu, 1978, p. 83). The “*science of management*” includes “acting and nonacting,” which encompass the “objective, the verbalizable, the systems analytical, and all of the other quantifiable factors” (p. 83). The “*art of management*” includes the “subjective, the ineffable, the holistic synthetic, and the infinite concatenations of cascading sensed-unknowables” (p. 83). “Small executive decisions are weighted toward the scientific polarity; BIG executive decisions are weighted toward the artistic” (p. 83). Combining the science and the art of Tao-time forms the strategic artistry of Chinese Baseball flow, Siu recommends five basic management principles to be perceived as energy-flow abstractions.

1. Act from an instantaneous apprehension of the totality. . . . The key word is “apprehending,” as contrasted to “understanding,” . . . able to reach into a mass of conflicting data and opinions and pull out the right thing to do at the right moment of need . . . the wholist strategy rather than the partist strategy

2. Subsume yourself and resonate. . . . pertains to the social meaning of one's own operations The executive imparts social significance and value to the operations (the corporation) by subsuming it in the larger context (the community)
 3. Maintain multiple tactical targets within attainable reach until the moment of final commitment. . . . pertains to competitive effectiveness. What is being assured is the freedom of tactical movement within a strategic thrust.
 4. Be propitious. . . . pertains to elegance and style in getting things done exhibit a native feel for the instrument of time in practice.
 5. Orchestrate the virtual presences pertains to the essence of leadership. . . . always creatively nimble in the adaptation of ceremonial stratagems.
- (Siu, 1978, pp. 84-8)

Siu comments, “The research leader should eschew the old Newtonian rule of management” (Siu, 1957/1971, p. 132). As “to every action there is an equal and opposite reaction;” motivating a “network of interactions so that to every action there is an equal and organic assimilation” (p. 132). Executives “need to be sincere;” by sincerity, “the Taoist means a naturalness in no-knowledge” (Siu, 1957/1971, p. 155). We “cannot explicitly define such a state of naturalness;” but Taoist, Chuang-tze, describes those who can sustain the state as the “pure men of old.”

acted without calculation, not seeking to secure results. . . . Therefore, failing they had no cause for regret, succeeding no cause for congratulations So far had their wisdom advanced toward Tao . . . (Siu, 1957/1971, p. 155).

Siu suggests executives and leaders master the principles and strategy of the “Singularly Essential Art” in virtual presence (Siu, 1978, p. 83); as in “competitive actualities, everything is in flux, and all systems are open” (p. 84). Using Taoist’s yin-yang balance, leaders can bring important factors to “virtual presence” to design, plan, and verify the transformational process.

Supporting the Essential Energy-Flow for Leadership in Transformations

Human activities, such as leadership and management practices are active energy-flow, usually cannot be described as 100% black or 100% white, but as shades of gray or other colors; similar to dusk and dawn between mid-day and mid-night peaks in nature’s cycle. Events as energy-flow compose

transient varying degrees of yin-yang energy states. There are eight varying degrees of “Yin-Yang” energy states “symbolizing certain attributes and objects of nature” (Siu, 1968/1972, p. 3). “A name was given [by the ancient sages] to each trigram [energy], symbolizing certain attributes and objects of nature in a state of continual transition” (p. 3). Siu explains that human events constituting those energy “states” of nature’s attributes can be viewed as “successive tiers of increasing intricateness” in a hierarchy of a “series of grades of simple and complex eternal objects” (Siu, 1957/1971, pp. 57-8). The eight varying degrees of “Yin-Yang” energy states can be of use to describe the dynamics of leadership phenomena and social events, to understand “complex objects” of “relationships” in finite or infinite sets of elemental energy-flow and transformation.

For this dissertation, echoing Siu’s notion of eight varying degrees of “Yin-Yang” energy states (Siu, 1968/1972, p. 3), I label the essential leadership states during complex process of transformation. As described in Chapter II, these energy-flow abstractions are, “Founding,” “Sustaining,” “Innovating,” “Anchoring,” “Responding,” “Influencing,” “Strategizing,” and “Implementing.” These leadership energies each represent a state of essential leadership function or attribute in a transformation. These energies are not discrete entity or process stage; rather they interact with one another in polar complementarity during a transformation, cognizant of yin-yang harmony oneness in the Tao—the universal consciousness, a unified field of energy.

Siu’s Insights on Energy-Flow and My Learning

Siu’s remarkable insights profoundly corroborate the energy-flow theory; he directly correlates Chinese philosophical Tao-time with Whitehead’s philosophical ideal, a unified energy-spiritual base in social life to explain leadership power and administrative management that renders cheerfulness in all facets of life. His work deals with the complexity of leadership,

yet he says we can reduce the complexity to a simple minimal expressible elemental unit base, illustrated as in an inverted pyramid, with the energy-flow of yin-yang at the bottom. His notion is exactly what has happened during the information explosion, which started from recognizing that zero and one could be used to represent any information. We can now represent a factual event using a narrative description, a still picture image, or a video recording using combinations of zeros and ones. If we use Siu's method of analysis, we can reduce the event to a binary off-on (zero-one) representation. That is the notion Siu alludes to for us to ponder—the yin-yang binary representation and the 0-1 base representation in computing technology.

His work shows the Taoist way of comprehending the essence of leadership as energy-flow, a “universal principle” seen to be “governing the cosmos itself, including the human society” (Siu, 1999c, p. 67). To understand human affairs is “to grasp the nature of the stuffs undergoing change and the associated process” (p. 26). From this arose a pattern that would describe the process of change.

Siu urges leaders to master the principles of the Tao and adopt strategy of the “Singularly Essential Art” in a “virtual presence” (Siu, 1978, p. 83). That is, to anticipate multiple solutions; subsume and resonate with the Tao; see conflicts as a stimulant for progress; and benefit from the potentials and possibilities brought about by a challenging situation. The leadership challenge is to be changing course to escape from a tailspin, as energy-flow is fluid, challenges could flow and transform from an opposing atmosphere and turn into a complementarity.

Siu's work shows ways to connect the modern science of the West to the ancient wisdom of the East. His work references Whitehead's and Russell's for philosophical and logical arguments. His twelve volumes of work reveal the dynamic interplay of the fundamental eternal elements underlying the mysteries of life. He recommends we subsume and resonate with virtual

presences to transcend action and non-action in all social interactions and suggests we measure energy-flow using a conceptual unit of measure, QIMASS (pronounced as ch'i-mass). Perhaps, we could use qimass to quantify energy-flow at any of the junctures in the *essential energy-flow*.

To conclude this dialogue, I recall Whitehead's notion of the non-obvious realm because it is in this domain the energy-flow theory finds true meanings of leadership and puts behind the effort to find that meaning in prevailing definitions of what leadership is. Siu suggests that effective leaders share the maturing process to attain "sageness," where the "explicit knowledge of the formal pronouncements" of the Tao disappear into their "deeper subconscious" (Siu, 1968/1972, pp. 8-9). Eventually, they become "oblivious of the very preachings themselves" and the spirit of the Tao merges with their "very being" (p. 9). From then on their actions are "evoked by the universal harmony;" "being one with nature" (p. 9). They will apprehend "the all—totally, instantaneously, ineffably" (p. 9). Leaders embracing this philosophy will be, transcending in practice, moving the collective whole toward cheerful happiness.

Csikszentmihalyi's Flow of psychic energy attention, Gerber's vibrational medicine of balancing energy in our mind-body-spirit, and Maslow's Eupsychian Management and leaders' unconscious impulses all direct us to pay attention to the energy-flow in and around us.

Prigogine's theory of dissipative structures helps us practice regulating our energy-flow to transform ourselves to handle a higher level of complexity. Whitehead's notion of displacing the material base with energy-spiritual base to create a unity in social life may promulgate our ability to attain happiness collectively.

Preparing to Explore Transforming Leadership with Energy-Flow Theory

In the above dialogue, the exemplar theorists and thinkers from six different traditions have weighed in on the energy-flow theory. Their works appear to have authenticated the

energy-flow concept from their disparate traditions. The dialogue has explored, in their writings, the fields of science, leadership, management, physics, physiology and psychology, and ancient Chinese philosophy, to epitomize how one grasps factual human affairs as energy-flow abstractions. This dissertation delves next into exploring how energy-flow might be used in fathoming a leadership theory, specifically, Burns' *Transforming Leadership: A New Pursuit of Happiness* (2003), a presentation of a major contemporary leadership theory.

Inquiry Prior to Exploring Burns' Transforming Leadership

A number of reasons prompted the inquiry for exploring Burns (2003) work. The following presents the essence of my exploration into what is leadership.

My reason to explore his work arose from this thought:

Is there a deeper level of leadership that gives a more profound and richer description of what is going on when leadership is happening than we have understood so far?

An answer in Burns' earlier work triggered a yearning to understand what occurs during the exercise of leadership. Burns points out a dilemma arising from the failure to recognize the fundamental nature of leadership, a paradox, which he suggests arises from the failure to distinguish between the two basic types of leadership: the *transactional* and the *transforming*.

My reading of Burns (1979) prompted me to read Russell (1938). In both I found the assertion that the fundamental concepts of energy in physics can enhance understanding of leadership power. Burns explains that intention between leaders and followers is an essential undergirding of power dynamics. That sparked formation of the second thought:

Might we enrich our understanding of how the retention of energy in transforming leadership works using an energy-flow based concept?

Since Burns' new work came twenty-five years after his earlier publication, my assumption became that Burns (2003) would focus on energy retention. That gave me a second reason; it

would allow me to look at transforming leadership as energy-flow to provide an answer to the above thoughts.

A third reason evolved out of the same insight. Given that his new book is titled, *Transforming Leadership: A New Pursuit of Happiness*, it might truly focus on the spiritual aspect of leadership. It holds a zest of spirituality I find in the topic of transforming leadership; one led me to appreciate Whitehead's work about energy-flow abstraction as a way to represent leadership events. Since Whitehead's work has the notion that there is a trend toward displacement of the transactional material base of social life with a transforming energy base, there is support for Burns' advocacy of transforming leadership. Whitehead's belief, and hope, that the energy base and the spiritual base will unite in social life sparked my idea that we could perceive transforming leadership as energy-flow. I became enthused by the following thoughts:

Describing from an energy-flow frame of reference, how do Burns' *Transforming Leadership* concepts (potential energy) motivate its readers' (kinetic) energy to engage in *a new pursuit of happiness*?

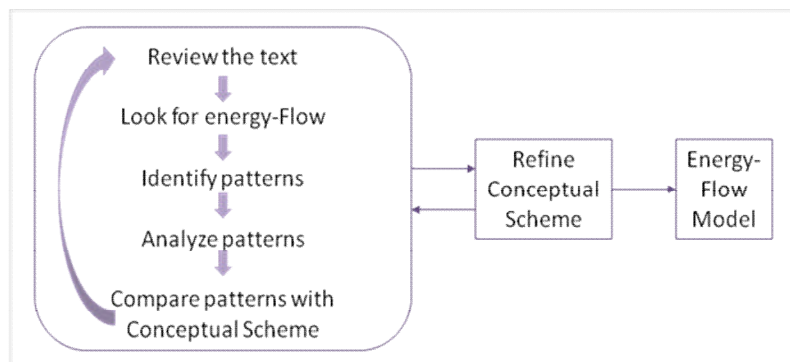
Might *transforming leadership* incite people to initiate *a new pursuit of happiness* and fulfill that timeless human longing, which moves them to Whitehead's spiritual base, or to what Maslow calls the self-actualization at the top of his need hierarchy? The title of Burns' new book appeared to be suggesting that *leadership* is the "what," which is achievable via *transforming*; and *transforming* is the "how," which is attained by arriving at some "ultimate meaning" in *a new pursuit of happiness*.

For the above reasons, I decided to chase down the different meanings of leadership and transformation, maintaining a "hypothetical frame of mind" (Vaill, 1988, Strategy #12). I want to find if Burns' recent work points toward *controversies* in the field, toward future issues, and/or toward unsolved problems illustratable using the energy-flow frame of reference.

Plan for Analyzing Transforming Leadership

The analysis, as shown in Figure 3, is a four-dimensional spatial-temporal spiraling process to review the text, circle back (two spatial-dimensions). Reread the same text with a deeper perspective reveals a new level of meaning (third spatial-dimension) about Burns' theory. Then perform a time-irreversible review of the text to gain new cumulative understanding (fourth, temporal-dimension). My learning expectation is that, as spiral gets widens so does the understanding of leadership meaning. The spiraling process consists of iterative cycles; each includes hermeneutical text reading (Bontekoe, 1996), analysis, and reporting as in "an iterative process" (Vaill, 2006, p. 4).

Figure 3: Process for Analyzing Burns (2003) Text



Chapter IV: James McGregor Burns' Transforming Leadership Theory

The virtual dialogue shifts from the works of the six exemplar/theorist/thinkers in the Chapter III to focus on Burns' *Transforming Leadership* theory to unfold new meanings of leadership. My intention is to assess the feasibility and practicality of the *Leadership as Energy-Flow* model, which arises from the amalgamation of the laws of physics and Chinese philosophy, to muse upon the following *Premise of the Dialogue*:

In what ways and to what extent would using the energy-flow frame of reference describe and stimulate new meaning in *Transforming Leadership: A New Pursuit of Happiness*?

With the above thought in mind, this dialogue session first summarizes Burns' perplexing theory and Burns (2003) chapters; then, moves to explore about some reviews and responses of the Burns (2003) from professional conferences and publications.

Overview of Burns (2003)

James MacGregor Burns (1918 -), the author of the book, won the 1971 Pulitzer Prize and the National Book Award for his *Roosevelt: The Soldier of Freedom*. As a presidential biographer, he is a senior scholar at the Jepson School of Leadership Studies at the University of Richmond, and the Woodrow Wilson Professor of Government Emeritus at Williams College. Burns' *Leadership* (1979), a cornerstone of leadership studies, has spawned thousands of academic, business, and government leadership programs; and sparked this exploration.

"*Transforming Leadership: A New Pursuit of Happiness*." is the title of the book (Burns, 2003). In the following review, all citation page numbers hence refers to this book (Burns, 2003) and all of the single-spaced material is directly quoted from the book.

The attraction to this book began with the publisher's advertorials inviting readers to join in. For instance, *The Washington Times* (Burns, 2003, front cover) personifies the book saying

that reading it is like having a dialogue with a sage professor:

A wonderful walkabout—a stroll with a brilliant, humane, and beloved old professor whose courses you took long ago . . . methodical, logically arranged, and easy to follow (Burns, 2003, front cover)

The above quote suggests the readers discover order while other quotes suggest they explore chaos. A “bold and innovative plan to address the greatest global leadership challenge of the twenty-first century . . . directing people for the common good” (front page) induces readers’ thoughts leading to form their own vision and contribute to the common good.

Transforming Leadership posits a vision of democracy based on the intimate organizations that make up movements for social change. Democracy is not the result of smooth social evolution; it requires leaders, conflicts, ideology and activism (Burns, 2003, back cover: *THE WASHINGTON POST*).

The above quote seems to suggest a conversation between order and chaos, and a need for both conflict and spontaneity. Another statement says this book is more than a study of leadership; “It is also a call to arms—for a radically different sort of conflict from the ones engaged in by the great figures of history” exemplified by the transforming leaders depicted on the book cover.

There are ten pictures of transforming leaders on the book cover. Although, the publisher did not tell their readers why they chose those ten for the cover—or even hinted who they are. I believe they are Mohandas Gandhi, Nelson Rolihlahla Mandela, Elizabeth I, Thomas Jefferson, Hallie Flanagan, Woodrow Wilson, George Washington, Charles de Gaulle, Mikhail Gorbachev, and Eleanor Roosevelt. They represent the kind of transforming leader one considers as exemplary, because of their works on human rights. That implies there is a connection between human rights, Burns’ *transforming leadership*, and a new pursuit of happiness—an idealistic notion. Their leadership stories are told in various sections in the text. In each Burns’ chapter summary below, I note which, if any, of the ten leaders-on-the-cover are discussed. In *Table 4-1*, the second column from the right, shows those leaders’ stories by chapter Burns told in his text.

In Chapter V of this dissertation, I detail their transforming leadership instances interpreted as a process of energy-flow.

The book contains 319 pages. There is no overall bibliography; instead, the *NOTES* for each chapter contain a chapter bibliography for the scholarly references and quotes Burns uses to substantiate his *Transforming Leadership* theory. The *Table of “Contents”* provides a construct of Burns’ text. The “*PROLOGUE*” suggests a vision, and the “*EPILOGUE*” unveils a call to arms for transforming leadership. Enwrapped by both are thirteen chapters under five parts headings (pp. 1-240). *Table 4-1* shows a high-level view.

Table 4-1: PART and Chapter Titles in Burns’ Text

Parts	Chapters	Leaders on Book cover	Synthesis
PROLOGUE: <i>Empowering Happiness</i>		Jefferson	Convey a transforming leadership vision
PART ONE <i>CHANGE</i>	1. <i>Mysteries of Leadership</i>		Establish a foundation for Burns’ transforming leadership theory and sustain that foundation preparing to transform readers
	2. <i>Searching for the X Factor</i>		
PART TWO <i>LEADERS</i>	3. <i>Kings and Queens, Knights and Pawns</i>	Elizabeth I Wilson	
	4. <i>Leaders as Planners</i>	Elizabeth I	
PART THREE <i>LEADERSHIP</i>	5. <i>The Transformation of American Leadership</i>	Jefferson Washington	
	6. <i>France: Trials of Leadership</i>	de Gaulle	
	7. <i>Leadership as Conflict</i>	Gorbachev	
PART FOUR <i>PEOPLE</i>	8. <i>The Anatomy of Motivation</i>		Announce a creative leadership theory; Respond to people’s wants and needs; Anchor theory to transforming values
	9. <i>Creative Leadership</i>	Gandhi Flanagan	
	10. <i>The Leader-Follower Paradox</i>		
	11. <i>Conflict: The Arming of Leadership</i>		
PART FIVE <i>TRANSFORMATION</i>	12. <i>The Power of Values</i>	E. Roosevelt	
	13. <i>The People, Yes?</i>	Jefferson	
EPILOGUE: <i>Global Poverty: Putting Leadership to Work</i>			Influence the readers to follow through

What is James McGregor Burns' Transforming Leadership theory?

Burns (1979) differentiates “transforming” leadership theory from “transformational” leadership theory. Burns says the former focuses on “means” while the latter on attaining “end-values” (p. 426). Burns (2003) brings forward “transforming leadership” from all other “transformational” and “change” leadership theories.

“During the past two decades both transactional and transformational¹⁴ leadership have become a focus of research and of controversy” (Burns, 2003, p. 24). They differ in the verbs “change” and “transform.”

To change is to substitute one thing for another, to give and take, to exchange places, to pass from one place to another . . . The transactional leader functioned as a broker. (p. 24)

to transform is to cause a metamorphosis in form or structure, a change in the very condition or nature of a thing, a change into another substance, a radical change in outward form or inner character . . . It is “change of this breadth and depth that is fostered by transforming leadership. (p. 24)

Historians once saw events caught in “patterns of flux and development. . . but *proofs* of their truth were elusive” (Burns, 2003, pp. 20-1). The “variables in the process of causation” Burns found so complex that “No single discipline . . . alone can deal adequately with the phenomenon of causation because the subject lies outside as well as inside every discipline” (p. 21). Burns by “approaching biographically” bound causation to process as he was “groping toward a theory of transforming leadership” in order to understand “the process of change” (p. 24). In “*What Is Transforming Leadership?*” (pp. 22-7), Burns conveys his theory, which I have grouped—using

¹⁴ Vaill speculates, that “transforming” is more “active” than “transformational,” which is a static concept. “Transforming” is a gerund, which is a noun preserving the active form of the verb, “to transform.” I have argued that we should do the same things with words like leadership, management, development, organization, etc. Karl Weick wrote a whole book (*The Social Psychology of Organizing* [1969]) arguing that an “organization” is really an ongoing “organizing” process. The relevance to energy-flow is that these gerunds all preserve the energy that is captured in the verb. “Leadership” has no energy; “leading” is full of energy. It is one way of bringing the “non-obvious realm” to light! (Vaill, 2008, Transform)

Burn's own words—into eight components. He himself does not divide his theory into eight sets of principles. This division is my own for a reason explained later in this CHAPTER.

1. A multidiscipline is necessary to borrow from and synthesize existing intellectual resources, and to generate new ones in the process, a discipline that can approach causation using the widest array of conceptual and empirical tools. That discipline is leadership—the X factor in historic causation. (pp. 21-2)
2. Vigorous interaction between transforming leaders and their followers is itself a powerful causal force for change. . . . The word for this process is *empowerment*; transforming leaders champion and inspire followers. (pp. 25-6)
3. By pursuing transformational change, people can transform themselves. (p. 26)
4. As leaders encourage followers to rise above narrow interests and work together for transcending goals . . . leaders can come into conflict with followers' rising sense of efficacy and purpose. . . . Followers might outstrip leaders. They might become leaders themselves. (p. 26)
5. Transforming leaders define public values that embrace the supreme and enduring principles of a people. Transforming values lie at the heart of transforming leadership, determining whether leadership indeed can be transforming. (p. 29)
6. The creative leader-follower interaction, in which the leader offers initiatives that followers pick up, amplify, reshape, and direct back onto the leader . . . Mutual empowerment means exactly that: the empowering of one makes possible the other's empowerment. "Pure" charismatic leadership also distorts constructive and mutually empowering leader-follower relationships. (p. 27)
7. Leaders take the initiative in mobilizing people for participation in the processes of change, encouraging a sense of collective identity and collective efficacy, which in turn brings stronger feelings of self-worth and self-efficacy. (p. 25)
8. transformation means basic alterations in entire systems—revolutions that replace one structure of power with another . . . a "higher order of change," constituting alterations in "attitudes, beliefs, values, and needs" (p. 24), which as a whole produce a "completely new orientation" (p. 27)

Before closing Burns' (2003) discussion of his theory of transforming leadership, he offers a way to test whether transforming leadership actually happened or not. He suggests we test, "when people confront the possibilities—and threat—of great change," to see if "powerful foundational values are evoked" (p. 29). The fundamental values are:

Summoned forth by human wants, the task of leadership is to accomplish some change in the world that responds to those wants. Its actions and achievements are measured by the supreme public values that themselves are the profoundest expressions of human wants: liberty and equality, justice and opportunity, the pursuit of happiness. (p. 2)

Those values are “the inspiration and guide to people who pursue and seek to shape change” and “the standards by which the realization of the highest intentions is measured” (p. 29). To anticipate a bit, the fact that Burns sees transforming leadership, as a process of continually transforming values is what leads me to believe that, as discussed at length in Chapter V, Burns' theory can be seen as a process of energy-flow.

Summary of Chapters in Burns (2003)

PROLOGUE: Empowering Happiness

Thomas Jefferson's pen glided across the parchment: ‘. . . Life, Liberty and the pursuit of Happiness’” and “how deeply were these words of the Declaration of Independence—expressing the common stock of human rights—etched into the American consciousness.” (Burns, 2003, p. 1)

The *PROLOGUE* introduces numerous ideas about Burns' vision that are inclusive of these ideas. Burns announces his belief that people's most worthy ambition is the pursuit of happiness, one of the great public values and most basic wants. He bemoans the inability of many people to pursue happiness and claims it is the responsibility of leaders. He says, “Leadership is in its growing stages; it has as yet no grand, unifying theory to provide common direction to thinkers and researchers;” even “the meaning of the term itself remains controversial” (Burns, 2003, p. 2). Burns reveals to readers the end values of transforming leadership and their effects in inspiring Americans and all peoples on Earth. There is an exciting ideal, in which transforming leaders and people throughout the world could work as “partners” with a unified transforming purpose held in the universal consciousness. It “could become the greatest act of united leadership the world has ever known” (p. 3). Such partnerships not only

“might break the vicious circle of poverty” and “combat global poverty;” (p. 3); but it could uncover leadership mysteries and find what Burns later calls the “X factor” (p. 17).

PART ONE CHANGE

Chapter 1: The Mysteries of Leadership

Chapter 1 consists of three subsections: “*Cleopatra's Nose*” (p. 8); “*Slaves of History*” (p. 11); and “*What Leadership Analysis Can Do*” (p. 14). Burns directs readers to uncover “*The Mysteries of Leadership*” (p. 7), to overcome and decipher “*CHANGE*” by attending to the undergirding causes instead of focusing on surface matters, such as judging appearances of beauty or ugliness. Burns uses the example that leadership in Egypt was not about the beauty of an Egyptian Queen, “*Cleopatra's Nose*” (p. 8). Rather, it was her charisma and her energizing intelligence, militancy, and ambitions involved in the service of her throne and empire. He says we have a tendency to be “*Slaves of History*” (p. 11). He awakens us, his readers, to shake loose from our habit of deterministically positing our thinking in historical materialism. He asks us to rethink the materialistic attainments of leadership. He talks about historical materialism as “situationism” (p. 12), which is so chaotic that it prompted an unfulfilled search for “laws governing the development of societies” (p. 13). Burns suggests, “*What Leadership Analysis Can Do*” (p. 14) to prevent leaders from becoming slaves of history is to explore the dynamics underlying dualisms, paradoxes, contradictions—what Burns calls the X factor.

Chapter 2: Searching for the X Factor

Chapter 2 has three subsections: “*The Quest for Causality*” (p. 18), “*What Is Transforming Leadership?*” (p. 22), and “*The Power of Vision*” (p. 27). Burns suggests there be an antidote for resolving and dealing with historic mysteries of “*CHANGE*” that led to causations of leadership. “*The Quest for Causality*” (p. 18) directs readers to discover the variables in the

mysterious causation process, which is the human motivations around people's wants and needs. The quest requires a multidisciplinary analytical tool to comprehend leadership beyond "deterministic theory of historical materialism" (p. 14) and to help people "transcend and even to transform" themselves (p. 14).

"What Is Transforming Leadership?" Burns reaffirms his earlier notion that there are two basic leadership types, "transactional" and "transforming" (p. 23) and clarifies the differences. The former exhibits definitive functions of primarily material exchange; a person behaves "as a broker and, especially when the stakes were low, his role could be relatively minor, even automatic" (p. 24). Transforming leadership achieves "not by enslaving followers but by liberating and empowering them" (p. 27). The important points Burns makes are: "As leaders encourage followers to rise above narrow interests and work together for transcending goals" and leaders can "come into conflict with followers' rising sense of efficacy and purpose" while they "champion and inspire followers" (p. 26). People, both leaders and followers embrace ever higher "transforming values" of "virtue and ethics" (p. 28). *"The Power of Vision"* (p. 27) is found in the leaders' belief that the effect of transforming leadership is brought about "by pursuing transformational change, [during which] people can transform themselves" (p. 29).

PART TWO LEADERS

Chapter 3: Kings and Queens. Knights and Pawns

Chapter 3 delves into four topics: *"Kings of Africa"* (p. 35), *"Elizabeth I: Ruler or Ruled?"* (p. 38), *"Reining in the Knights"* (p. 43), and *"The Plight of the Pawns"* (p. 47). Burns illustrates the different leadership functions in real life as an "intellectual combat" game of chess. "To play 'human chess,' with all its incalculable and shifting elements, its crosscutting forces of conflict and collaboration, its turbulent sea of variables, is to enter the world of leadership, its

theory and practice” (p. 34). Mimicking how a follower can take on leadership tasks, “queening” in a chess game is a move whereby “lowly foot soldier can be transformed into a queen” (p. 33).

Kingship/rulership has “so vital a role in human societies” (p. 38). Burns touches not only “*Kings of Africa*” (p. 35) but rulers across time from ancient Greece and even other lands such as India, to discuss “the emergence of true leadership,” which was the source of “power” to ensure “continuity, stability, and effectiveness” (p. 38). In Queen “*Elizabeth I: Ruler or Ruled?*” (p. 38), we see a ruler motivated by the people’s wants and the needs of the country she ruled. During her forty-five year reign, she was able to transform England from an impoverished country riven by religious squabbles to become one of the most powerful, prosperous countries in the world. Her transforming leadership raised the country and its people to a higher level of morality.

In “*Reining in the Knights*” (p. 43), Burns discusses how the many attempts in history meant to readjust “the balance of power” failed, and how the “illusions about the balance of power as a cure for war” were shattered (p. 45). European warrior cultures were at war with one another for centuries, invading and conquering weaker peoples to control commerce. “*The Plight of the Pawns*” (p. 47) discussed how the people suffered through those attempts to achieve a “balance of power” (p. 44). The “proliferation of brutal rulerships in a fragmenting Europe” led Woodard Wilson to campaign for a League of Nations following World War I. His hope to abolish war was the “most ambitious, attempt by visionaries and statesmen to create a structure of international collective leadership with the transformational goal of ending war” (p. 44).

Chapter 4: Leaders as Planners

Chapter 4 covers four subsections: “*The Winds and Waves of War*” (p. 52), “*Dreamers with Shovels*” (p. 58), “*The Power of Steam Shovels*” (p. 62), and “*The Transformation of Harvard University*” (p. 67). This chapter is about overcoming adversity through strategy,

planning, and innovation.

In “*The Winds and Waves of War*” (p. 52), Burns tells of Spain’s grand plan to assault and “brush through scattered English forces and descend swiftly on undefended London,” and capture Queen Elizabeth I. The plan was foiled by nature’s effect¹⁵ and underestimation of the determination “not only of the queen and her commanders but of the English people” (p. 56).

In “*Dreamers with Shovels*” (p. 58), Ferdinand de Lesseps fulfilled a dream “to pierce the Suez isthmus” (p. 59) and transformed the earth. With his vision “by uniting East and West, the canal would break down the barriers dividing humankind” (pp. 59-60), all kinds of leaders “poured their imaginations and energies into . . . transforming the earth” (p. 58); from when the “first shovelful of sand was dug up” (p. 60) until “the two seas were joined” (pp. 60-1). That was world’s “collective leadership at its best” (p. 60).

“*The Power of Steam Shovels*” (p. 62) is about another canal dream, in which humans use machines to conquer nature, the Panama Canal. Theodore Roosevelt’s leadership took many forms. His “visionary and opportunistic, collective and individual, transforming and transactional” (p. 62) leadership created equal-power members in the Panama Canal project.

“*The Transformation of Harvard University*” (p. 67) presents the forty-year presidency of Charles William Eliot, whose innovative leadership “served as a beacon for other education leaders” (p. 70). His success was in turning conflict struggles (p. 69) into opportunities to “embrace collective solutions to social problems” (p. 70). His leadership was to fulfill a dream (in education) and he had a “deeply rooted faith that humanity was ‘meant for progress’” (p. 70).

PART THREE LEADERSHIP

Chapter 5: The Transformation of American Leadership

¹⁵ The Spanish Armada of 1588 was scattered and rendered ineffective by a gigantic storm that accompanied its voyage up the English Channel.” (Garrett Mattingly, *The Spanish Armada* describes the events vividly.)

Chapter 5 covers five subsections: “*Collective Leadership on Trial*” (p. 76), “*The Most Remarkable Work*” (p. 80), “*One Man’s Leadership for Rights*” (p. 84), “*A Dependence on the People*” (p. 88), and “*Parties—the People’s Constitution*” (p. 93). This chapter is about the evolving American ideal; how it survived and “formed the backbone of an unprecedented collective leadership that transformed the American people” (p. 76).

The “*Collective Leadership on Trial*” (p. 76) talks about how American ideals, tested by the people hammering out their controversies, led to “the adoption of the U.S. Constitution” in 1788 and “our most precious possession, the Bill of Rights, on December 15, 1791” (p. 77).

“*The Most Remarkable Work*” (p. 80) is the Constitution. It was “to an astonishing degree, a product of collective thought” (p. 83). The framers of the Constitution operated at two levels. They are at a transactional level, shaping decisions and brokering compromises while at the transformational level, they “rose above horse-trading to focus on *national* needs and a transformational goal: a new and far stronger” nation (p. 83).

That “*One Man’s Leadership for Rights*” (p. 84) is all about Thomas Jefferson. He was noted for being “absolutely principled and [his] consistent stands for liberty” (p. 86).

In “*A Dependence on the People*” (p. 88), Burns discusses why Jefferson’s “principle that the will of the Majority should always prevail” ended up launching the two-party system (p. 91). His ideal was challenged by Madison’s concerns that, “If a majority be united by a common interest,” then “the rights of the minority will be insecure” (p. 90), and people must “first enable the government to control the governed; and in the next place oblige it to control itself” as “ambition must be made to counteract ambition” (p. 89).

The “intellectual seeds” of change in “*Parties—the People’s Constitution*” (p. 93) continues to influence America. “Americans were coming to understand that ‘government by the

people’ would not depend on consensus except over constitutional arrangements and election procedures” and a successful “transfer of power between parties” (p. 96).

Chapter 6: France: Trials of Leadership

Chapter 6 has four subsections: “*Crown Rule and Crowd Leadership*” (p. 100), “*The Rule of Terror*” (p. 104), “*Napoleonic Rulership*” (p. 109), and “*The Gaullist Brand of Leadership*” (p. 113). French history offered “a laboratory for analyzing the interaction of leaders and institutions, values and conflict, in the dynamics of change”—experimenting with “moral and practical—and sometimes lethal” leadership (p. 113).

“*Crown Rule and Crowd Leadership*” (p. 100) subsection talks about the switch that began in the late 1760s, after “Poor harvests and erratic government policies brought shortages and price spirals and hunger” (p. 101). “Louis XVI reigned but rarely governed” (p. 100). “Corruption was institutionalized” and perpetuated a worsening of the situation (p. 100). “The wretchedness of the poor contrasted more and more with the unprecedented opulence of the nobility,” which led to “the detachment of government from the people” (p. 101). France fell into “the darkness” of “*The Rule of Terror*” (pp. 104-5) following the “‘Declaration of the Rights of Man and the Citizen,’ proclaiming the nation itself” (p. 103). There came “a revolution within the revolution” in which “Terror became the system of government” (p. 105) and the “desperate citizenry looked for survival and security”—looking for a savior (p. 109).

“*Napoleonic Rulership*” saved “the French people after the turbulence of revolution” by providing some “stability” and order (p. 110). Napoleon had “wanted to be a transforming leader” (p. 112); but, after “the disaster of his Russian campaign” he “left France open to invasion” and “mourning the deaths of several hundred thousand young soldiers” (p. 110). His rulership left the country in enervated lethargy. In 1958, “*The Gaullist Brand of Leadership*” (p.

113) embraced a “vision of France’s ‘exalted and exceptional destiny;’” but in “the wake of Gaullist ‘modernization,’ the gap between rich and poor” grew again to an “extreme,” which set off a “moral and social crisis” (p. 117). Burns sums France’s experiments; “One trial the French did not make” in their laboratory was “the mutual empowerment of leaders and followers;” that “might transform France and its people” (p. 119).

Chapter 7: Leadership as Conflict

Chapter 7 covers three subsections: “His Majesty’s Opposition” (p. 122), “Irrepressible Conflict?” (p. 127), and “The Russian Oppositionists” (p. 132). Burns demonstrates the strength of paradox and power of conflict using China’s Mao Tse-tung’s invoking a kind of “newfound militance” of “several hundred million peasants” (p. 120). It is “a force so extraordinarily swift and violent that no power, however great, could resist it” (pp. 120-1).

His Majesty’s Opposition” (p. 122) is a British theory, “opposition should be based on ‘great principles’ of patriotism, not selfish motives;” its implementation revealed the “actual opposition to opposition” (p. 124). This led to “the individual leadership of powerful personages” rather than “the collective leadership of the amorphous parties” (p. 124).

“Irrepressible Conflict?” (p. 127) in America “precipitated the most catastrophic failure of leadership in American history”—“the long road to civil war” (p. 127). The nation grew “increasingly divided” to “an unbearable heat by the awful issue of slavery” (p. 127) and specialized in “brokerage”—“in short, transactional leadership” (p. 128) that “marked the moral bankruptcy of a two-party system” (p. 129). The people formed a new “Republican Party” led by Abraham Lincoln who vowed to “put our action upon the moral ground” declaring “hatred” to all moral, social, and political aspects of “Slavery” (p. 129).

“The Russian Oppositionists” (p. 132) denied the notion that “Opposition was treason”

and “Social change and individual initiative were threats to order” (p. 132). In 1985, “a new, reformist Communist party general secretary, Mikhail Gorbachev, loosened party controls and the Russian people sprang to life like spring flowers” (p. 133). His initiation of opposition triggered a response by the people who felt empowered to raise their own leaders.

PART FOUR PEOPLE

Chapter 8: The Anatomy of Motivation

Chapter 8 consists of three subsections: “*Sheer Want*” (p. 140), “*Real Need*” (p. 144), and “*Empowering Motives*” (p. 147). Burns’ theory is about “people transforming themselves” (p. 141); he uses Maslow’s theory of need hierarchy in “*The Anatomy of Motivation*” (p. 139) but he expanded it beyond the leader-self to encompass collective leadership.

“*Sheer Want*” (p. 140) can turn into human “proliferation of wants” that are insatiable (p. 141). “*Real Need*” (p. 144) manifests out of real want, which is supposedly just the requirements for life subsistence. “Typically the conversion of wants into needs is a lifetime experience, because humans are never free of emerging wants that seek sanction as needs, or of social forces that regulate the process” (p. 144). Burns links Maslow’s drive for self-actualization to why “wants and needs motivate leaders and followers to struggle for social change;” saying they are “the powerhouses of leadership” (p. 144).

In “*Empowering Motives*” (p. 147), as we probe “the origins of leadership,” we find “The mystery centers on the real nature of motivational forces” (p. 148). It is about “how they move people, how they expand and change, and how leaders might summon, direct, and shape them for the protection and even benefit of people” (p. 148). Because they underlay people’s motives, their voracious “wants and needs—are the most powerful forces on earth” (p. 147). At a transcendent level, leadership is a “collective process, whose dynamic is more than the simple

sum of individual motivations and efficacies” (p. 151). However, what sets this “intricate mobile of empowered motives into motion is the spark of creativity” of leadership (p. 151).

Chapter 9: Creative Leadership

Chapter 9 consists of four subsections: “Liberating Ideas” (p. 153), “The Springs of Creativity” (p. 158), “Golden Ages” (p. 160), and “The Transforming Vision” (p. 166). Creative leadership begins with “*Liberating Ideas*” (p. 153) that are fragile uncommon beliefs, hidden in subconscious thoughts, which flourish when “the indispensable spark is supplied by the imagination” (p. 153). When imagining “a state of affairs;” a nonexistent “initial creative insight or spark is enlarged into a broader vision of change, possible ways of accomplishing it are conceived” and “the vision is communicated to others” (p. 153). Most ideas of significant change “make some persons followers and others opponents, conflict arises” (p. 153); such conflicts supply “powerful motivation for transforming leadership and followership, fusing them into a dynamic force in pursuit of change” (p. 153). The sparks of imagination invigorate “*The Springs of Creativity*” (p. 158) and induce transformation leading to social change.

In “*Golden Ages*” (p. 160), when “the whole community started ‘vibrating;’” then “the mass of the nation grows incandescent, and may continue to glow by pure inertia” (p. 161). If stimulated by tenacious leadership interactions, which reach “a catalytic pitch that generates a momentum of its own, producing such transformations as paradigm shifts” (p. 161). During such time, “*The Transforming Vision*” (p. 166) of the desired future induces crises in people’s thoughts. However, “Crisis is the prime source of transforming creativity, as when familiar meanings become exhausted or debased or inadequate to account for severe changes or threats of change” (p. 166). It is when “real, growing wants are ignored or delegitimated, defined out of existence” (p. 166). Transformational creativity can “flourish amid such tensions” to the extent

that “The unthinkable becomes thinkable” and perhaps even “imperative” and desirable (p. 166).

Chapter 10: The Leader-Follower Paradox

Chapter 10 includes three subsections: “Followers as Leaders” (p. 171), “Leaders as Followers” (p. 175), and “From Engagement to Empowerment” (p. 182). “Burns’ paradox”—“*Followers as Leaders*” (p. 171) and “*Leaders as Followers*” (p. 175), says, “Students of leadership” divide “people into leaders and followers” (p. 170). The “relationship seems so simple at first glance: leaders lead, followers follow,” but “on further reflection problems arise” (p. 171). Some educators advocate, “Schools are meant to train leaders” (p. 170). It seems in today’s world, everyone is trained in schools; thus, “everyone is a leader—but who would be left for them to be leading” (p. 171)? In reality, “followers may lead and leaders follow” as “people play different roles in different contexts” (p. 171). In addition, “leaders are called upon to be responsive also as followers” and recognize “the need for enlightened and engaged followers as well as leaders” because “passive followers” would “make leadership difficult” if not “impossible” (p. 172). Thus, “leadership and followership are so intertwined and fluid” (p. 171). It becomes a problem to “distinguish conceptually between leaders and followers” (p. 171).

In “*From Engagement to Empowerment*” (p. 182), Burns says, “engagement is the crucial moral and practical function of empowerment” (p. 183). Engagement clarifies mutual “wants” while empowerment sanctions mutual collective affirmation for individual actions. When transforming values became collective, people “empowered one another; all were leaders and all were followers” (p. 185) and “The Burns Paradox ultimately disappears” (p. 185).

Chapter 11: Conflict: The Arming of Leadership

Chapter 11 has three subsections: “The Conflict over Conflict” (p. 187), “The Leadership of Conflict” (p. 191), and “The Power of Leadership” (p. 195).

The fact that the “most arresting rulers in world history have not been the supreme peacemakers but the warriors” (p. 186) who eliminate conflicts to gain leadership power over the opposition and attain peace for their countries. War and peace—“people cry for peace but honor warriors” (p. 187), the “relation of conflict to leadership is rich in paradox” (p. 186). At a deeper level, the “one other paradox: analysis of conflict—especially non-violent conflict—may be the key to opening up crucial dimensions of leadership” (p. 187).

Different schools of thought led to “*The Conflict over Conflict*” itself (p. 187). Since ancient times, “conflict and consensus have battled for centuries with one another” (p. 187). Making “war the arbiter of men and nations,” “conflict was inextricably woven into the structure of the universe” (p. 187). In the late nineteenth century, people saw “conflict against the established order as necessary to their hopes for change” (p. 188). In late twentieth century, the “equilibrium theory” was challenged by many “as a defense of privilege and oppression, hollow values, and social stagnation” (p. 190). We still hold the idea that “consensus and cooperation” is the “morally right” way to work together; but it became the conservative “tradition that would have little place for deviants” (pp. 187-8). People believe “Harmony, compromise, consensus are good” and “Conflict, discord, dissension are bad” (p. 191).

Burns advocates, “Nonviolent conflict” is “potentially a powerful force . . . invigorating leadership, and—paradoxically—for fostering social integration and stability” (p. 191). The “exclusion of conflict that was abnormal. . . it carried a heavy price, for social conflict was the ‘great creative force’ that carried along change” (p. 190). The implications of “*The Leadership of Conflict*” (p. 191) go “far beyond” the “conflict-consensus argument” to leverage “*The Power of Leadership*” (p. 195). “Only leadership can overcome the abuses of leadership” by developing “new collective capacities and new relations of power” to fight abuses of power (p. 198).

PART FIVE TRANSFORMATION

Chapter 12: The Power of Values

Chapter 12 highlights in three subsections: “What Values for Leaders?” (p. 203), “Transforming Values” (p. 207), and “Empowering Values” (p. 211).

“*What Values for Leaders?*” (p. 203), in late 1944, “American delegates to a United Nations organizational conference overcame British and Soviet objections to including the need for human rights in the charter of the United Nations” (p. 203). This is known as the “Universal Declaration” and is “a complete system of public values” (p. 206), which “dominate people's hopes and fears and expectations that deeply influence their social and political attitudes and shape much of their day-to-day behavior” (pp. 205-6). Those values are “the most powerful of principles because they represent the most broadly relevant, deeply felt, longest lasting, morally grounded commitments humankind can make” (p. 205).

“*Transforming Values*” (p. 207) are “a revolutionary set of values” (p. 208). “Leaders embrace [transforming] values; values grip leaders” as “The stronger the value systems, the more strongly leaders can be empowered and the more deeply leaders can empower followers” (p. 211) in reinforcing cycle. In the “transformational dynamic that mutually empowers leaders and followers involves,” we see “wants and needs, motivation and creativity, conflict and power” and “at its heart lie values” (p. 211). “Values not only exist side by side but intertwine and interact, immensely strengthening their collective impact” (p. 206). In sum, transforming values are “power resources for a leadership that would transform society for the fuller realization of the highest moral purposes” (p. 213).

Chapter 13: The People. Yes?

Chapter 13 concludes Burns theory in three subsections: “The X Factor” (p. 215), “Life.

Liberty. and ... ” (p. 222), and “... the Pursuit of Happiness” (p. 227). These echo the ideal in Burns’ PROLOGUE. Burns takes the readers through various leadership pursuits, “Our search has been for an explanation of the *human* role in change, of leadership conceived as a dynamic, fluid system of leaders and followers that has deep causal impact” (p. 214). Any theory “draws upon the past, but is valued for its capacity to describe the future, for its powers of forecast;” yet “a theory of leadership will never be precise in its predictions because its raw material is the most enigmatic of phenomena” (p. 214). “We can indicate the principles and patterns of the leadership process, point out its origins and ends, mark out its stages, suggest its variations and also its universality;” but “the theory of leadership is bound so closely to its practice” (p. 214).

Underpinning transforming leadership practice is “The X Factor” (p. 215). “Leadership brings to consciousness and makes articulate what people already know” (p. 224). “When a society is in homeostatic equilibrium,” it seems the “world is not a static one, but neither is it transformational” (p. 222). Creative leadership “sparks an evolution in followers toward committed, empowered participation in the struggle for meaningful change” (p. 224). “Leadership is the X factor” (p. 222) because from that participation, can come “an inner, personal transformation comparable to the changes activists seek in the world,” so all may enter into a “mutually transforming relationship” (p. 224).

EPILOGUE: Global Poverty: Putting Leadership to Work

EPILOGUE ends the book with a call for *Transforming Leadership* to establish a common focus. Burns suggests a focus to test transforming leadership—a resolution of global poverty issues. That is, at the heart of the money strategy solution for poverty, there was “a void, a missing link, an absent X factor and catalyst: leadership” (p. 234). Burns acknowledges that resolving this global poverty problem can be a large claim. It is “based on the proposition that

transforming leadership begins on people's terms, driven by their wants and needs, and must culminate in expanding opportunities for happiness” (p. 230). He encourages the readers to pursue the goal because a vicious dynamics invokes its own interventions and a “sense of empowerment [that] fuels the pursuit of happiness” (p. 240).

Burns summarizes what are the key challenges for readers ahead; as “If ‘ideas are weapons,’ . . . then . . . leadership must face the test of applicability to real life” (p. 231). The “tests of applicability are even harder for transforming leadership, particularly when this biggest, boldest kind of leadership confronts the largest, most intractable problem” (p. 231). “No leader can truly lead if he cannot respond to the wants of followers, if she fails to elevate and empower them” “No leader can lead without seeing that conflict is not only inevitable but often desirable” (p. 231). Burns (2003) concludes with a quote from the *Book of Tao (Tao Te Ching)* by its author, Lao-Tze (or Lao-Tsu) (Burns, 2003, p. 240, Lao-Tze, circa 600 BCE/1972, Ch. 10):

Bearing yet not possessing
Working yet not taking credit
Leading yet not dominating
This is the Primal Virtue

Publications and Responses to Burns (2003)

Burns (2003) has spurred professional workshops and dialogues, and the topic transforming leadership appeared in many sessions including those held by the International Leadership Association (ILA) whose conferences have included many discussions of the “global poverty” issues. Some readers have taken on Burns’ suggestion to strategize tackling “global poverty” issues raised by him in his “*EPILOGUE*.” At ILA ’06 and ’07 they shared examples of how international, federal, state, and local levels can work together to end poverty. Many leadership students have shifted their focus to study the essence of transforming leadership.

There have already been articles in scholarly reviews. They are: academic journals on transforming leadership (Kuehn, 2003): *Standards for Excellence* (Bear, 2007), key breakthrough in leadership (Kaske, 2003), and *Gandhi Was, Napoleon wasn't: What Makes a Real Leader* (Caldwell, 2003).

Personal Observations about Burns (2003)

Reading Burns (2003) is like having “a stroll with a brilliant, humane, and beloved old professor” (front cover); and I would add, like having a dialogue with a sage professor who does not give straight answers. Burns’ text does not provide the obvious “canned answers” or lists of “ought to” nor “should” that readers usually expect to find. It actually invites readers into a pool of many choices of thought and idea provoking readers’ to use their own interpretations and imaginations to select their own. I see it as sacrificing commonsense and illusionary certainty for creativity. For example, one has to dig into the text to find what Burns’ *Transforming Leadership* theory is, and even then finds one cannot put the theory into a succinct sentence. This reminds me of a Taoist teaching; once we label a thing “is” we often later find that same thing “is not.”

One puzzling thought that remains throughout the review process is, apparently they are more than those ten transforming leaders we have witnessed in history and who are for human rights. Why the ten transforming leaders were selected on the cover and not others he writes about? Their pictures fill up the front cover and appear again in a smaller array on the back cover seeming to represent that there is some significance related to Burns’ *Transforming Leadership* ideal. But, there are digressions into stories of other leaders in the text that makes readers wonder why the ten are special. Possibly those ten on the cover were not chosen by Burns, but rather by the publisher as a kind of marketing strategy, as authors often do not have any hand in the artwork of the cover Burns’ back and forth telling of leaders’ stories makes it difficult to pinpoint

when Burns considers them transactional or transforming. Those puzzles inspired me to contemplate a deeper meaning of leadership.

Unlike many of the current leadership theories, Burns' *Transforming Leadership* theory is not psychological and it is not behavioral. It is concretely about the kinds of large-scale changes people influenced and were influenced by. I realized that complexity is what make us human and not machine, our multiple sense perceptions of multi-viewpoint interpretations on multiple-dimensional beings create a complex milieu we call leadership. By the end, I found there was a calculated method behind Burns' presentation, which is presented in Chapter V next.

Chapter V: An Exploratory Conversation about Energy-Flow in the Transforming Leadership

Theory of James McGregor Burns

I have found substantial clarification of and support for energy and energy-flow in the work of six exemplar thinkers (Chapter III). I now explore how the *Leadership as Energy-Flow* model relates to an existing major contemporary leadership theory. I have chosen *Transforming Leadership* by James McGregor Burns. The book itself is described in Chapter IV. In this chapter, I want to engage in an imagined dialogue with Burns, so to speak, exploring what he has in mind with his theory, and whether my thoughts about energy-flow contribute something important to his work.

A number of epiphanies took place for me, which brought together my learning from the works of my six guiding theorists, during my exploration of Burns' *Transforming Leadership* theory. While I expected to find evidence of transformation and spirituality, I did not expect to experience transformation itself. It is the awareness that I had become totally absorbed in Burns' summons to transform that I found myself transforming. I encountered some unexpected, and heartening, synchronicity between Burns' theory and my energy-flow theory. I did not anticipate that finding answer to my *Premise of the Dialogue* (Chapter I, p. 9) required me to transform myself first. These epiphanies were energy-flow bifurcations I experienced myself as I became a constantly perturbed dissipative structure.

Unanticipated Encounters with Energy-Flow in Burns (2003)

Reading Burns (2003) from the energy-flow frame of reference was more an experience of discovery than anticipated. Perhaps, it is an illustration of the truth in this statement—when one is ready to see something, all of a sudden that something will manifest itself. Even though the works of the six thinker/theorists (Whitehead, Prigogine, Maslow, Csikszentmihalyi, Gerber,

and Siu) had transformed many others, I was not ready to transform myself until I faced the challenge of finding energy-flow in Burns (2003).

In starting out, I intended to let the text guide me. Each reading, however, awakened some hidden insights and unearthed awareness of my beliefs and self, and invoked transforming energy-flow within me. It was at this time that I encountered an energy-flow, induced by my own controversial internal dynamics, which instigated a battle between my non-conventional thinking and my residual reflexive materialistic thinking. The controversies led me to reexamine my mental perceptions of value and spirituality. They alerted me to become aware of my subconscious upholding of a materialistic sense of competitive unintentional-labeling, ranking, categorizing, and accomplishment judging when analyzing leadership events. Vaill advises I figure out a way to remind myself continually of this very important learning, as there is a natural danger of “defaulting” to “these older materialistic thought forms” (Vaill, 2008, default).

Wrestling with my own controversial thinking was itself a transforming experience leading to one epiphany. I believe a personal transforming experience is a “one of a kind” thing, in which the explorer transform themselves and “become part of the phenomenon and retains something of her/is old independence” (Vaill, 2008, awareness). “That is a truly mystical evocation of the spirit of ‘participation in the phenomenon;’” It is analogous to how “energy” retains “material” but goes beyond it to include “transcendent.” Vaill describes, the kind of exploration I was engaged in as one in which there are “unstable and rapidly changing contexts” (Vaill, 2006, p. 15). Agreeing with Lawrence, Vaill quotes the following observations:

If we think about it, we find that our life consists in this achieving of a pure relationship between ourselves and the living universe about us. This is how I 'save my soul' by accomplishing a pure relationship between me and another person, me and other people, me and a nation, me and a race of men, me and animals, me and the trees or flowers, me and the earth, me and the skies and sun and stars, me and the moon: an infinity of pure relationships, big and little, like

the stars of the sky: that makes our eternity, for each one of us, me and the timber I am sawing, the lines of force I follow; me and the dough I knead for bread, me and the very motion with which I write, me and the bit of gold I have got. This, if we knew it, is our life and our eternity: the subtle, perfected relation between me and my whole circumambient universe [Lawrence, (1925) 1968, p. 528]. [sic] (Vaill, 1998a, p. 17)

Although Burns' text appears to be stable and unchanging, yet, from an energy-flow frame of reference, one perceives different temporal and changing contexts. The interpretations of the text become highly unstable because, as the exploration continues, the energy-flow abstraction transforms. When reinterpreting the complex interactions in the text, the path becomes unpredictable as the exploration goes deeper with the author's thought abstractions, especially Burns' multiple inferences about the meanings of transforming leadership.

That awareness of the struggle evoked an understanding (another epiphany) about why Burns (1979) differentiates transforming leaders from transformational leadership. The latter is more concerned with *end-values* (such as liberty, justice, equality) while the former emphasizes raising people up through levels of morality—that places emphasis on the people. It is all about the people, without the people, everything seems to lose its meaning. Burns cautions, although both kinds of leadership have moral implications, “insufficient attention to means can corrupt the ends” (Burns, 1979, p. 426). To me, the means is what really matters, more so than the end-values themselves, that is why leaders engage people at a collective conscious level. Burns (2003) adheres to Burns (1979) recommendation by being attentive to the means while letting the “end-values” be as high as the collective could possibly achieve at that given moment.

By nurturing the people dimension, Burns (2003) emphasizes the belief that “people can transform themselves” (p. 26). Burns' *Transforming Leadership* theory concurs with Vaill's perception that leadership needs a developing-people dimension. We may “speculate from the experience of OD [contemporary organization development] that ‘good subjectivity’ balances the

attainment of task objectives with the development of people” (Vaill, 1985, p. 32). Thus, rather than suppressing the good subjectivity in people, leaders must subscribe to the philosophy that “integration of interests to the extent possible is more valuable than differentiation of interests” (p. 32). It requires to attain to both task and people; not either task or people (Vaill, 1998a, p. 239). The epiphany is that, I discovered an energy-flow complementarity induced in the integration of interests. We see spirituality in the feeling of the people as they rise through levels of morality and abandon the need to differentiate or judge benefits of material-transactions. It came as a revelation that leaders must transform themselves before they can transform others.

I started my exploration with a transactional mindset—as a subjective observer, but by the time I was prepared to finalize my observations, I became aware that I had become part of the collective transforming consciousness. That is another epiphany. Being engrossed in the author’s thought-flow was itself a transforming experience. Burns (2003) refers to the participation of the “collective” (p. 25) as being essential to transforming ventures. That awareness of the collective notion induces finding transforming energy-flow within self. I became aware that in the collective consciousness the wisdoms of the six thinkers/theorists (Whitehead, Prigogine, Maslow, Csikszentmihalyi, Gerber, and Siu), join with Burns’ wisdom. There was one other epiphany. I am holding that one until the end of this chapter.

Recapitulating Burns (2003) Text in the Essential Energy-Flow Conceptual Scheme

The joining wisdom of the seven thinkers/theorists has crystallized and refined the conceptual scheme in the ways of paradigm shift that I have disclosed in my epiphanies. I understand Burns’ *Transforming Leadership* theory from the perception of elemental yin-yang energy-flow in the Tao. Thus, it gives rise to the synchronicity of the *essential energy-flow* conceptual scheme, and encourages me to map Burns’ transforming leadership practice to the

essential energy-flow.

To reiterate, the *essential energy-flow* consists of eight leadership energies. They are: Founding, Sustaining, Innovating, Responding, Anchoring, Influencing, Strategizing, and Implementing. They represent the transformational nature and attributes of leadership. They are shown in *Table 2-2* and *Figure 2-3* in Chapter II illustrates the cyclic nature of transformation; the energy-flow in nature and leadership phenomena; the Loop of Virtuous Leadership (green loop in the center) captures Burns' notion of transforming leadership phases. Prior to a transforming effort, a leader would have a vision motivated by the collective of the people to have a desired future. The collectivity of the people fosters creative leadership to identify reasons motivated by each individual who has grasped the transforming values and have transformed himself or herself or are ready to transform. Collectively, they identify the gaps between current reality and the desired to-be-future. Vaill says, it is not a repetitive iterative process, though: that the leader by his or her example, contributes to "the people" becoming a new collective, a new consciousness of themselves. That is, "the new consciousness produces new visions of a desired future, which a leader can crystallize and respond to and a foundation for new future" (Vaill, 2008, new future).

The transformation cycle from Founding to Implementing varies in duration and scope. The end of one transforming leadership cycle marks the beginning of next. Each cycle takes the people to a higher level of morality, which is the new foundation of a happier life. The eight phases in the energy flow cycle are not discrete steps; in fact, the transitions lines are not abrupt, but gradual. There may be iteratively crossing and returning to an energy state. Nevertheless, the *essential energy-flow* is a tool for design, verifying, and rectifying, during transformation.

Initially, my hope was that the dynamics embedded in Burns' theory would concur with

the Tao of leadership. If true, transforming leadership practice in Burns' exemplar transforming leadership instances might agree with the *essential energy-flow* in the conceptual scheme discussed in Chapter II. I gleaned, from the gist of Burns message to his readers, an overall feeling of the energy-flow in the book in order to synchronize my energy-flow with my subjective observations—identifying similarities or disparities, and pinpointing the salient, enthralling points. As I was trying to synchronize my energy-flow with his energy-flow revealed through his text, a surprising twist happened unexpectedly—Burns' structure of presenting his *Transforming Leadership* theory is congruent with the *essential energy-flow* proposed in my conceptual scheme.

Table 5-1 presents the associations of the *essential energy-flow* and the thought-flow in Burns (2003). It is my best attempt to describe Burns' text in terms of the *essential energy-flow*. Burns' flow of ideas correlates to the leadership energies only at the general or aggregate PART level. Behind Burns' presentation of his thoughts in parts and chapters, confined to an artificial order dictated by time and language rules, there is a natural flow of thought. Burns (2003) illustrates leadership theory is about a major thought abstraction that flows and intermingles with other theoretical thoughts. The presentation of his thoughts thus moves through transitions from one leadership energy-flow to another, cycling iteratively, sometimes forward and sometimes backward in an abstract pattern not unlike what is experienced in real life. As many readers would find Burns' presentation somewhat confusing, perhaps, the *Table 5-1* will be meaningful to them—as it provides an insight into what Burns' intention looks like from one reader's perspective.

Table 5-1: Leadership as Energy-Flow and Burns (2003) Flow

Essential Energy-Flow		Parts	Chapters
A Vision for Transforming	Communicating Burns’ transforming vision	PROLOGUE: <i>Empowering Happiness</i>	
Founding	to establish a solid foundation for work toward transforming vision	PART ONE <i>CHANGE</i> PART TWO <i>LEADERS</i> PART THREE <i>LEADERSHIP</i>	1-2
Sustaining	to maintain solidity of that foundation in completing the transformational cycle		3-4 5-7
Innovating	to stimulate a new idea for successful transformation	PART FOUR <i>PEOPLE</i> PART FIVE <i>TRANSFORMATION</i>	8-11 12-13
Responding	to get feedback from multiple directions to refine that new transforming idea		
Anchoring	to secure that new idea to transforming values that people collectively care most		
Influencing	to convince and motivate people to participate in the transforming work	EPILOGUE: <i>Global Poverty: Putting Leadership to Work</i>	
Strategizing	to set strategic directions and plan for transforming work	(Burns' book itself does not deal directly with these two energy states. For the moment, it is left to the reader to speculate about how these two energy states are expressed in Burns' theory. Later on in this CHAPTER, I give my own speculation about the role these two play in Burns' theory)	
Implementing	to develop tactical plan and carry out and completing the transforming work		

In Burns' PROLOGUE, he presents his transforming vision and an overview of his text, preparing readers, as I see it, to engage them, spark an energy-flow for embarking on an experience of transformation. The EPILOGUE arms readers with transforming leadership ideas readying them to engage in a transforming energy-flow that may launch them into a new pursuit of happiness. The spark grows from a potential energy seed, a transforming vision presented in the PROLOGUE, to kinetic action/thought energy. The energy-flow begins with Founding and Sustaining Burns theory in PART I, II, and III, through which the energy-flow shifts until it arrives at a state where Burns expects readers' acceptance of his concept. Then energy-flow

continues on Innovating, Responding, and Anchoring in *PARTS IV* and *V*, where Burns' text shifts between the three leadership energy states to further explain his innovative concept. The *EPILOGUE* then shifts to Influencing energy-flow. At this point, Burns anticipates readers are inspired by his transforming leadership ideal, and have transformed themselves and are ready to embark on either a personal and/or a global collective pursuit of happiness. That is, leadership energies of Strategizing and Implementing are left up to the readers; perhaps the readers' chapters in completing Burns' ideal. I admit this has been a speculative application of the structure of Burns thinking to the energy-flow conceptual scheme.

Abstracting Exemplar Leadership Instances in Burns (2003) as Energy-Flow

The ten pictures of exemplar-transforming leaders portrayed on the book cover (left to right, top to bottom) are Gandhi, Mandela, Elizabeth I, Jefferson, H. Flanagan, Wilson, Washington, De Gaulle, Gorbachev, and E. Roosevelt. *Table 5-2* below shows page numbers in Burns' chapters where he tells each leader's story or pieces of it.

This is a tentative interpretation of the work of the ten exemplar leaders-on-the-cover; all were controversial in their day; other interpretations of their work are certainly possible based on other historical evidence. They all had a positive transformational impact on society. Those leaders have the following in common. They held to the moral code of their time; held the intention of meeting the wants of the people; legitimized those wants making them needs and noble values; caused an empowerment of the people. The result was that the empowerment of the people led to a lasting advance in the moral state of the people.

These ten are representative of the kind of transforming leader, but they are not the only transforming leaders history has witnessed. Burns text covers only eight out of ten transforming leadership stories comprehensively. He mentioned Mandela along with Gandhi and other

transforming leaders not on the book cover; and Washington is only mentioned along with historical events that are not specific to Washington. It was necessary to go beyond Burns' text to obtain information from an internet encyclopedia (specifically <http://www.britannica.com/>) on the dates for all leaders and one leadership instance Nelson Rolihlahla Mandela. For Washington, I developed his story by inference from the participation of Washington mentioned in Burns' text.

Table 5-2: The Stories of Ten Leaders Found in Burns' Thirteen Chapters

Chapter Page # Leader	PART I CHANGE		PART II LEADERS		PART III LEADERSHIP			PART IV PEOPLE				PART V TRANSFORMATION	
	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Ch. 5	Ch. 6	Ch. 7	Ch. 8	Ch. 9	Ch. 10	Ch. 11	Ch. 12	Ch. 13
	PP. 7-16	PP. 17-30	PP. 33-50	PP. 51-72	PP. 75-97	PP. 98-119	PP. 120-136	PP. 139-151	PP. 152-169	PP. 170-185	PP. 186-199	PP. 201-213	PP. 214-230
Gandhi								141	155-8		198		
Mandela											198		224
Elizabeth I			38-43	49-56	75								
Jefferson	1			63	76-95								228-9
Flanagan									163-4				
Wilson			45-9	52,67						176	186	203	
Washington					79-93						186		
Gaulle		25				115-9					186		
Gorbachev							133-5						
E. Roosevelt								139	177			204-7	229

I found most of those ten leadership instances to exhibit identifiable energy-flow patterns and share common transforming attributes—they practice Burns' notion of nonviolent conflict. Those instances reveal particularities of Burns' theory in comparison with prevalent leadership theories. Burns' bar for *Transforming Leadership* is very high on the morality scale; the high-end of the scale requires transcendental spiritual attainment while the low-end is materialistic accomplishment. For example, if there was transactional leadership intention (brokerage

exchange) in a leadership instance, then that particular leadership effort failed Burns' "*acid test*" (Burns, 2003, p. 213). Each of those transforming leaders succeeded in passing Burns' "*acid test*" for human rights.

Burns' *acid test* measurements use "a potent equation: embattled values grounded in real wants, invigorated by conflict, empower leaders and activated followers to fashion deep and comprehensive change in the lives of people" (p. 213). Burns' *acid test* begins with assessing the degree of pureness of a leader's intention, on attending to means in empowering, and on fostering energy-flow in follower-leader interdependency to achieve the collective *end-values*. The test is also, about "whether the change is lasting or whether it is temporary and even reversible" (p. 213). "Deep and durable change, guided and measured by values, is the ultimate purpose of transforming leadership, and constitutes both its practical impact and its moral justification. And that is the power of values" (p. 213). In summary, Burns' *acid test* stresses the power of values because it is at the heart of motivating people to transform; so the test is to assess if people actually transformed themselves to a lasting higher level of morality.

In my attempt to examine it with an energy-flow frame of reference, I reviewed the text keeping in mind that every event is a manifestation of the yin-yang energy-flow abstracted by historians then interpreted by Burns. Several of Burns ten leaders can be seen to behave in balance with the yin-energy-flow, calling forth the extreme yang responses, for many: verbal attacks, physical violence, even incarceration and assassination attempts. Elizabeth I, Mandela and Gandhi might have known that all they had to do was stay alive to make their point.

These tables seem to suggest that the energy-flow is linear, but keep in mind that the eight states in energy-flow cycle do not always arrive in the same sequence nor is the progress of transforming one way. There are multiple levels of aggregated events that yield multiple

reappearance of the eight energy-states—cycles can be linear, non-linear, recursive, and/or iterative in many different combinations. When leading transformation, not only are others transforming, there are external transformations, all of which affect the complexity of the transformation under study. Vaill comments, “One image I have that for some events in a complex system, two or more of the eight trigrams can be present at once.” In a complex system, “one might have one trigram primarily operating at a project level, another trigram operating at the program that contains the project, another trigram at the division that contains the program, etc” (Vaill, 2008, complex system). Thus, multiple trigrams may be present in a given event. Following Whitehead’s *Fallacy of Misplace Concreteness*, it is best to keep verbal description simple; emphasize the complexity of the phenomenal event.

The reinterpretation using the *essential energy-flow* in my conceptual scheme demonstrates it is possible to sort out the different strands of energy-flow intertwined in each of the leadership instances. Each leadership instance intermingles with and affects other instances in history. This makes differentiating the attributes of transforming leadership difficult.

When analyzing leadership theories using the yin-yang energy-flow, I could use Burns two basic types of leadership—transforming and transactional—as the two ends of a leadership continuum. When assessing the success of transforming leadership, I integrated Burns *acid text*, and his potent equation for what transforming leadership is, as Assessment tools. I combined them with my *essential energy-flow* conceptual scheme to improve my ability to assess transformation and leadership instances. I realize that it is necessary for me to tap into, and refine, my assessment of leader thinking as they personally assess the meanings of leadership and followership.

Mohandas Gandhi—Humanist

Energy-Flow	Transforming Leadership Instance of Gandhi (1869 – 1948)
Founding	The “meaning of the struggle” . . . was better expressed by a word he coined, <i>satyagraha</i> —the power “born of Truth and Love or non-violence.” (p. 155) For a real awakening, . . . their struggle must be personal as well as political. (p. 156)
Sustaining	Gandhi's idea was to conquer hatred by love. (p. 155)
Innovating	Gandhi's invention of the concept of <i>satyagraha</i> was the distinctive act of his creative leadership, and it was to be the distinctive weapon of his protest leadership. If <i>satyagraha</i> was the weapon, <i>swaraj</i> was the supreme goal . . . meant self-rule (p. 155)
Responding	Gandhi deepened his ideas about moral ends and political means while practicing <i>swaraj</i> in a Pretoria prison, where he was jailed for civil disobedience. (p. 156) As the time approached many of his supporters in India and England warned him that the campaign was too risky, and that he probably would be imprisoned. (p. 157)
Anchoring	Salt was a powerful, inclusive symbol for a <i>satyagraha</i> campaign against British injustice. (p. 156-7) . . . ultimately trumped the vast material—but feeble moral—resources of the British; was in his followers' unshakable inner discipline and devotion to Gandhi's transforming concept of nonviolent direct action. (p. 158)
Influencing	Continuing his nationwide mobilization campaign. . . he searched for the dramatic act that would spark Indian liberation. (p. 156) Gandhi sought to teach and transform people who in turn would join him in the collective, national struggle; and the strength of his cause. (p. 158) Then, for twenty-four days, across two hundred miles, led his following, which grew as he went to thousands of women, children, and men. (p. 157)
Strategizing	Gandhi kept steadily to his plans, convinced that the government would not act if his followers heeded his insistence on disciplined nonviolence. . . it evolved there and in India, proved both deeply principled and shrewd strategically. (p. 157)
Implementing	The salt <i>satyagraha</i> was a colossal success, mobilizing millions of Indians behind Gandhi's leadership. The march had dramatized the political tactic of nonviolent direct action that would be emulated by many moral leaders and protesters around the world. (p. 157)

Gandhi completed his transforming energy-flow cycle and succeeded in his transforming leadership. “Though nearly twenty more years of struggle would follow the salt march, the British never regained their balance” and “Britain's Labour government acknowledged the inevitable: Indian independence” (p. 157). His nonviolent philosophy inspired others.

Nelson Rolihlahla Mandela—Peace Negotiator

Energy-Flow	Transforming Leadership Instance of Mandela (1918 -)
Founding	The most potent appeal to their [people's] wants and motivations is moral (p. 198)
Sustaining	maintain a nonviolent stance
Innovating	Mandela's creative leadership was not obvious, leading while being in imprisonment. His imprisonment became a cause célèbre among the international community that condemned apartheid.
Responding	The South African government under President F. W. de Klerk released Mandela from prison. They worked to end apartheid and bring about a peaceful transition to nonracial democracy in South Africa.
Anchoring	His commitment to nonracial democracy in South Africa
Influencing	In April 1994 South Africa held its first all-race elections, which were won by Mandela and the ANC. (African National Congress)
Strategizing	As president, he established the Truth and Reconciliation Commission (TRC), which investigated human rights violations under apartheid
Implementing	In 1996, he oversaw the enactment of a new democratic constitution; introduced housing, education, and economic development initiatives designed to improve the living standards of the country's black population.

Mandela demonstrated an uncompromising ideal of transforming leadership. His non-violent combat against apartheid brought nonracial democracy and peace to South Africa.

Elizabeth I—Ruler

Energy-Flow	Transforming Leadership Instance of Elizabeth I (1533 – 1603)
Founding	Elizabeth said she owed her throne—and her survival—to no one but the people, who had remained loyal to her” (p. 39)
Sustaining	Except in aggravated cases, Elizabeth did not take this [a punitive] harsh path. The people she governed already savored the idea that they were secure against arbitrary power in their persons and property.” (pp. 42-3)
Innovating	As a survivor herself, she helped her country survive (p. 43)
Responding	But the main secret of Elizabeth’s success was in her shrewd judgment, her intellectual grasp of rival leaders, their motivations and power resources combined with an intuitive understanding of the play of human ambition and rivalry in her own and foreign courts (pp. 41-2)
Anchoring	to overcome the instability she inherited, and to enthrone her highest value, domestic order, without which no other value was achievable (p. 42)
Influencing	Even before the Armada sailed, the counties had mobilized. “High and low,” . . . “rushed to offer their arms to the Queen.” (p. 56)
Strategizing	She intended to convert the Church of England into a national and more secular institution, a great broad stabilizing center that reflected her own relative tolerance and pragmatism and that marginalized extremists. Having accomplished this, she characteristically repelled all proposals for further reform (p. 43)
Implementing	Motivated by a deep unease over "the perturbations of the unstable world around her," she used pragmatic tactics to accomplish the small changes that made stability possible and a larger transformation unnecessary, or at least avoidable. (p. 43)

Elizabeth I’s rulership passes Burns’ *acid test* of *Transforming Leadership*. She transformed England from being a torn-apart dictatorship into a powerful united country that survived after her reign and became a leading world power of the time.

Thomas Jefferson—Ultimate Patron of Human-Rights

Energy-Flow	Transforming Leadership Instance of Jefferson (1743 – 1826)
Founding	“We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.” (p. 78)
Sustaining	“That to secure these rights, Governments are instituted among Men, deriving their just Powers from the consent of the governed. That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles, and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness.” (p. 78)
Innovating	As an act of collective intellectual leadership, the declaration sprang from decades of philosophical and political controversy . . . created an <i>American Enlightenment</i> that supplied the overarching principles, . . . “the kind of sagacious and flexible leadership that came to the highest places of power in the American Revolution,” and after. (p. 77)
Responding	“the general idea of framing a government which should go on of itself peaceably, without needing continual recurrence to the state legislature. I like the organization of the government into Legislative, Judiciary and Executive.” . .
Anchoring	the Declaration of Independence . . . sought only to “place before mankind the common sense of the subject, in terms so plain and firm as to command their assent.” (p. 77)
Influencing	the most potent agent for change, for unlocking the transformational capacities needed to make the pursuit of happiness more than a phrase on parchment. (p. 2)
Strategizing	Political strategizing flourished at the grass roots, too. Rather than flatly oppose the Constitution, some Anti-Federalists called for a new national convention to consider a bill of rights. (p. 88)
Implementing	And so [due to Jefferson’s intervention] a bill of rights was passed, propelled by a groundswell of support among the populace . . . and by James Madison. Once he had been convinced of the need for amendments, hearing the deep public concern over the threat to liberty, their most cherished value, Madison took the lead in distilling eternal and transcending principles from hundreds of proposals, (p. 88)

Jefferson insisted on his belief “in the possibility of a republic of virtue and so foresaw and welcomed majority rule” (p. 90) Jefferson recognized “parties were integrating American society by dividing it in half. Only by being conflicted could Americans be united, and thereby justify those glorious words, ‘We the People.’” (p. 96)

Hallie Flanagan—Artist

Energy-Flow	Transforming Leadership Instance of Flanagan (1889 – 1969)
Founding	Times of revolutionary change create new cultures of creativity, where leaders become followers of the turning tide, and followers become leaders. (p. 163) a theater without walls, a “drama of remembrance” and “prophecy of the future” . . . [a] transforming theater (p. 163)
Sustaining	It is their theatre, “speaking to their lives, their hopes, needs, and fears, the drama “forged from a belief which audience and actor shared.” (p. 163)
Innovating	Flanagan imagined that any of the audience of enraptured workers might “leap upon the stage and take a part. It is their theatre” (p. 163) Soon she was enlisting thousands of demoralized and dispersed show people in a national effort “equal to the gigantic task of bringing to People across America” theater that was “free, adult, uncensored” (p. 163)
Responding	But the FTP [Federal Theatre Project] ran into congressional opponents who feared that its performances might “radicalize” their constituents. (p. 164)
Anchoring	Flanagan believed that drama could “influence human thought and lead to human action” and fiercely defended its right—even obligation—to give “apoplexy” to the powerful, though she insisted that the FTP not become a tool for any political party. (p. 164)
Influencing	Soon she was enlisting thousands of demoralized and dispersed show people in a national effort “equal to the gigantic task of bringing to People across America” theater that was “free, adult, uncensored.” (p. 163)
Strategizing	To celebrate the teeming diversity of the land, she sponsored everything from classical and modern drama to vaudeville, religious pageants, children's theater, and even circuses. (pp. 163-4)
Implementing	<i>One-Third of a Nation</i> , echoing FDR’s striking evocation in 1937 . . . touched off a cry of moral indignation against slumlords and helped bring passage of a new housing law, exhibiting just the sort of transforming political power the FTP’s conservative foes feared. (p. 164)

Flanagan’s concept of “a theater without walls” continues to influence others, inducing more Strategizing and Implementing energy-flow in others’ works. For example, “Valdez and his group” created a play with “a specific message: ‘Join the union.’” (p. 164). Another work by “Augusto Boal, Brazilian director and activist, had an even broader vision of the theater’s transformational potential for liberating the oppressed;” (p. 164).

Woodrow Wilson—Crusader

Energy-Flow	Transforming Leadership Instance Wilson (1856 – 1924)
Founding	Wilson vowed at the league's first national assembly in May 1916 to take leadership in establishing a “universal association of the nations” that would indeed be a league to enforce peace. (p. 45)
Sustaining	the Assembly of the League of Nations in Geneva . . . most ambitious, attempt by visionaries and statesmen to create a structure of international collective leadership with the transformational goal of ending war . . . assaults on the security of defenseless peoples . . . rogue knights swept into their lands and homes . . . (pp. 43-4)
Innovating	Sometimes a better solution could be found in alliances. . . a very different vision of international leadership . . . [than] illusions about the balance of power as a cure for war . . . reassessed their strategies of peace. (p. 44-5)
Responding	He was fortified by his conviction that he represented the hopes of peoples everywhere, a shining contrast to the cynical statesmen even now bent on playing the old balance-of-power game. (p. 46) Wilson's trip to Europe . . . after an armistice in November 1918 brought the world war to an end, and of the roaring welcomes in Paris, London, Rome. (pp 45-6)
Anchoring	Nations did not consist of their governments, he asserted, “but consist of their people!” a rudimentary idea . . . most war settlements had been based on national advantage and trade values, not on the wants and needs of people. (p. 48)
Influencing	For Wilson this would not be another [presidential] election campaign but a moral evocation that would penetrate to the heart of the American psychology as well as polity. It would be to ask the people not for votes but for affirmation of a new internationalism. (p. 48)
Strategizing	"gone to the country"—it was an old American custom. But no president ever before had gone so directly, and so passionately, to the great masses of people assembled in cities and towns across the United States. (p. 48)
Implementing	As he spoke Wilson brought audiences alive, but even more he spoke increasingly with a kind of austere desperation, warning that the people might once again pay the cost of war in lives lost and maimed—the great mass of people who were most powerless and most desolate. (p. 48) Wilson's tour by presidential train in September 1919 became an American epic, a heroic and exhausting campaign that ended in physical collapse and devastating political defeat. (p. 48)

Although, Wilson’s transformational leadership failed, as he did not achieve his end values—ending wars, his transforming leadership “had stirred profound moral convictions” and kept “before the country a high moral purpose” (p. 176). It was, “Later the UN established a Commission on Human Rights” (p. 203).

George Washington—Warrior for Independence

Burns' text does not mention much about Washington's specific accomplishments. The following extracts are about memorable activities that Washington participated in.

Energy-Flow	Transforming Leadership Instance Washington (1732 –1799)
Founding	Americans had been at war for over a year; six more years . . . before the British surrendered at Yorktown [to Washington,] and another two before peace. The war ended in military victory and political turnover . . . fused the Americans of the 1780s into one people. (p. 79)
Sustaining	[Resolve] conflict between these two meanings, finding the pursuits of individual and collective happiness. (p. 79) immigrants began to flood in from Europe, further straining republican ideals of a unified, homogeneous citizenry . . . “a national Spirit is the natural Result of national Existence” (p. 79)
Innovating	attend a constitutional convention . . . “determine whether we are to have a Government of respectability under which life, liberty, and property will be secured to us, or are to submit to one which may be the result of chance or the moment, springing perhaps from anarchy and Confusion, and dictated perhaps by some aspiring demagogue who will not consult the interest of his Country so much as his own ambitious views.” (p. 81)
Responding	Much of the debate took place in newspapers, books, taverns, and parlors. Most of it, though, occurred in correspondence among the notables and among lawyers, businessmen, teachers, clergy. It is both the depth and the scope of their thinking that strike us two centuries later. (p. 81)
Anchoring	The 1786 rebels were threatening values that the 1776 rebels held dear—“life, liberty, and property” . . . now invoked repeatedly by Washington and others. Something had happened to “happiness.” (p. 81)
Influencing	Madison now sought a national power with supremacy over the states—in short, a second revolution in American government. (p. 81)
Strategizing	Such a transforming goal was in the minds and hopes of not a few of the delegates—George Washington among them as they met in Philadelphia. (p. 81)
Implementing	As transforming leaders, the framers pulled off their intellectual coup because they were working as both theorists and practitioners. . . . All leaders themselves, they were led toward a common purpose by Washington and Madison and Hamilton (when he deigned to attend) and a dozen others of the most creative thinkers in the convention hall.(pp. 83-4)

George Washington established numerous precedents as president; perhaps the most important one was that he refused the role of rulership and maintained the value of equality. He was recognized in his time as “still the icon of national unity” (p. 93).

Charles de Gaulle—Ideologist

Energy-Flow	Transforming Leadership Instance de Gaulle (1890 – 1970)
Founding	he urged that France abandon the static defenses of the Maginot Line in favor of greater mobility and mechanization for the army of the future (p. 115)
Sustaining	The unity, cohesion and internal discipline of the French Government must be held sacred if national leadership is not to degenerate rapidly into incompetence and impotence. (p. 115)
Innovating	most notably in his leadership of the Free French resistance during World War II. Though himself a rebel in the military ranks, he brought strong ideas about authority and discipline to the civilian domain. (p. 115)
Responding	de Gaulle's inflexible and paternalistic governing system . . . could not bend, so it broke, in the face of social and economic change seeking new political expression. (p. 118)
Anchoring	de Gaulle's great claim to leadership, however, was about order and unity, not the economy . . . his fundamental promise of security and stability (p. 117)
Influencing	he proclaimed that he was “ready to assume the powers of the Republic” . . . A panicked National Assembly turned to the man . . . who appeared able to prevent civil war and to avoid national humiliation. . . . by a divided assembly vote, de Gaulle was summoned to the premiership with the mandate he had demanded: the authority to restore order and to draft a new constitution . . . and de Gaulle was elected the first president of the Fifth Republic (p. 116)
Strategizing	Prepared in private by a team of young attorneys under de Gaulle's close supervision, the constitution of the Fifth Republic was an authentic Gaullist concoction. Its keystone was the shift of power from parliament to the president, who was to be the nation's "arbiter" and "protector." He would be chosen for a seven-year term by the people, . . . eighty thousand electors who were mainly local officials. . . . And in the event of crisis, he was authorized to take “whatever measures are required by the circumstances.” The new charter was ratified overwhelmingly—by 80 percent of voters (p. 116)
Implementing	de Gaulle had his constitution, . . . As “guide of France,” he claimed the right to “exercise supreme power over the whole range” of the nation's affairs. He dismissed the last vestiges of parliamentary rule with his assertion that “the indivisible authority of the state is entrusted wholly to the president by the people who have elected him.” (pp. 116-7)

Charles de Gaulle's “vision of France's ‘exalted and exceptional destiny’—were not enough, especially when its government appeared in-different to or uncomprehending of the real wants and expectations of its people” as he gave “the impression of loving France far more than he loved the French” (p. 118).

Mikhail Gorbachev—Democracy Reviver

Energy-Flow	Transforming Leadership Instance Gorbachev (1931 –)
Founding	Gorbachev loosened party controls and the Russian people sprang to life like spring flowers (p. 133)
Sustaining	Early and notable were the Democratic Union, “the first outright opposition party,” and Memorial, established not only to expose crimes of the Stalin era but to ensure by pursuing “complete democratization” that they would not be repeated. (p. 133)
Innovating	<i>perestroika</i> — <i>economic</i> and political revitalization . . . over the long term by institutional structures permitting autonomous political and social action and a broad sphere for political discourse. (p. 133)
Responding	A harsher test of democratization would be official toleration of overtly political groups. Informal clubs were one thing, collective organizations that could easily become an opposition were something else. (p. 133)
Anchoring	Gorbachev needed active followers to carry out his plans for <i>perestroika</i> but his approach called “for a new kind of mass mobilization, stimulated, as before, by policies initiated from above,” (p. 133)
Influencing	Organizations ranged from nationalist and religious groups on the right, to a Peasant party in the center, to Social Democrats on the left—perhaps in all more than a hundred. Few drew more than two or three thousand members. Many were little more than debating societies, luxuriating in the newborn freedoms of thought and discussion, and paying scant attention to recruitment and participation. (p. 133)
Strategizing	his approach called “for a new kind of mass mobilization, stimulated, as before, by policies initiated from above” (p. 133).
Implementing	Still, parties, or proto-parties, blossomed. Early and notable were the Democratic Union, “the first outright opposition party,” and Memorial, established not only to expose crimes of the Stalin era but to ensure by pursuing “complete democratization” that they would not be repeated (p. 133).

“Liberated after decades of repression, the oppositionists found themselves required to fill a growing ideological and political vacuum.” (p. 135) “*Perestroika* has already awakened our people.” “They’ve changed. We have a different society now. We will never slip backward.” (p. 134). He said, “we will certainly keep moving ahead.” *Time* anointed him “Man of the Decade” (p. 134). Gorbachev “performed well” as a transforming leader (p. 134). Because he raised the morality level in people “A new political order emerged without the terrible violence that has accompanied other revolutionary transitions” (p. 134).

Eleanor Roosevelt— Human Rights Champion

Energy-Flow	Transforming Leadership Instance E. Roosevelt (1884 – 1962)
Founding	the American Declaration of Independence and Bill of Rights (p. 203) Woodrow Wilson's League of Nations to restrain the sweep of fascist aggression not only against states but against political, ethnic, and religious minorities under their domination. (p. 203)
Sustaining	the campaigns for the rights of women and racial and ethnic minorities that followed over the next two centuries. Still, these were national or local struggles, not global in scope. (p. 203)
Innovating	This declaration was the culmination of centuries-old aspirations for some kind of world agreement that would not only define and proclaim the universal rights of all human beings but also pursue and enforce such rights. (p. 203)
Responding	World War II, even as a new "cold war" divided the planet, political leaders fashioned an accord of astonishing boldness and vision, called the Universal Declaration of Human Rights (p. 203)
Anchoring	A successor to the League must squarely state not only what it stood against—aggression and war—but also what it stood <i>for</i> . (p. 203) Later the UN established a Commission on Human Rights, which set to work on a separate universal declaration of rights. (p. 203)
Influencing	She led the drafting committee through tense, emotional debates, defending the American position <i>yet</i> seeking to conciliate the Soviets—as well as expressing her own principled recognition of the interdependence of wants—when she declared that “no personal liberty would exist without economic security and independence.” (p. 204)
Strategizing	late in 1944, as the Allied armies smashed their way into the Nazi homeland, American delegates to a United Nations organizational conference overcame British and Soviet objections to including the need for human rights in the charter of the United Nations. (p. 203)
Implementing	Eleanor Roosevelt coaxed a potentially transforming agreement out of the bickering delegates: No wonder that the General Assembly of the United Nations gave her a standing ovation, followed by its unanimous vote for the draft in December 1948. (p. 204)

Eleanor Roosevelt’s campaign for human rights that managed “To distill an international consensus out of these and other conflicting priorities clearly demanded leadership that was politically practical yet dedicated to achieving a truly global and visionary declaration” (p. 204). “Almost miraculously,” such transforming leadership appeared in the “American representative to the Human Rights Commission” (p. 204). Eleanor declared, “no personal liberty would exist without economic security and independence. Men in need were not free men” (p. 204).

To recap, the above ten instances that Burns uses to illustrate his *Transforming Leadership* theory pass Burns' *acid test* for human rights, and help us comprehend the mysterious meaning of transforming leadership. In each leader's actions we observe obvious behavioral macroscopic yang energy-flow while behind each action there is decision based on the implicit motivational microscopic yin energy-flow not only of the collective, the people, but the well thought-out intentions of those leaders themselves. As in the Tao symbol, there is yin in yang and yang in yin; in every action, there is a motivation that triggers it and every motivation instigates further action. The laws of physics help us shift our paradigm and think of these ten instances as an illustration of what happens when interactive kinetic yang energy-flow transforms to potential yin energy-flows. Those energy-flow abstractions of concrete facts, interpreted by historians, shape our thoughts about leadership instances and reality.

Synchronizing Flow of Burns' Theory with the Essential Energy-Flow

Siu recommends leaders subsume and resonate with the Tao using "singularly essential art" as a way in everyday life (Siu, 1978, p. 84). The art of taking account of singularities (ambiguity of more than one solution) in each leadership event, leaders find a gateway amid seemingly chaotic situations and recalibrate their carefully calculated projections to success. The *essential energy-flow* can be a tool for the art.

Transforming Leadership: a Gateway to Understanding Leadership

Studying Burns' theory shifted my paradigm seeing things from an objectivistic position to that of subjectivity where I could sense the energy-flow presence. I believe this to be an experience of Whitehead's notion of how it feels to displace materialistic preconditions. Vaill offers insights, "Here are two more 'anomalies' that have emerged in recent years; (1) the fact that women often lead differently from men, which reveals that the prevailing leadership

paradigm is primarily a masculine model.” (2) “Leadership” in a group frequently emerges from different members, not just one person called “the leader.” This has created a situation where when one is talking about “leadership” in a group, one cannot point to any single person and say “that is the person I am talking about.” (3) Burns leader-follower paradox is actually a third case, because in the prevailing paradigm, there are no “paradoxes” (Vaill, 2008, leadership anomalies).

I began to understand what Csikszentmihalyi (1990) meant about programming the intention in our consciousness and attend to that intention to induce the psychic energy-flow, “*FLOW*.” This could be an experience of what Maslow (1954) intended when he spoke of self-actualization. Gerber’s (1996) work about the leader-self needing to maintain balance between psychological and physiological energy-flow connects to Siu’s (1978) notion on needing to subsume and resonate with the Tao balance.

Burns (2003) shows his readers both the gateway and the key to an entrance to a deeper meaning of leadership. At the gateway, he invites the readers to enter into a transforming leadership experience in which they might transform themselves. He says the study of transforming leadership leads to an “analysis of conflict—especially non-violent conflict—[which] may be the key to opening up crucial dimensions of leadership” (p. 187). He intends to arm leaders with the skills they need to exploit and maneuver through or around “society’s pervasive conflicts to create a stable and prosperous state” (p. 188), in a Tao state where yin-yang energy-flow complement each other.

Siu (1971) says, to “solve the difficulty” and understand complex objects, one can find the entry to the transcendent energy-flow path and discern it among the clutter of chaotic events. Siu explains, “The key [to finding the path] is what Whitehead calls ‘an instance of the ingression of sense-objects amid [chaotic] events’” where “the passage of this ingression of

sense-objects [leads] to the perceptual objects” (p. 29). Siu’s explanation supports Burns analysis of conflict as being the key to understanding the undergirding energy-flow dynamics amid perpetual conflicting ideas and events. We might extract from the chaos “the intrinsic character of each instance which would justify the belief. It must be known by relatedness” between events (Siu, 1957/1971, p. 29).

Multiple Solutions and Multiple Paradoxes

Burns (2003) provides profuse examples that show how conflict stimulates progress and that suppressing it can be lethal. Transforming leaders might surface the enormous undercurrents perturbing and escalating the conflict beneath the apparent smooth calmness, and channel that colossal energy-flow to raise people to a higher level of morality so that, collectively, they can transform themselves.

Burns (2003) “one other paradox: analysis of conflict” (p. 187) is the *X Factor* of leadership, (p. 215). Conflicts are solutions owned by some but rejected by others. Burns’ idea echoes Whitehead (1953), Prigogine (1984), and Siu’s (1978) notion of “singularity.” Burns uses many leadership instances to describe that moment when multiple potential solutions present themselves as conflicts, leaders become tasked to orchestrate, not eliminate, conflicts. Those are opportunities to induce energy-flow of yin-yang complementarity among the conflicts (progress) and encourage people to transform themselves.

“The Burns Paradox” of “followers as leaders” (Burns, 2003, p. 171) and “leaders as followers” (p. 175) is the same as the ageless Tao of yin-yang energy-flow applied to modern leadership practice. His theory says that the dynamics of mutually empowering interaction between leader and follower is so fluid, and transforming. The persons initially labeled “leaders” or “followers” come to succeed each other—merge with each other—so that they can faultlessly

substitute for each other. Burns insights are consistent with the expression of a Taoist ambience. Burns says, leaders “are called upon to be responsive also as followers” because “Passive followers” would “make leadership difficult—impossible” (p. 172); leaders are “to learn from and be led by followers” and “leading by being led” (p. 143). Maslow echoes the Taoist yin, leaders arise when they are “trying not to try” (Maslow, 1954/1987 p. 66) to lead, and empower others to lead.

Siu offers a “subsuming-and-resonating principle” to be a “Singularly Essential Art” which is the science of Tao-time (Siu, 1978, p. 83). Vaill captures that notion as “wu-wei,” which implies concretely in relation to what he understands management and leadership to be taking non-action in a time “of patience, of being accepting of emergent events” (Vaill, 1989, p. 188). Only then is the collective whole positioned to transform toward high performing goals under conditions that leaders facing conflict describe as being in a permanent white water (Vaill, 1989). “Wu-wei [non-action] is about balancing yin-yang energy-flow in accord with the Tao; that is, leader cultivates and “harmonizes one's self with the Tao” (Siu, 1980b p. 52).

Transforming Leadership Practice and Puzzles

During my attempt to synchronize the flow in Burns (2003), at an aggregate level, with the *essential energy-flow*, another epiphany occurred that cleared up two confounding puzzles. One puzzle was that I could not find, in his text, any indication or attempt to satisfy the two energies—Strategizing and Implementing. That puzzle made me wonder why he did not complete my *essential energy-flow* cycle, as he seems to have shown evidence with all the exemplar transforming leadership instances in his text.

Another remaining puzzle was why Burns differentiates transforming leadership from transformational leadership. He says the former is to attend to the means in raising the people's

morality level while the latter is to achieve end values. On the surface, the differentiation seems very clear as he defines them with many meaning-loaded words. However, underlying that clarity is the reality of causation in leadership intention, value, purpose, fluidity, agility, and many, many other attributes. It is impossible to tackle them all in one scoop; besides those are variables—like the Taoist notion—if we pinpoint that something “is” then we would find that something “is not.” There is one hint that appears repeatedly throughout the book (Burns, 2003), a salient point that transforming leadership is about enacting people’s ability, so that “people transform themselves.” Other word hints are “collectivity” and “creativity.”

My ultimate epiphany, that I have saved until now, came when I connected the three hints.

In order for Burns’ *Transforming theory* of leadership to be effective, he expects the readers to transform themselves first, then challenges them to use their self-transforming experience to help others transform themselves.

Eventually, the collective would transform itself. If Burns were to complete his transforming leadership cycle, then what has he left for the readers to do? Would that not defeat the purpose of his transforming leadership theory to finesse the collectivity of people and creativity of readers? In terms of my conceptual scheme, Burns' treatment is incomplete because he does not deal with the two functions I have called 'Strategizing,' and 'Implementing.' I believe that the reason for this lack of completion is that he wants readers themselves to do what I call the *Strategizing* and *Implementing*. That is, it is for readers to take specific steps grounded in a strategic view to bring about greater happiness within their own worlds. Yet, to be sure that the readers get the moral of his intention, in the *EPILOGUE*, he chides readers with the image of global poverty. Vaill points out, “Burns notion of global poverty means that billions of people are stuck at the bottom of Maslow’s Need Hierarchy” (Vaill, 2008, global poverty).

Vaill comments, it can also be argued that *Strategizing* and *Implementing* are very situational, very attuned to a particular system and cast of characters. Therefore, there is little Burns can say at the general level. “I would also say that ‘Implementing’ is the great blind spot of much academic management theory” (Vaill, 2008, academic). “First, the organizational unit . . . exists to *accomplish* something. Second, the leader-manager of the unit is perceived to be . . . accountable for the formulation and accomplishment of these objectives” (Vaill, 1998a, pp. 98-9)

It is to test their transforming leadership skills in a new pursuit of happiness, satisfaction of an ultimate human longing. If readers embark on their own pursuits, they complete Burns’ *Transforming Leadership* cycle. As transforming leaders themselves, they begin and complete their own transforming cycle; as a result, they also make Burns their transforming leader.

Collectivity, Creativity, and the Essential Energy-Flow in Transforming Leadership

Table 5-3 is an attempt to capture my syntheses of what Burns’ *Transforming Leadership* theory is—from an energy-flow perspective. Once again, it must be remembered that these eight phases are not a lock-step linear process, but are rather recursive, iterative, and cyclic, and can operate at many levels of aggregation. Burns seems to grant that “motivation” is a foundational idea in leadership, “the potential link between Maslow’s drive for self-actualization and the motivation for leadership” (Burns, 2003 p. 142). What the psychologist calls motivation is yin-potential energy while action and behavior are yang-kinetic energy. Burns’ accounts of how exemplar leaders work with and through others demonstrate back-and-forthness of collective energy-flow empowerment and “springs of creativity” (p. 158).

In *Table 5-3*, I attempt to demonstrate that the *essential energy-flow* conceptual scheme is congruent with the practice of Burns’ *Transforming Leadership*, his theory and his leadership examples.

Table 5-3: Summarizing Burns' Transforming Leadership Theory in Essential Energy-Flow

Essential Energy-Flow	Transforming Leadership Practice
Founding—to establish a solid foundation for work toward transforming vision	Cause a “metamorphosis in form or structure,” in which “a radical change in outward form or inner character” (p. 24) There is a revolution, comprehensive and pervasive change, in the system where the structure of power is altered and is permanent
Sustaining—to maintain solidity of that foundation in completing the transformational cycle	Transforming leaders bring about stronger sense of “meaningfulness” in people’s work and lives (p. 26) Vigorous interaction between transforming leaders and their followers is itself a powerful causal force for change. . . . <i>empowerment</i> ; transforming leaders champion and inspire followers. (pp. 25-26)
Innovating—to stimulate a new idea for successful transformation	By pursuing transformational change, people can transform themselves. (p. 26) A strong (inspiring) moral goal that secure and extend great public values and timely opportunity—becoming significant and lasting
Responding—to get feedback from multiple directions to refine that new transforming idea	They inspire and empower. When followers' rising sense of efficacy creates conflict with the leaders, together they make “transforming leadership participatory and democratic” (p. 26) embrace conflict as a source of understanding the continuous want and needs of followers; act on shared ideas rather than shared interests; discussions involve considered responses—not reactions
Anchoring—to secure that new idea to transforming values that people collectively care most	Embrace the supreme and enduring principles . . . Transforming values lie at the heart of transforming leadership, determining whether leadership indeed can be transforming. (p. 29) Turn conflicts into actions that serve a vital and progressive purpose
Influencing—to convince and motivate people to participate in the transforming work	Creative leader-follower interaction, in which the leader offers initiatives that followers pick up, amplify, reshape, and direct back onto the leader . . . “Pure” charismatic leadership. . . distorts mutually empowering leader-follower relationships (p. 27)
Strategizing—to set strategic directions and plan for transforming work	Construct a future sequence of significant actions built on clear goals, every step draws people into a collective effort—a widening arc of external support and obstruction—accounting for the interplay of forces (motivations--human ambition and rivalry; power resources) and try not to leave things to chance
Implementing—to develop tactical plan and carry out and completing the transforming work	Absolute focus on the goal employing relevant means; close coordination with continuous and unambiguous communication; be decisive and flexible; seize opportunities; employ collective leadership—collaborative and democratic—to overcome obstacles and adjust to changing means and end

Creative leadership contains elements of both yin-potential and yang-kinetic energies.

Notice that "nonviolence," as espoused by at least Gandhi, Mandela, and M.L. King, Jr., a

brilliant synthesis of integrating yin and yang. The determination to press the case is yang and the determination and the great power of not to using violence is yin. In its assertiveness and persistence in the face of strong opposition and threats of death violence is very yang. Nevertheless, in refusing to engage in physical violence, and in forgiving the attackers and haters, it is a demonstration of the power of yin.

The ten exemplar-transforming leaders all had a vision, a dream of the desired future. Being armed with Burns' *Transforming Leadership* theory enables potential transforming leaders to imagine a transforming vision and identify the gap between that vision and current reality, inducing an internal energy-flow of creativity in connecting the gap. "Maslow placed creativity at the core of psychic and spiritual health crucial to the fulfillment of human potential" (Burns, 2003 p. 159). Burns says that vision satisfies the want or need for actualization of the collective. Having had the experience of being transformed themselves, the leaders are able to help others transform themselves; they join and embark on the transforming effort. Perhaps using the *essential energy-flow* conceptual scheme as a guide might help those leaders to think through the cyclic transforming phases. Leaders would contemplate a viable path and identify resources, skills, and people to prepare for transformation and enable the collective to realize their dream future.

Chapter VI: Implications and Future Energy-Flow Exploration

This chapter reflects on my transforming experience in employing the energy-flow conceptual scheme to explore Burns' *Transforming Leadership* theory. The exploration has taken me to a transcendent level of thinking and greatly influenced my understanding of what leadership is. The experience is a process of unfolding and enfolding new meanings of leadership through which it delivers more clarity and conveys new implications.

Implications of Perceiving Burns' Transforming Leadership as Energy-Flow

Several implications occurred to me as results of studying Burns' *Transforming Leadership* from an energy-flow frame of reference. Burns concludes his book with a passage of ancient Tao wisdom that alludes to his *Transforming Leadership* ideal, a "Primal Virtue" (Burns, 2003, p. 240), the highest level of morality attainable by leaders. The use of that passage brings to light a significant meaning—Burns' theory enfolds the art of balancing yin-yang energy-flow in accord with essence of the Tao. Burns' ideal also emphasizes the collectivity of the people, leaders and followers; both embracing transforming values, reciprocally empowering one another, and enabling a collective energy-flow. With this collective ability, people transform themselves in a pursuit of happiness— "transforming change flows not from the work of the 'great man' who single-handedly makes history, but from the collective achievement of a 'great people'" (p. 240).

During my exploration on Burns' *Transforming Leadership* theory, I grappled with the implications his theory has on the field of leadership and this prompted many thoughts about my leadership as energy-flow concept. There are several most notable ones.

Burns (1979) identifies two basic types of leadership: transforming and transactional. They align with Whitehead (1953) and Maslow's (1954) notion that there are two bases of social

life, material and spiritual. His distinctions between the two types support Maslow's need hierarchy, which ranges from lower basic material needs to the higher needs of spiritual self-actualization. Thus, the two types differ in leadership intention, values, and purpose.

Transforming leadership is more complex and we can easily identify its attributes with energy-flow and transformation; but transforming is not necessarily required during simple transactional leadership exchanges. Though there may be energy-flow during transactional leadership, the energy is usually entropic, fades away and converts into energy for other purposes. Energy-flow in transforming leadership retains in the collective consciousness of the people who have transformed themselves exhibiting synergy and a united spirituality around their transforming values.

Burns' (2003) inspiration carefully differentiates between transforming leadership and transformational leadership. Transforming leadership focuses on the means, "people transform themselves" enabling creativity and collectivity to achieve higher level of morality while transformational leadership aims at attaining the end values. Vaill (2008) comments "transforming" retains in its verb form denoting actions and processes while "transformational," an adjective of the noun form "transformation," signifying goals and achievements. The implication is that the former, more of a yin energy-flow, puts emphasis on developing people (both leaders and followers); while the latter, more of a yang energy-flow, targets achieving the goals. When we consider the two leadership types as yin and yang energy-flow, it is easier to grasp their polar-oneness as they contain and embrace each other complementarily in leadership practice. Burns (2003) indicates a very interesting attribute of transforming leadership—that only history can be a witness to its success, collectivity, and lastingness—its efficaciousness remains for generations and centuries.

An insight Burns' *Transforming Leadership* theory reveals is the one very crucial distinction, which is, a transforming leader's followership. That is, transforming leaders lead by following, by satisfying collective wants and needs of the people. That comes from empowering the people who in turn empower their leaders to lead them. The reciprocal empowerment of leadership-followership is explainable when viewed as a relationship of yin-yang energy-flow complementarity as seen in the Tao of leadership.

Burns' (2003) paradox—followers lead while leaders follow—is an amazing leadership effect that only occurs when they empower each other to form one collective leadership. Within that collectivity, there is the yin-yang energy-flow. An abstraction illustrated by the Tao wisdom, it inspires us to meditate on reciprocations in life and revelations of mysteries; as nothing stands still, everything has its yin-side and yang-side, and transitioning in-betweens. The complementarity of yin-yang energy-flow enables us to perceive the attributes of leadership from the new perspectives of temporality, fluidity, and uncertainty. This is an emancipation, which brings new implications to the meaning of leadership.

Burns' leader-follower paradox disappears (Burns, 2003, p. 195). We shift our paradigm to perceive leading and following as complementary vibrating energy-flows of interwoven threads of progress in the social fabric. Burns invites us to break free from being “slaves of history” (p. 12) to challenge the conviction of our commonsense meaning of leadership as rulership, authority, or certainty. As history has witnessed to the adage that certainty is only an illusion, leadership is uncertainty. In fact, following and leading are intricately intermingled, as yin-yang energy-flow, naturally in the individual's, organization's, and perhaps, universal consciousness.

The leader-follower relation can become unstable; the dynamic of mutual empowerment may even bring the “creative destruction” of old leaders. Yet

leadership itself must persist in its transformational [sic] task—its central causal purpose—of turning all such continuities and contingencies to the aim of achieving real change. Leadership is the X factor. (Burns, 2003, p. 222)

Finally, Transforming leadership welcomes opposition and conflict as they induce complementarity of energy-flow, and are the necessary ingredients that stimulate progress and harmony in society. Burns' theory about collective purpose may become a common root for modern leadership theories and practices. The theory invokes energy-flow in people, to engage collectively in a pursuit of happiness, whether it is to satisfy basic physiological material wants or pursue psychological spiritual attainment and actualization.

The new pursuit of happiness takes many forms, bringing on confusion, uncertainties, and setbacks, but one factor is consistent: “[emphasis in the original] *the needs are defined and their satisfaction [is] sought on the needing person's terms*” (Burns, 2003, p. 240). The dynamics are reinforcing; a sense of empowerment fuels the pursuit of happiness, activates the desire for self-fulfillment, and enables people to transform themselves.

Reciprocating the Works of Six Thinkers and Burns (2003) in Essential Energy-Flow

With the support of the works of the six thinkers/theorists (Alfred North Whitehead, Ilya Prigogine, Abraham H. Maslow, Mihaly Csikszentmihalyi, Richard Gerber, and Ralph H.G. Siu) and James MacGregor Burns, now I am reciprocating, moving back and forth between my energy-flow and their works. I endeavor to enfold their works into a collective conscious whole and unfold their connected meanings using the essential energy-flow of my conceptual scheme.

During my attempt to find energy-flow in Burn' (2003) text, I became aware that the works of the six thinkers had been unified into one wisdom of collective consciousness. So much so, that I could not think of them separately, but as a web of energy-flow. Each of the small pieces I selected from their polymathic works, now including Burns (2003), created a mosaic that

radiates their collective enlightenment. The mosaic seems to reveal that the leadership as energy-flow concept is worthy of further pursuit.

To recap my exploration experience, I found synchronicity¹⁶ between energy-flow in their works and my energy-flow. The non-static vibrating streams of fluxes required my constant adjustment to maintain synchronicity. I had to challenge constantly my old retained Newtonian materialistic thinking paradigm in which my egotistic-self often showed up disguised in a subjectivity cloak. I had to readjust and engage myself in Taoist thinking, and an Einsteinian energy-flow paradigm, to appreciate paradoxes and chaos as energy-flow in natural phenomena. I became more aware of where I was in a materialistic-spiritual perspective continuum scale. The range on the scale was from pure physical materialistic senses (seeing, hearing, tasting, smelling touching, and feeling) at one end to stoic energy-flow perception in thought at the other end. I realized it would be a lifetime pursuit to move from the materialistic end to the spirituality end.

As all human affairs are events and concrete facts captured by our sense perceptions as energy-flow abstractions in thought, they differ paradigmatically. The abstractions of the same event perceived by different people differ because we all sense the event differently. Vaill clarifies “sometimes perceptions vary, but sometimes they are similar. What one cannot assume is that perceptions will be totally the same. That is where so many leaders go wrong” (Vaill, 2008, perception). Leadership is by its very nature eclectic and there is more variety in leadership at the practical level than any single disciplinary theory can comprehend. To discern what happened in a leadership event to bring order out of chaos requires tools.

The *essential energy-flow* in my conceptual scheme described in Chapter II may be one

¹⁶ Synchronicity—coincidence of events that seem related but are not obviously caused one by the other. Vaill defines it as “Two or more elements that are superficially unrelated yet which occur in the same period and exhibit the same or very similar characteristics and dynamics” (Vaill, 2008).

of such tools to use for that diagnostic, comprehending purpose. Siu (1971) provides an explanation of that excitement in his reference to Whitehead's suggestion that we find the key to analyzing an instance by finding the entrance to a path amid chaotic events. This path is a sense perception that leads to the energy-flow in a leadership instance that allows us to understand occurrences prior to the event and possible future outcomes. In Burns (2003), the entrance to the path leading to each historical leadership instance is, the "*thinking*" that "initiated broad changes in that era, beginning with . . . people imagining and envisioning things that did not yet exist"(p. 18). He says, "it meant a radically new way of thinking about causation in history" (p. 18) that "make sense of 'why' questions" (p. 20).

My attempt to use the *essential energy-flow* conceptual scheme as a tool for making sense of "why" questions and finding meanings amid chaos led me back to the mosaic of the combined wisdoms of the six theorists plus Burns. Though the works of these theorists relate to human affairs, they so not always directly link to leadership. The following explains the reasoning and dynamics of my interpretation of corroborative links to Burns' *Transforming Leadership* theory undergirded by the essential energy-flow.

Founding Energy—The Founding principle in Burns' multidisciplinary leadership concept strikes a chord with Prigogine's notion of the unification of science and philosophy. Prigogine (1984) supports Burns (2003) when he advocates a return to studying the science of nature as a whole—in its entirety. That is to discover in the midst of the extraordinary diversity of the sciences some unifying thread, which can bind the pieces back together again. The Founding principle draws from multiple disciplines, those in the sciences and philosophy that Prigogine and Whitehead advocate using.

Sustaining Energy—The Sustaining leader-follower interactions is an abstraction of

energy-flow in Burns' *Transforming Leadership* theory. Agreeing with Whitehead (1953), the notion of a non-obvious realm of reality in which events are ebbs and fluxes of vibrating energy-flow offers a transformation in social life. Whitehead explains that energy-flow abstractions are fundamental and subordinate materialism to unite with the spiritual base in social life. He postulates that we use multiple space-time relativity frames of reference to understand human events, such as leadership, as energy-flow.

Innovating Energy—Burns (2003) says creative leadership arises from the thought that transforming leadership motivates the people to transform themselves. Csikszentmihalyi (2004) says, encompassed in the web of leadership meanings, there is psychic energy-flow and transformation. It is essential that leaders have clear unselfconscious self-assurance in their intention to lead others and focus attention on the world rather than selves—to form cultural norms. Maslow's (1954) self-actualizing person is extremely creative. One could almost hypothesize the most interesting Innovating energy in any system will come from those who are the most self-actualizing. Thus, transforming leadership is about the collective, leaders and followers, embarking on a creative effort that they transform themselves and, in the process, discover a higher purpose.

Responding Energy—Burns' (2003) leading-following paradox is about responding energy-flow of feedback and mutual empowerment. Siu (1980) conveys several notions of what these may look like: the whole is ever in continuous flux; specific facts and figures are not constant; and no single constituent is without impact upon the others and vice versa. Thus, nothing is constant, yet nothing secedes from the whole; and one's actions of the instant are but notes emitted from one's ineffable harmony with the totality of nature in the Tao. In the tension of the paradox, there is a flux of energy-flow, which causes leaders to follow and followers, lead.

Anchoring Energy —anchoring transforming values to the collective impulse of human motivations and potentials is the task of transforming leadership. Maslow (1954) describes those kinds of impulses; like energy-flow in nature, they require no artificial organization or unified will, but induce people to obtain satisfaction of instinctual needs. In the collective consciousness, contradictory impulses exist side by side without neutralizing each other or drawing apart, they maintain their complementary uniqueness. Gerber (1988) resonates with Maslow's notion from the perspective of interpenetrating physiological and psychological interactive energy fields. Humans are multidimensional beings of energy beyond our so-called subtle energetic anatomy bio-machinery, creating rippling, producing subtle-energy effects in the planetary field.

Influencing Energy—Influencing is a reciprocal, two-way, empowerment of leaders and followers. Mutual empowerment creates an enormous surge of transforming energy. Everything in the world has its yin-yang effect. Burns' (2003) and Siu's (1978) notions of power and power-over declare they only have an effect when the responder latches on to the attraction of that power. The power wielder loses control when the responder does not seek the sanction from the power wielder. Charismatic leadership is a mono-directional caressing wind, suave and inviting to the credulous; without seeking feedback, the buildup of mono-directional re-enforcing energy-flow could turn into a destructive tornado of undemocratic tyranny. Prigogine (1997) substantiates Burns' belief that creative leader-follower empowerment is a complementarity. Restating Burns' thoughts using Prigogine's words, the laws of nature explains the perturbation in a non-equilibrium dynamics of a dissipative structure. That is, when the perturbation reaches a bifurcation point, a singularity that could produce either democracy or tyranny—it depends on the people's response and readiness for deep transforming change. Nature indeed creates unpredictable novelty, where the possible manifestations of leader-follower are richer than the

observable reality.

Strategizing Energy—strategizing transforming leadership emphasizes that people need meaningfulness in their lives and hold a sense of collectivity in an ever-changing world. Siu (1978) agrees with Burns (2003) in that “everything is continually changing—not only the events themselves, but also the very rules governing those events” (Siu, 1978, p. 84). “This kind of arena is alien to the scientific tradition of fixed boundary conditions, clearly defined variables, nonsubjective [sic] assessments, and rational consistency within a closed system. In actualities, everything is in flux, and all systems are open” (p. 84). Siu (1971) says nothing remains static. The yin and the yang forces induce energy-flow that gives rise to the vital forces in nature such as, when “the sun reaches the meridian, it declines,” and when “the moon becomes full, it wanes” (p. 2). As Lao-tze says, “Reversal is the nature of the Tao,” the “art of good living lies in the ordering of one's life in harmony with the cosmological movements of the yin and the yang” (p. 2). Siu advises leaders to have a strategy that includes “an intuitive appreciation of universal movements during their instants of change” (p. 8). The art of transforming leadership in human affairs “comes naturally” when resonating with the Tao (p. 8). Burns’ leadership interpretation is that transforming leaders “comprehend the game's evolving structure, anticipating possibilities, searching out the key variables in the entire multitude of forces” (Burns, 2003, p. 34). Transforming leaders also “recognize the limitations of their appraisal—the X factors” (p. 34).

Implementing Energy—in transforming leadership, Implementing Energy is the last energy-flow state in which a profound change becomes irreversible. Describing Implementing energy-flow for the collective is the same as describing the last energy-perturbation state of Prigogine’s dissipative structure, the perturbation has reached its peak tolerant level, both the collective and the individuals are in a bifurcation. When people have transformed themselves,

they induce a synchronized energy-flow and collectively leap into a higher moral level of existence. At this state, the collective is ready for a new beginning.

The above sequential description of energy-flow follows the Loop of Virtuous Leadership (green color line) as illustrated in *Figure 2-3* in Chapter II, from Founding energy through other energies to Implementing energy then returns to Founding energy. Much like the nature's yearly cycle, it completes a full cycle of the suggested *essential energy-flow*.

The works of the six theorists have intermingled with Burns' (2003) *Transforming Leadership* theory to corroborate my energy-flow theory. In such a way, I found new meanings in leadership, that is, when people have collectively transformed themselves, they would have created a new foundation for a new pursuit of happiness—that defines leadership.

Concurrence of Heifetz's Adaptive Challenge Process Flow with Essential Energy-Flow

Ronald A. Heifetz, author of the book *Leadership without Easy Answers*, “strikes out in ground-breaking directions” says Burns, “in a field in which there has been a great deal of repetitious work” (Heifetz, 1994, comments). Heifetz's views leadership is “organized around two key distinctions between technical and adaptive problems, and between leadership and authority” (p. 8). He emphasizes leadership is about anyone who needs to take the lead in almost any situation, with or without authority. His approach to leadership is somewhat unconventional, but seems cohesive with energy-flow theory. The technical challenges are Newtonian and well defined while the adaptive challenges are Einsteinian, quantum, elusive, and non-localizable.

Technical challenge can be resolved in more prescribed way while adaptive challenge takes some innovative thinking to attain the desired outcome. Heifetz (1994) provides two real-life leadership examples of adaptive challenge, In both examples Heifetz recommends a process flow for handling adaptive leadership challenges that he used in those real life instances:

“Barbara Parsons and William Ruckelshaus” (p. 99).

I discovered that the suggested order of the *essential energy-flow* is not solely my own; the sequence is repeated in Heifetz’ process flow, a leadership “framework for assessing” and “mobilizing adaptive work” (Heifetz, 1994, pp. 101-24). He emphasizes, prior to conducting a transformation, the assumed leaders should have a vision, identifying “the adaptive challenge—the gap between aspiration and reality” (p. 99). Thus, that means a leader is to find the entrance to a path that would lead people, stakeholders, to the understanding of the instance and its adaptive challenges. The reality is where they are in the instance and the aspiration is where want to be. Heifetz recommends a process flow for handling adaptive challenges, shown in *Table 6-1*.

Table 6-1: Heifetz’s Process Flow for Handling Adaptive Challenges

Heifetz’s Transformation Process Flow for handling Adaptive Leadership Challenge (Heifetz, 1994)		<i>Essential Leadership Energy-flow</i>	Energy-flow Explained
Authority as a resource for leadership . . . [creating] a holding environment	(p. 103)	<i>Founding:</i> a foundation	Establish a holding environment
Managing the holding environment . . . [to] facilitate adaptive work	(p. 104)	<i>Sustaining:</i> a foundation	Maintain the holding environment
Directing attention . . . is the currency of leadership . . . [on ideas to resolve] tough issues	(p. 113)	<i>Innovating:</i> acquire some creative idea	Come up with a creative idea to resolve tough issues
Reality testing . . . investigate problems more objectively	(p. 114)	<i>Responding:</i> all directions	Test reality and get feedback
Managing information and framing issues . . . [the most concerned are] issues already fastened in people’s minds	(p. 115)	<i>Anchoring:</i> fasten to core values	Tie to what people concern most and value most
Orchestrating conflicting perspectives . . . stir up . . . drawing competing perspective . . . be resolved . . . strengthen . . . adaptive capacity	(p. 117)	<i>Influencing:</i> get all people involved	Surface conflicts, draw competing perspective, induce resolution
Choosing the decisionmaking Process	(p. 121)	<i>Strategizing:</i> set direction	Choose strategic decision process
Mobilize people locally to tackle a tough adaptive problem	(p. 123)	<i>Implementing:</i> get tasks done	Show people how to Tackle tough issues

Interestingly, Heifetz's specific functions in his leadership framework (listed in left-hand column 1 of *Table 6-1*), correspond to the order of the general labels in the suggested *essential energy-flow* (center column), but with different wordings. Both lists present similar interpretations (shown in right-hand column). The second column from the left shows the page numbers from Heifetz's work where he discusses the process step—note that the page number sequence is incremental.

The temporal order in which Heifetz (1994) presented the leadership functions seems to be significant to a successful outcome when dealing with adaptive challenges. There is an implication—if one were to perform functions not according to the suggested sequence—unintended consequences would probably occur. An example is, when one jumps in and tackles tough issues without a holding environment to orchestrate all issues involved, one would not achieve hoped-for cooperation and might bring undesirable results. Heifetz's leadership stories illustrate that the process order may be essential to planning at the start or rectifying in middle. This commonality of the temporal order of Heifetz's process flow and the *essential energy-flow* vindicates continuing explorations.

Comparing Burns' (1979) two basic types of leadership to Heifetz (1994) differentiation of two types of leadership challenges I found that Heifetz's adaptive challenge requires transforming leadership while technical challenge takes transactional leadership.

Essential Energy-Flow-ers in Organizational Polarity

Vaill (2008) proposed a situation to challenge thinking in a discussion with an executive training group, who were going to apply TQM in an automobile company and in a university, two huge bureaucracies. In the discussion, they were talking as though one can just initiate change like a knife through butter: smooth, one-way, efficiently; Vaill says, "I was appalled by

the naiveté of these otherwise-experienced executives” (Vaill, 2008, TQM). Large-scale change requires leaders to consider behind each positive attempt, there are possible negative unintended consequences or reactions tending to negate the effects of the change. Thus, it requires constant planning, assessing, and adjusting, to keep balance during each phase.

In *Table 6-2*, the left-hand column displays polarities typically found in leading organizational change; though they seem to appear as discrete events, they are connected. The middle column shows the elements in essential energy-flow, and the right-hand column explains how each energy could induce its polar opposite energy to either complement or work against it.

Table 6-2: Leading Organizational Change with Essential Energy-flow

Alternative starting points for an organizational change process, existing as somewhat polar opposites	<i>Essential Leadership Energy-flow</i>	Possible Polarity-pair In Energy-Flow Field
vision-drawn and problem-pushed	<i>Founding:</i> a foundation	Founding \leftrightarrow Sustaining
at a "macro" level dealing with overall organizational structure and culture; or it may focus at a "micro" level dealing with individual personalities	<i>Sustaining:</i> a foundation	Sustaining \leftrightarrow Founding
innovations generate needs to assess [values]; assessments generate needs to innovate.	<i>Innovating:</i> acquire some creative idea	Innovating \leftrightarrow Anchoring
Change occurs (or doesn't occur) both for logical and for non-logical reasons [depending on if populace is convinced]	<i>Responding:</i> all directions	Responding \leftrightarrow Influencing
theory and principles and best practices from outside and also a great deal of internal, bootstrap innovation,	<i>Anchoring:</i> fasten to core values	Anchoring \leftrightarrow Innovating
better information and better communication	<i>Influencing:</i> get all people involved	Influencing \leftrightarrow Responding
strong support from the top and vigorous "bottom-up" participation and often leadership	<i>Strategizing:</i> set direction	Strategizing \leftrightarrow Implementing
formal and technical organization regarding work design and organization structure, into the informal social organization and culture	<i>Implementing:</i> get tasks done	Implementing \leftrightarrow Strategizing

Vaill comments that the basic idea about organizational changes is almost Newtonian—"Every action in an organization may generate an equal and opposite reaction" (Vaill, 1999). In view of energy-flow notions about -transforming leadership, this Newtonian equilibrium assumption may be in question.

Essential Energy-Flow in this Theoretical Dissertation Process

My personal transforming experience is thus far my highest virtue attainment, although I hope to reach higher. Initially, I had intended this dissertation process to follow the flow as shown in *Figure 1* of Chapter I, but so many epiphanies occurred during my exploration, facing with challenges, twists, and turns in finding the meaning of Burns' Transforming Leadership, I found myself transformed in the process. As emphasized in Burns' *Transforming Leadership* theory, only time can witness transforming effort, I can only summarize what I have experienced so far and let time determine if my experience is actually transforming. *Table 6-3* shows my dissertation process in the *essential energy-flow* conceptual scheme.

Chapter 1 is not included in *Table 6-3*; it is an introduction to set context and vision for learning and an entry point into the energy-flow in this dissertation. *Table 6-3* illustrates what this dissertation process has affected my personal learning and articulate my transforming experience. The left most column of the process flow shows the transforming energy-flow and the related chapters, next column shows the specific leadership energy-flow state. The rightmost column explains how each energy-flow state relating to my transforming process.

This transformation experience may not be as valuable for others as it is for me, as it has influenced and awakened my inner self about meaning and purpose of life of "who I am" and what I could contribute to the collective universal consciousness. I cannot pinpoint exactly what made me shift my paradigms. It is a very personal process. I hope my experience will stimulate

others to apply the concepts to their own experience.

Table 6-3: Energy-Flow of this Theoretical Dissertation Process

The Transforming Process Flow for this Dissertation		<i>Essential Leadership Energy-flow</i>	Energy-flow Explained
Classical and Modern Physics, and Chinese philosophy/cosmological science	(Ch. II)	<i>Founding:</i> a foundation	Establish a new theory based on the existing theories
Laws of energy in physics and Yin-yang energy flow in the Tao	(Ch. II)	<i>Sustaining:</i> a foundation	Maintain the base using laws of energy
<i>Leadership as Energy-Flow</i> model, the theory and conceptual scheme	(Ch. II)	<i>Innovating:</i> new perspective	Tools for exploring leadership as energy-flow
Corroboration of works of Whitehead, Prigogine, Maslow, Csikszentmihalyi, Gerber, and Siu; and Degree Committee	(Ch. III)	<i>Responding:</i> feedback from six traditions	Get enlightenment from the exemplar theorists/thinker
Burns' <i>Transforming Leadership</i> values, empower people, leaders and followers, to transform themselves collectively	(Ch. IV)	<i>Anchoring:</i> transforming values	Relate to people's collective values and purpose
Use <i>essential energy-flow</i> conceptual scheme to understand Burns' exemplar Transforming leadership instances	(Ch. V)	<i>Influencing:</i> induce energy reciprocally	Transforming effort begins with leader/reader self, then others
Synchronize my own energy-flow with the author's energy-flow in a dialogue	(Ch. IV, VI)	<i>Strategizing:</i> dialogue flow	Intuit a strategic process about transforming-self
Look for authors' intention, purpose, and undergirding dynamics in their leadership theories	(Ch. IV, VI)	<i>Implementing:</i> Dialogue with the book	Read and look for shifts of energy-flow in the text; synchronize, write

Peter Vaill, my mentor, inspired me with many light-hearted hints of awareness that I follow my bliss. I found if we loosen our commonsense guards and use our sense perception, we could synchronize our inner energy-flow with the energy in the presence and enact our internal wisdom.

Recommendation for Future Explorations

Burns (1979) and Russell (1938) ignited the first sparks that led me to embark on this exploration to perceive leadership phenomena as energy-flow. Russell provided the idea of describing human affairs in social life as vibrating ebb and flow of energy explainable by

physics—my energy-flow concept. Burns (2003) shed new light on transforming leadership. It emphasizes, “While leadership is necessary at every stage, beginning with the first spark that awakens people's hopes, its vital role is to create and expand the opportunities that empower people to pursue happiness for themselves” (p. 240). Having hope invokes tremendous empowering energy-flow in transforming leadership.

This exploration only establishes a beginning. I present energy-flow abstractions as a theory of how to represent concrete leadership phenomena. Other leadership theorists and practitioners may similarly describe leadership using laws of nature in physics such as power, force, and energy abstractions to portray human interactions in society. Much more needs to be done to advance this energy-flow theory to practice. I have looked at the possibility of investigating a number of additional works that seem to include aspects of energy-flow. The following briefly discusses these possibilities for future explorations:

Essential Energy-Flow and the Noble Eight-Fold Path

As reviewed in Chapter III, Siu's use of “dukkha” for quantitative measure of suffering (Siu, 1993a, p23), which connects to *The First Noble Truth of Buddhism* about the timeless pervasiveness of “dukkha.” Perhaps, there is a link from Siu's *Panetics*, “self rectification,” “less suffering for everybody” (Siu, 1993a, p. 73), and “cheerfulness” (Siu, 1999a) to Burns' *Transforming Leadership: a pursuit of happiness* that implies moving the people from a state of suffering to a state of cheerfulness by getting the people to transform themselves.

In terms of personal and collective transformations, maybe there is a relationship between the “Buddha in mystic illumination: the cycle of birth and rebirth” (Sutta, 1996) to the *I-Ching*, Chinese Cosmology, and Taoist teaching. There may be correlations between the eight primal trigram energies in *I-Ching/Chinese Cosmology* (reviewed in Chapter II) and “The way to

cessation of suffering offered by the *Noble Eight-Fold Path* of Buddhism.” The “*Noble Eight-Fold Path*” has the same number of parts: “right belief (view), right thought (aspiration), right speech, right action, right livelihood, right effort, right mindfulness and right meditation (concentration)” (Sutta, 1996). The “paths are not so much a set of steps as a naturally flowing progression of states of mind, the transcendent path leading to harmonious balance with transcending of ordinary understanding and the acquisition of direct knowledge of unconditioned truth” (Sutta, 1996). It may be interesting to explore from leadership development perspective.

Perhaps future explorations can expand on Siu’s *Panetics* equation and he postulates, “QIMASS. The metabolism of ch’i and “mass-energy within an integrated wholeness gives rise to and sustains a living organism” (Siu, 1999c, p. 31) to find some quantitative measure for leadership and transformation.

James MacGregor Burns on Leadership (1979)—Power and Empowerment

After studied Burns (2003), I would be interesting to find what Burns means in his earlier work, “Leadership is one of the most observed and least understood phenomena on earth” (Burns, 1979, p. 2). Would we understand better if we were to shift our paradigm? We continue to observe and judge leadership using a material base. Burns points to examples of how this material base influences our perceptions about leadership: “the interwoven texture of leadership and followership and the vital and concentric rings of secondary, tertiary, and even ‘lower’ leadership at most levels of society” (pp. 4-5). Long before modern day, “Plato analyzed not only philosopher-kings but the influences on rulers of upbringing, social and economic institutions, and responses of followers” (p. 2). “Confucian thinkers were examining the concept of leadership in moral teaching and by example;” “Christian thinkers were preaching nonviolence” (p. 2); and the list can continue. Would we be able to explain them in terms of energy-flow?

Burns observes, “The crisis of leadership today is the mediocrity or irresponsibility of so many of the men and women in power” and “underlying mediocrity is intellectual” as “We fail to grasp the essence of leadership that is relevant to the modern age” (Burns, 1979, p. 1). To fathom the essence of leadership requires we understand the nature of power, for “leadership is a special form of power” (p. 12). He uses a power as explained in physics. He sees this power as

Whitehead’s displacing material with energy base and unite with the spiritual base in social life:

What is power? The "power of A over B," we are told, "is equal to maximum force which A can induce on B minus the maximum resisting force which B can mobilize in the opposite direction." One wonders about the As and the Bs, the Xs and the Ys, in the equations of power. (Burns, 1979, p. 4)

Using Burns’ (2003) “equations of power” to express and formulate the behavioral interactions of leadership-followership, we might also borrow the laws of Newtonian physics to understand the effect of forces of push and pushback between power wielder and power recipient. The exploration might focus on balancing the energy-flow by both the leaders and the follower. Like in martial arts, Chinese Tai-Ji or Japanese Karate, we learn effectively to manipulate our own power and waste or weaken opponent’s power. Perhaps future study may look at how power-wielding leadership may be converted into transforming leadership that turn opponents into allies, oppositions into complementarity, and conflicts into stimulating power for progress.

Bertrand Russell on Power

Bertrand Russell explains power in social interaction and leader-follower relationships as a form of energy-flow, an enthralling metaphor to describe abstractions of social transformation (Russell, 1938, pp. 12-6). The following is a list of some suggestive entry points to paths into his energy-flow that might be of interest to fathom.

. . . the fundamental concept in social science is Power, in the same sense in which Energy is the fundamental concept in physics. Like energy, power has many forms, such as wealth, armaments, civil authority, influence on opinion. (pp. 12-3)

The laws of social dynamics are laws which can only be stated in terms of power, not in terms of this or that form of power. (p. 13)

. . . power, like energy, must be regarded as continually passing from any one of its forms into any other, and it should be the business of social science to seek the laws of such transformations. The attempt to isolate any one form of power, more especially, in our day, the economic form, has been, and still is, a source of errors of great practical importance. (pp. 13-4)

Love of power, though one of the strongest of human motives, is very unevenly distributed, and is limited by various other motives, such as love of ease, love of pleasure, and sometimes love of approval. It is disguised, among the more timid, as an impulse of submission to leadership, which increases the scope of the power-impulses of bold men. (p. 14)

THE POWER impulse has two forms: explicit, in leaders; implicit, in their followers. (p. 16)

Burns' *transforming leadership* theory resonates with Russell's notion of inducing energy-flow in people to turn powerless feeling into collective power in a pursuit of happiness. The forms of power Russell talks about need further study to determine their affect transforming leadership.

Alan E. Guskin on Creative Tension of Opposing Forces

Guskin explains his leadership role and experience as an institutional president in "recapturing Antioch" as balancing the creative tension between centrifugal and centripetal forces (Guskin, 1998, 1999). The following quotes might set context for understanding the force interplay manifested in the Antioch turnaround effort.

Some institutions, like some people, go through cycles of trauma and transformation as they seek to meet the challenges of their aspirations and societal realities. This happened to Antioch College, a distinctive well-known liberal arts college, which lost its way in the heady period of the late 1960s and suffered for nearly two decades. Searching for its role to serve others, it severely over-extended itself and became detached from the legacy and spiritual core that

provided its sustenance. This is the story of the recapturing of its wonderful legacy and the struggle to rebuild this visionary institution over a nine year period from 1985-1994 (Guskin, 1998, p. 1).

The centrifugal forces represent the interests of individuals and groups, as well as the chaotic pressures of inadequate resources, unpredictable markets and internal conflict; centripetal forces represent the holistic, systemic and integrative pressures, including the institution's values, strategic directions and administrative systems (Guskin, 1999, p. 87).

. . . in successful institutions the centrifugal and centripetal forces interact with each other and create a dynamic, pulsating balance—a creative tension . . . the creative tension, not necessarily calm, releases a great deal of creative energy . . . generates uncertainty and unpredictability, and could imbalance an organization (Guskin, 1999, p. 88).

Guskin (1999) brings to light how two opposing forces induce polar yin and yang energy-flow and produce creative tension. Explaining the energy-flow pulsation in the Antioch case using Prigogine's dissipative structure, the "creative energy" induced by the creative tension between its two forces perturbs the system causes it to fluctuate and escalate in contradiction.

Recognizing the creative tension, Guskin's leadership resurged the potential seed energy of Antioch's motto, Horace Mann's aphorism of winning "Victories for Humanity," and reverted the creative tension of contradictory energy-flow into complementarity. By balancing the two opposing forces, successfully turnaround Antioch before its energy perturbation reached a far-from equilibrium or maximum tolerant level. Because at that point, the system would bifurcate, how the system would behave was uncertain. The system could leap into a higher morality and complexity level of existence if people had transformed themselves collectively in complementarity; or could disintegrate if people were in contradiction. Recognizing and balancing opposing forces are keys to success. Like polar energy-flow in conflict, tension could work increase either in contradiction to each other or in complementarity.

Peter B. Vaill's "Managing as a Performing Art," "Learning as a Way of Being," and "Spirited Leading and Learning"

Vaill's *Managing as Performing Art* sets context for managerial leadership when dealing with world's chaotic change, analogous to learning how to navigate in a permanent white water (Vaill, 1989, 1996, 1998a). We often talk about the need to handle "change, uncertainty, and turbulence" (Vaill, 1989, p. 1). Vaill (1996) says there are seven qualities of learning for leaders to learn how to cope with uncertainty and change. They are "Self-directed learning," "Creative learning," "Expressive Learning," "Feeling learning," "On-line learning," "Continual learning," and "Reflexive learning" (p. 56). He told me there is an eighth one, I believe it is the meditative "*Spirited Leading and Learning*" (Vaill, 1998a). Like playing music, "learning as a way of being becomes a variety of chords and intricate melodies," interweaving in complementarity to create harmonious music (Vaill, 1996, p. 56). Perhaps, we can apply *essential energy-flow* to gain insights into how each learning quality contributes to leaders' learning and perhaps unlearning of those commonsense no longer serve us.

Situating Vaill's (1989) permanent white water metaphor in Prigogine's (1984) dissipative structure, we can simulate possible outcome of the impacts change, uncertainty, and turbulence having on the system. As changes evoke energy-flow perturbation in an organization, manifested as uncertainty and turbulence, these eventually escalate into a maximum tolerance point. At that point, the system bifurcates and faces all kinds of possibilities. The possibilities range from the system snaps into disintegrated destruction to the people have transformed themselves into a higher morality and spirituality and capable of handling complexity. Whitehead's (1938) notion of energy-spiritual base in social life helps prepare organizations in perturbation that the people would have made a conscious choice to engage in the process of

learning as a way of being (Vaill, 1996). Gerber's (1996) physiological energy-flow healing, perhaps, can be applied to organizational healing to help people think beyond materialist conceptions of meaning. Perceiving spiritual integrity, people transcend themselves progressively, Vaill's metaphor of seeing white water not as a disruptive abyss but as the creative challenge of continued spiritual growth. Not only would they survive; they would thrust and soar into their dreamed future.

Warren Bennis on Managing the Dream

Warren Bennis describes leaders as dreamers with responsibilities to succeed, to see the dreams of the future come true.

"In dreams begin responsibilities," William Butler Yeats wrote. Nowhere is this demonstrated more vividly than in the lives of effective leaders. All humans possess an overpowering desire to understand and predict the future; but a leader takes real responsibility for molding it by embracing and "managing" a tangible dream for the future. In essence, a leader *incarnates* a dream for that future. . . . a dream is a roadmap to a rendezvous with destiny—a set of imaginative hypotheses groping toward whatever vivid utopias lie at the heart of our consciousness. (Bennis, 2000, p. xiii)

These are questions that should exhilarate and hopefully energize us. The years ahead of us promise to be uniquely exciting ones, times that seem to mock any effort to define or shape them. . . . charting a course for the future . . . so must we be interpreters [sic] of our complex times and the dreams that arise within them. Could there be a more thrilling time to be a leader? (Bennis, 2000, p. 308)

Energy-flow transforms dreams (seed energy) across time and space from dormant potential energy to active kinetic energy. Bennis' "vivid utopias" dreams can be best described by Maslow's "Utopian and normative thinking of this sort is not very common these days, and even when it does occur, is by many rejected as being not in the realm of acceptable knowledge, much less in the realm of science" (Maslow, 1998, p. xxii). Echoing Burns' leadership hierarchy and Maslow's hierarchy of needs, perhaps, we find in Bennis' work, energy-flow in a hierarchy of dreams. Leaders dream the dreams; share with people the dreams; transforming leaders empower

people to transform the dreams in collective pursuits of their happiness of the future.

Conclusion

“The pursuit of happiness must be our touchstone” (Burns, 2003, p. 214) is very important to Burns, and in some ways explains his whole book. He insists that the pursuit of happiness is what transforming leadership is all about. It is his single most creative and perhaps controversial contribution. It resonates with Siu’s cheerfulness, Maslow’s unconscious impulse, Csikszentmihalyi psychological and Gerber’s physiological wellness, and Vaill’s spirited learning. Pursuing happiness is important to Burns, and many others, Chinese philosopher, Chuang-tze, and Greek Democritus, Whitehead, Russell and Prigogine, perhaps, you and me.

I found that Burns’ theory not only deepened my understanding, but also led me to discover new meanings about leadership, transforming and personal transformation. I expect this exploration to provide a new perspective of Burns’ *Transforming Leadership* theory that will provoke new thinking to further the concept of energy-flow in future research and practice, and contribute to the field of leadership study.

Reference List

- Barrett, W. (1978). *The illusion of technique*. New York: Doubleday.
- Bear, M. F. (2007). *A walk down memory lane*. Retrieved March, 2007, from http://www.amazon.com/gp/cdp/member-reviews/AIWRH3K10EWY/ref=cm_pdp_reviews_see_all?ie=UTF8&sort%5Fby=MostRecentReview
- Bennis, W. G. (2000). *Managing the dream: Reflections on leadership and change*. Cambridge: Perseus.
- Bennis, W. G., & Nanus, B. (1997). *Leaders: Strategies for taking charge* (2nd ed.). New York: HarperBusiness.
- Bhatt, C. (2004). *Researching society and cultures* (2nd ed.). Thousand Oaks: Sage.
- Blackburn, S. (2007). *The Oxford dictionary of philosophy* (Vol. 2008). New York: Oxford University Press.
- Bohm, D. (1980). *Wholeness and the implicate order*. London: Routledge.
- Bohm, D. (1985). *Unfolding meaning: A weekend of dialogue*. London: Routledge.
- Bolman, L. G., & Deal, T. E. (2003). *Reframing organizations: artistry, choice, and leadership* (3rd ed.). San Francisco: Jossey-Bass.
- Bontekoe, R. (1996). *Dimensions of the hermeneutic circle*. Atlantic Highlands: Humanities Press International.
- Burns, J. M. (1979). *Leadership*. New York: Harper & Row.
- Burns, J. M. (2003). *Transforming leadership: A new pursuit of happiness*. New York: Grove/Atlantic.
- Caldwell, C. (2003, April). Gandhi was, Napoleon wasn't: What makes a real leader. *The New York Times*, p. E10.
- Capra, F. (1982). *The turning point, science, society and the rising culture*. New York: Simon and Schuster.
- Capra, F. (1991). *The Tao of physics, An exploration of the parallels between modern physics and eastern mysticism* (3rd ed.). Boston: Shambhala. (1975, Original work published).
- Capra, F. (1996). *The web of life, A new scientific understanding of living systems*. New York: Anchor Books, Doubleday.
- Cleary, T. E., & Confucius. (1992). *The essential Confucius: The heart of Confucius' teaching in*

- authentic I Ching Order* (T. Cleary, Trans.). New York: HarperCollins.
- Cleary, T. E., Lao-Tze, & Chuang-Tze. (1993). *The essential Tao: An initiation into the heart of Taoism through the authentic Tao Te Ching and the inner teachings of Chuang Tzu* (T. E. Cleary, Trans.). New York: Harper-Collins.
- Cleary, T. E., & Liu, I.-m. (1986). *The Taoist I Ching* (T. E. Cleary, Trans.). Boston: Shambhala. (1800, Original work published).
- Cleary, T. E., Sun-tze, & Sun-Pin. (1996). *The lost art of war: The recently discovered companion to the bestselling the art of war* (Thomas Cleary, Trans.). New York: HarperCollins.
- Couto, R. A., & Fu, C. (2004). *The authentic leadership of sacred texts*. Paper presented at the Gallup Leadership Institute Summit, Omaha.
- Csikszentmihalyi, M. (1990). *FLOW: The psychology of optimal experience*. New York: Harper & Row.
- Csikszentmihalyi, M. (1997). *Finding flow in everyday life*. New York: Basic Books, HarperCollins.
- Csikszentmihalyi, M. (2004). *Improving leadership around the world: challenges, ideas, innovations*. Paper presented at the 4th Annual Conference, Washington D.C.
- Einstein, A. (1922). *The meaning of relativity, including the relativistic theory of the non-symmetric field* (5th ed.). Princeton: Princeton University Press.
- Einstein, A. (1956). *The world as I see it*. Secaucus: Carol.
- Einstein, A. (2005). *The meaning of relativity* (Brian Green ed.). Princeton: Princeton University Press. (1922, Original work published).
- Einstein, A., & Infeld, L. (1966). *The evolution of physics, from early concepts to relativity and quanta*. New York: Simon & Schuster. (1938, Original work published).
- Freeman, C. (2004). *Egypt, Greece and Rome, civilizations of the ancient Mediterranean* (2nd ed.). Oxford: Oxford University Press.
- French, J. R. P. (1956, May). A formal theory of social power. *Psychological Review*, 63 (3), 181-94.
- Freud, S. (1933). *New introductory lectures on psychoanalysis*. New York: Norton.
- Fu, C. (1986, Jan). An independent workstation for a quadriplegic. *International Exchange of Experts and Information in Rehabilitation, Monograph #37* (Interactive Robotic Aid).
- Fu, C. (2000, May). Balancing in a corporate storm: Boeing's Quantum Shift Learning team. *The*

Systems Thinker, VII (N4), 6-7.

- Fu, C. (2001a, August). *System Dynamics Insights for Balancing in a Corporate Storm*. Paper presented at the 2nd Annual Naval-Industry R&D Partnership Conference, Washington DC.
- Fu, C. (2001b, July). *System Dynamics Insights for Balancing in a Corporate Storm*. Paper presented at the International System Dynamics Conference, Atlanta.
- Fu, C., & Kirk, P. (1999, November). *A Path in the Storm: A New Model for Productive Participation during Rapid Change at Boeing*. Paper presented at the Systems Thinking in Action Conference, Atlanta.
- Fu, P. Y. (1953). *Philosophy of Chuangtse*. National Taiwan University, Taipei.
- Gerber, R., MD. (1996). *Vibrational medicine: New choices for healing ourselves* (Updated ed.). Sante Fe: Bear. (1988, Original work published).
- Gerber, R., MD. (2000a). *A practical guide to vibrational medicine: energy healing and spiritual transformation*. New York: Harper Paperbacks.
- Gerber, R., MD. (2000b). *Vibrational medicine for the 21st century: The complete guide to energy healing and spiritual transformation*. Cedar Rapids: Eagle Book.
- Gerber, R., MD. (2001). *Vibrational medicine: The #1 handbook of subtle-energy therapies*. Santa Fe: Bear.
- Greenleaf, R. K. (1977). *Servant leadership: A journey into the nature of legitimate power and greatness*. Mahwah: Paulist Press.
- Guskin, A. E. (1998). *Recapturing Antioch's legacy: Reflections on the struggle to rebuild a visionary institution*. Unpublished manuscript, Yellow Springs.
- Guskin, A. E. (1999, Jan). On being a pragmatic idealist: A social psychologist's reflections on his role as a university president. *US: Psychologist-Manager Journal*, 3 (1), 84-96.
- Guskin, A. E., & Marcy, M. B. (2002, September/October). The yin yang of campus leadership. *Trusteeship*, 8-12.
- Han-Fei-Tze. (circa 250 BCE). *Han-Fei-Tze*. Retrieved May, 2008, from <http://www.answers.com/topic/han-fei-tzu>
- Heifetz, R. A. (1994). *Leadership without easy answers*. Cambridge: Belknap Press of Harvard University Press.
- ISP. (1999). *East meets west: Ralph Siu's contributions*. Retrieved May, 2007, from <http://paneticsworldwide.org/DisplayEvents.cfm?g=4>

- Kaske, M. (2003, April). Burns, James MacGrego transforming leadership: A new pursuit of happiness. *EBSCO, Booklist*.
- Kirk, P. (2000, January). Corporate evolution and the chaos advantage. *The Systems Thinker*, 10 (10), 1-6.
- Kline, G. L. (Ed.). (1963). *Alfred North Whitehead essays on his philosophy*. Englewood Cliffs, N.J: Prentice-Hall.
- Kuehn, R. (2003, Winter). Transforming leadership: A new pursuit of happiness. *Human Development*, 24 (4), 47-8.
- Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed.). Chicago: University of Chicago Press. (1962, Original work published).
- Lao-Tze. (1972). *Tao Te Ching* (G. F. Feng, Trans.). New York: Random House. (circa 600 BCE, Original work published).
- Lao-Tze, & Legge, J. (1891). *The Tao Te Ching*. Retrieved May, 2006, from <http://www.sacred-texts.com/tao/taote.htm>
- Legge, J. (1899). *Chinese Literature Classics*. Retrieved May, 2005, from <http://www.chinapage.com/classic1.htm>
- Legge, J., & Chuang-Tze. (1890). *The complete Chuang Tzu based on the translation*. Retrieved May, 2005, from <http://oaks.nvg.org/ys1ra5.html>
- Maslow, A. H. (1987). *Motivation and personality*. New York: Harper & Row. (1954, Original work published).
- Maslow, A. H. (1987). A theory of human motivation. In L. E. Boone & D. D. Bowen (Eds.), *The great writings in management and organizational behavior* (pp. 106-26). New York: Random House.
- Maslow, A. H. (1998). *Maslow on management*. New York: John Wiley & Sons.
- McGregor, D. M. (1960). *The human side of enterprise*. New York: McGraw-Hill.
- Mo-Tze. (450 BCE). *Mozi*. Retrieved May, 2008, from <http://www.answers.com/topic/mo-zi>
- Needham, J., & Ronan, C. A. (1978). *A shorter science and civilization in China* (Vol. I). Cambridge: Cambridge University Press.
- Perkins, D. (2000). *Encyclopedia of China: The essential reference to China, its history and culture*. New York: Roundtable Press.
- Price, L. (2001). *Dialogues of Alfred North Whitehead*. Jaffrey: A Nonpareil Book, David R. Godine. (1954, Original work published).

- Prigogine, I. (1997). *The end of certainty, time, chaos, and the new laws of nature*. New York: The Free Press, Simon & Schuster.
- Prigogine, I., & Stengers, I. (1984). *Order out of chaos, man's new dialogue with nature*. New York: A Bantam Book.
- Rost, J. C. (1993). *Leadership for the twenty-first century*. Westport: Praeger.
- Rudestam, K. E., & Newton, R. R. (2007). *Surviving your dissertation, a comprehensive guide to content and process* (3rd ed.). Thousand Oaks: Sage.
- Russell, B. (1938). *POWER, A new social analysis*. New York: Norton.
- Russell, B. (1972). *The history of western philosophy* (pbk ed.). New York: Simon & Schuster. (1945, Original work published).
- Russell, B. (2001). *ABC of relativity*. New York: Routledge. (1925, Original work published).
- Secter, M. (1993). *I Ching clarified: A practical guide*. Rutland: Charles E. Turtle.
- Senge, P. M. (1990). *The fifth discipline, the art & practice of the learning organization*. New York: Doubleday.
- Sherburne, D. W. (Ed.). (1966). *A key to Whitehead's process and reality*. New York: The MacMillan Company.
- Silverman, D. (2005). *Doing qualitative research: A practical handbook* (2nd ed.). Thousand Oaks: Sage.
- Siu, R. H. G. (1971). *The Tao of science: An essay on western knowledge and eastern wisdom* (Vol. 1). Cambridge: The Massachusetts Institute of Technology. (1957, Original work published).
- Siu, R. H. G. (1972). *The portable dragon: The western man's guide to the I Ching* (Vol. 2). Cambridge: M.I.T. Press. (1968, Original work published).
- Siu, R. H. G. (1974). *Ch'i: A neo-Taoist approach to life* (Vol. 3): The Massachusetts Institute of Technology.
- Siu, R. H. G. (1978, Spring). SMR Forum: Management and the art of Chinese baseball. *Sloan Management Review*, 19 (3), 83.
- Siu, R. H. G. (1979). *The craft of power* (Vol. 4). New York: John Wiley & Sons.
- Siu, R. H. G. (1980a). *The master manager* (Vol. 6). Washington D.C: John Wiley & Sons.
- Siu, R. H. G. (1980b). *Transcending the power game, the way to executive serenity* (Vol. 5). New York: John Wiley & Sons.

- Siu, R. H. G. (1993a). *Less suffering for everybody: An introduction to panetics* (Vol. 7). Washington, D.C.: International Society for Panetics.
- Siu, R. H. G. (1993b). *Panetics and the dukkha: An integrated study of the infliction of suffering* (Vol. 8). Washington, D.C.: International Society for Panetics.
- Siu, R. H. G. (1993c). *Seeds of reflection: Panetic word clusters* (Vol. 9). Washington, D.C.: International Society for Panetics.
- Siu, R. H. G. (1999a). *Cheerfulness* (Vol. 11). Washington, D.C.: International Society for Panetics.
- Siu, R. H. G. (1999b). *Shaping one's own life: A Socratic anthology of perennial questions* (Vol. 12). Washington, D.C.: International Society for Panetics.
- Siu, R. H. G. (1999c). *Unifying theory of the human organism and behavior* (Vol. 10). Washington, D.C.: International Society for Panetics.
- Sutta, M.-v. (1996). *An analysis of the path*. Retrieved May, 2007, from <http://www.accesstoinsight.org/tipitaka/sn/sn45/sn45.008.than.html>
- Too, L. (2000). *Practical feng shui formulas for success*. Boston: Element Books.
- Vaill, P. B. (1984). Process wisdom for a new age. In J. D. Adams (Ed.), *Transforming work, a collection of organizational transformation readings*. Alexandria: Miles River Press.
- Vaill, P. B. (1985). OD as a scientific revolution. In D. D. Warrick (Ed.), *Contemporary organization development* (pp. 28-41). Glenview: Scott, Foresman.
- Vaill, P. B. (1988). *Paring a large field down to size*. Unpublished manuscript.
- Vaill, P. B. (1989). *Managing as a performing art, new ideas for a world of chaotic change*. San Francisco: Jossey-Bass.
- Vaill, P. B. (1996). *Learning as a way of being*. San Francisco: Jossey-Bass.
- Vaill, P. B. (1998a). *Spirited leading and learning: Process wisdom for a new age* (1st ed.). San Francisco: Jossey-Bass.
- Vaill, P. B. (1998b). The unspeakable texture of process wisdom. In S. Suresh (Ed.), *Organizational wisdom and executive courage* (pp. 25-39). Cambridge: Lexington Books.
- Vaill, P. B. (1999). *Polarities in leading organizational change*. Unpublished manuscript.
- Vaill, P. B. (2006). *Notes on case research and writing*. Unpublished manuscript.
- Vaill, P. B. (2007). Dissertation discussion. In C. Fu (Ed.): Antioch Ph.D. in Leadership &

Change.

Vaill, P. B. (2008). Dissertation dialogue. In C. Fu (Ed.): Antioch Ph.D. in Leadership and Change.

Vaill, P. B., Wergin, J. F., & Kenny, C. B. (2007). *What is a theoretical dissertation* (Electronic communication): Antioch Ph.D. in Leadership and Change.

Whitehead, A. N. (1938). *Modes of thought*. New York: The Macmillan.

Whitehead, A. N. (1953). *Science and the modern world*. Toronto: Collier-Macmillan Canada. (1925, Original work published).

Whitehead, A. N. (1957). *The aims of education and other essays*. New York: The Free Press, Macmillan. (1929, Original work published).

Whitehead, A. N. (1961). *Adventures of ideas*. New York: The Free Press. (1933, Original work published).

Whitehead, A. N. (1967). *Process and reality, an essay in cosmology*. New York: The Macmillan. (1929, Original work published).

Whitehead, A. N., & Russell, B. (1999). *Principia mathematica TO *56*. Cambridge, UK: Cambridge University Press. (1910, Original work published).

Wilhelm, H., & Wilhelm, R. (1995). *Understanding the I Ching, The Wilhelm lectures on the Book of Changes*. Princeton: Princeton University Press. (1979, Original work published).

Wilhelm, R., & Baynes, C. F. (1997). *The I Ching or Book of changes* (R. Wilhelm, Trans.). Princeton: Princeton University Press. (1950, Original work published).

Williams, C. A. S. (1981). *Outlines of Chinese symbolism and art motives* (5th ed.). Tokyo: Charles E. Tuttle. (1941, Original work published).

Wu, K., Lao-Tze, & Chuang-Tze. (1955). *Lao Chuang philosophy*. Taipei: Taiwan Business Affair.

Wu, K. C. (1982). *The Chinese heritage*. New York: Crown.

Yukl, G. (2001). *Leadership in organizations* (5th ed.). New York: Prentice-Hall.