Knowledge Area 703

System Theory and Mystical Kabbalah

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To help soul and psyche experience reality, spirituality is required.

Swami Chandrasekharanand Saraswati

If you know the answer, you're only part of the problem.

Snowden

Abstract

This paper outlines two different wholistic approaches, namely systemic theory and mystical Kabbalah. Both theories describe wholeness, as opposed to dissectional analysis, and the abstract totality of diverse realities. Key ideas of systemic theory, complexity theory and chaos theory, as well as the Universal Mystical Heritage of Humankind, the Kabbalah, are being explored. This exploration helps to reveal resemblances and differences. The comparison of the two approaches deepens our understanding of the interconnectedness and wholistic nature of reality. It challenges our perception and habitual heuristic to relate to the internal and external world. It requires that we incorporate and experience reality rather than think about. Finally, the comparison helps us to integrate seemingly disparate points of view.

Content:

Part A: Overview

Introduction into a scientific (r)evolution

Systemic thinking arose from a need for understanding and integrating assemblages of divergent components in interdependent, unified structural arrangements. The need to align a host of interacting, reciprocal and iterative factors, to create coordinated, systematic, and coherent output in highly interactive, reciprocal systems, exceeded the then known scientific possibilities.

In rocket science, for example, chemical, electrical and physical components needed to be integrated in one aligned and stratified process. Ecological problems, including air and water pollution, traffic congestion and weather forecast, defied simple, few-dimensional cause-and-effect chain analysis. Social problems, like organized crime, juvenile delinquency, or city planning, required a grand synthesis of diverse interdisciplinary approaches for their resolution. The generation of these solutions needed to be embedded in a unifying, overarching theory that allowed an effective understanding of the reciprocities and effects involved.

In the 1940s, evolving new disciplines of what became later known as information theory, cybernetics, gamble theory, decision theory, molecular biology, cognitive science, biophysics, or thermodynamics, all ran into challenges whose structures were astoundingly similar. In each field, the complexity of the abstract and practical issues defied uni-dimensional solutions as offered by common positivistic, dissectional scientific thinking. The required integration of diverse variables and the interconnectedness and reciprocity of the phenomena exceeded the contemporary understanding of mechanistic clockwork interaction.

Various scientists, whose interest and attitude precluded them from staying within the confinement of positivistic thinking, strove to find a new theory for understanding complex and highly interconnected problems. People, including Walter Cannon (1871 – 1945, physiologist, homeostasis), Ludwig van Bertalanffy (1901 – 1972, organismic theorist, General System Theory), Ilya Prigogine (1917 – 2003, physical chemist, dissipative structures), Franciso Varela (1946 – 2001, neurobiologist, autopoiesis, constructivism), Humberto Maturana (1928 - present, neurobiologist, autopoiesis, constructivism), Heinz von Foerster (1911 – 2002, physicist, radical constructivism), Norbert Wiener (1894 – 1964, mathematician, cybernetics), Anatol Rapoport (1911 – 2007, biomathematician, systems and

game theory), Gregory Bateson (1904 – 1980, anthropologist, epistemology), Kurt Lewin (1890 – 1947, psychologist, group dynamics), Warren McCulloch (1899 – 1969, neurophysiologist, neural network), Margaret Mead (1901 – 1978, anthropologist), Claude Shannon (1916 – 2001, information theorist, information theory), and Max Delbrück (1906 – 1981, geneticist, molecular biology) strove to elaborate a *Grand Unified Theory*. The interdisciplinary Macy conferences, hosted by The Josiah Macy Jr. Foundation from 1946 – 1953 in New York City, provided a cauldron for sharing and developing ideas that evolved into cybernetics and systems theory.

In this context, a "third form of science" (Waldrop, 1992, p. 63) established itself which stood between the common alternatives of theory and experiment. This new form of science profited from increasing computational capacity, which allowed the computation and modelling of non-linear and iterative equations on computers. According to Heylighen, professor of a transdisciplinary research group at the Free University of Brussels, the information capacity from pre-industrial times (200 years ago) till today multiplied 100 billion times (!) (Francis Heylighen, 2002, p. 3). Consequently, this (r)evolution of abstract modelling finally sped up new forms of thinking which became known as chaos theory, systems theory and cybernetics.

Heylighen, Cilliers and Gershenson (2007) show to what extend these new ideas challenged Newtonian science and thus the habitual way of thinking. The foundational principles of science at this time were reductionism, determinism, and assumed objective knowledge. The traditional methods were analysis and isolation of variables in combination with gaining full understanding and gathering of complete information about a phenomenon. Concepts of matter, absolute space, time, and nomothetic law, which govern movement in a clockwork world, reigned absolute. The underlying materialistic ontology sees all phenomena as constituted of matter and excludes possible alternatives for ephemeral phenomena, such as biological, mental, social or spiritual realities.

Heylighen et al. (2007) identify the corresponding Newtonian thinking as "reflection-correspondence view." The objective reality outside creates a corresponding inner experience.. Science strives to make this correspondence a perfect match - a perfect objective representation where our internal cognitive reality reflects accurately the external material reality. The net result of this approach to reality is "the principle of *distinction conservation*"

(Francis Heylighen, 1990). Whoever looks at the objective reality in the world, makes the same dissecting distinctions to understand the phenomena. As these distinctions remain stable there is no change in the fundamental components that create reality. No new distinctions, initial states, or intermittent variations come into being. Heylighen et al. conclude that Newtonian science is simplistic, as "it is merely an 'uncovering' of distinctions that were waiting to be observed" (p. 4). They refer to Prigogine and Stengers (1984) who support the view that the Newtonian approach does not allow for novelty or creation.

Taking into account that Newtonian thinking forms the background for an interdisciplinary, evolving, new paradigm, the foregoing description may make clear that this evolution had characteristics of a (r)evolution. The common beliefs were turned upside down, as will be outlined in the following paragraphs.

System Theory

van Bertalanffy sets out to formulate a General System Theory as the "scientific exploration of 'wholes' and 'wholeness'" (1969, p. xx). A *system* can be broadly defined as an assemblage of things - sets or units which share a particular, characteristic interaction. James Grier Miller gives a general definition of *system* saying that it "is a set of interacting units with relationships among them" (1978, p. 16). In Fritjof Capra's view, the term "systemic" can be used interchangeably with "holistic", "organismic", or "ecological" and refers to the basic tension between "the parts and the whole". (Capra, 1996, p. 17). The different definitions of systems usually stress existence of a number of components which mostly create a tangible structure in combination with a particular organization. It is this interactional organization, independent of the physical structure, that is the major focus of systemic theory. According to the neurobiologists Maturana and Varela (1987), *living systems* coordinate their behavior (communicate) along autopoietic (self-made) autonomous and self-referential interactions in a structure-determined way. It is not yet fully clear in what way this is true for social systems. The interaction in systems is considered to be non-trivial, which means non-linear (Bertalanffy, 1969, p. 19).

The particular quality of the interrelatedness produces *emergent* phenomena which cannot be derived from the quality of the constituent components. Emergent qualities cannot be researched by a dissecting, reductionist, scientific approach that is interested in the properties of parts. The enormity of this statement becomes clear when "on closer scrutiny practically all

of the properties that matter to us in everyday life, such as beauty, life, status, intelligence…, turn out to be emergent" (Francis Heylighen et al., 2007, p. 6). Love is an emergent quality that is based on a particular quality of relationship. This relationship may be based on diverse structural components, including baby - mother, husband - wife, person - spiritual source, human being – human being, human being - animal. It is a particular quality of relationship in the context of bonding, attachment or interrelatedness that brings about the emergent phenomenon of love. This perception of love reciprocally and iteratively feeds back into the relationship and into communication. It may express in diverse and unpredictable forms as behavior, emotion, rituals, communication, physical proximity, spiritual practice, etc.

The systemic approach adds to the traditional Cartesian view of the world, which is confined to the non-emergent, linear, and often mechanical. Nevertheless, technical systems can certainly have emergent and non-emergent properties at the same time. The weight of a car is a non-emergent property and depends on the sum of the weight of all its parts. Speed, however, critically depends on a particular interaction and thus functional relationship among the parts and can be seen as an emergent property. The irreducibility of emergent phenomena opened the view on new research questions that had been excluded from science so far. The inclusion of questions like order, organisation, reciprocity, wholeness, or teleology changed the understanding of living systems.

Moreover, although systemic approaches never resulted in a consistent mathematical theory that is applicable in a universal way, "they created a certain way of thinking, a new language, new concepts, and a whole intellectual climate that has led to significant scientific advances in the recent years" (Capra, 1996, p. 79).

The Chilean neurobiologists, Maturana and Varela, developed a systemic understanding of human epistemological processes. They expounded a biologically-based theory of living systems that reaches into the arena of human reflective consciousness and knowledge generation. Gregory Bateson (2002), Margaret Mead, and the German sociologist Niklas Luhmann (1999; Luhmann, 2002) set out to transfer the sometimes highly abstract and technical systemic ideas to social and sociological systems. Luhmann tried creating a universal theory of society as, in his view, current sociological theories fell short of offering a satisfactory global theory for the understanding of a diversified modern society (Luhmann, 1999). Luhmann replaced the physical and organizational boundary of Maturana and Varela's

autopoeisis by a symbolic social boundary. This social boundary is self-made by sets of expectations, loyalties, confidentialities, and coordinative acts. However, Luhmann's endeavor resulted in an extremely abstract language that makes acquisition and application of his theory difficult. We will come back to the issue of increasing abstractness later, when looking at different Kabbalistic descriptions.

Cybernetics

The word "cybernetic" is rooted in the Greek *kybernetes,* which is commonly translated as "steersman", "pilot" or "rudder". The term denotes the science and art of directing highly complex systems and thus deals with issues of communication and control. The mathematician, Norbert Wiener, together with Ross Ashby is one of the originators of the discipline. According to Wiener, the necessity for control was greatly enhanced in the wake of the mechanization of the World Wars. He considered the eighteenth century as the "age of the clock", the nineteenth century as the "age of the steam engine", and the twentieth century as "the age of the 'servomechanisms'" with the "need of handling the extremely dangerous energy of the atom …" (Wiener, 1948/1961, p. 43). He writes in the preface to the second edition of his foundational book *Cybernetics: or Control and Communication in the Animal and the Machine*, that "the role of information and the technique of measuring and transmitting information constitute a whole discipline for the engineer, for the physiologist, for the psychologist and for the sociologist" (Wiener, 1948/1961, p. vii). This statement makes clear that cybernetics deals not just with weaponry or technical issues but with the interdisciplinary problem of communicative patterns in any form of organization. Heinz von Foerster clarifies that cybernetic theories use the term "information" in the sense of "signal" rather than in the common sense of "news" (Capra, 1996, p. 64). Heylighen explains that

> cybernetics (Ashby, 1962; F. Heylighen & Joslyn, 2001) is the science that studies how goal-directed systems can succeed in a complex, variable environment, by counteracting any perturbations that make them deviate from their preferred course. Adopting a more modern terminology, we will call such systems that try to reach their goal by acting upon their environment *agents*. Agents can be people, organisations, cells, robots, or any living organisms" (2007, p. 2).

Cybernetics had an impact on several newly emerging sciences including control theory, computer science, information theory, automata theory, artificial intelligence, artificial neural networks, cognitive science, computer modelling, simulation science, dynamical systems and artificial life. Although partly rooted in the understanding of technical systems, mathematical machines, and abstract language, cybernetics contributed to a new view on the basic processes of life – the self-regulatory processes of feedback loops. The idea of feedback loops sparked a process of thinking in circular processes rather than linear progression.

The idea of circular causality was described as a self-balancing (negative) or self-reinforcing (positive) circle that has an impact on its own starting point – it feeds back on itself. It is an iterative process for regulating temperature, steering trajectories of ships, airplanes, missiles or keeping the blood sugar at a particular level. Negative feedback loops correct any deviation from equilibrium, and preserve a homeostatic state in living organisms. Any registered variation from a set value is nullified by a corresponding counter-regulation. Positive feedback loops add more of the same and thus make for increasing effect in the cycle and ensuing instability due to a state far from equilibrium. In economics, this principle was dubbed “increasing returns” by Brian Arthur (Waldrop, 1992, p. 17) and shows how those who come first on the market have an advantage that multiplies. Positive behavioral feedback loops are described in common parlance as a *vicious circle* or *self-fulfilling prophecy* where the engagement in a particular kind of practice inevitably self-perpetuates until a final point of collapse of the system is attained. In order to prevent the often disquieting effects of a positive feedback loop from gaining full momentum, one has to break the cycle or balance it by the interconnection with a negative feedback loop. Nature, for example, keeps the growth of a population in check through an ongoing scarcity of food. In this way, different contextual conditions interlock and create a self-regulating whole.

Capra notes that circular causality is not equal to an actual circular physical arrangement of the constituent parts of a system. He points out that “for the first time in the history of systems thinking, the cyberneticists clearly distinguished the pattern of organization of a system from its physical structure – a distinction that is crucial in the contemporary theory of living systems” (1996, p. 64). Consequently, this insight stimulated a search for pattern recognition in systems that finally deepened the understanding of concepts like self-organization, autonomy, and autopoiesis of living systems (Humbert R. Maturana & Varela, 1980;

Humberto R. Maturana & Varela, 1987; Varela, 2002). Dealing with patterns of organization became one major focus of cybernetics.

Another merit of cybernetic thinking is the recognition that system observers are cybernetic systems themselves ("second-order cybernetics"). This inclusion of the observer evolved with a shift from mechanical systems to organic or social systems in the early 1970s. Heinz von Foerster's catchphrase, "objectivism is the delusion that ideas can be made without a maker (and can be enacted without an actor)" (cited in Pask, 1996, p. 351), is indicative of the inclusion of the observer as a part of the system. Interaction is needed to understand a system and the particular intention and quality of interaction makes the observer part of the system. Cybernetic systems observation becomes the connection of two self-regulating systems that construct their own internal reality. The inner structure of one system changes according to the interconnection with the environmental system. This point of view shifted the focus from objective systems "out there" to the cognitive and social processes involved. Heinz von Foerster, Humberto Maturana, Gordon Pask, Ranulp Glanville, and Paul Pangaro explored the implications of this observer inclusion.

Although Heylighen, Cilliers and Gershenson (2007, p. 2) summarize that "complexity science is little more than an amalgam of methods, models and metaphors from a variety of disciplines rather than an integrated science," they admit that it can claim "a unified focus". Despite its mostly formalized language of network clustering algorithms, computer simulations, and non-linear differential equations, or ambiguous ideas and metaphors, its main characteristic is its idiosyncratic way of conceptualizing. It replaces reductionism by a "scientifically-based holism" (p.1). Pask holds the view that cybernetics "permeates all science" (1996, p. 352) although it lacks a clear body of identity. Heylighen & Joslyn (2001) point out that the ubiquitous use of the prefix "cyber-", which shows the shift in system understanding to "relations, functions and information flows" (p. 5), has become part of a common culture that, more often than not, lacks depth of understanding of the often highly abstract theories involved.

Chaos Theory

Dynamical systems theory, the mathematical branch of system theory, evolved into an abstract body of descriptive mathematics, which laid the foundations for chaos theory. The non-linear interconnectedness of a wide range of phenomena required a mathematic which

could describe non-linear processes, and qualities of relationships and patterns. The current mathematical tools of algebra, as developed by Islamic philosophers in Persia, differential calculus, as developed by Isaac Newton and Gottfried Wilhelm Leibniz, and statistical methods, as developed by James Clerk Maxwell, could not describe non-linearity. However, non-linearity was found almost everywhere, e.g. in electrical circuits, lasers, chemical reactions, fluid dynamics, population growth, action potentials in neurons, or molecular vibrations. Eventually, chaos theory became the mathematical description of nonlinear dynamical systems, and computer-based weather forecasting is an example of the evolution of non-linear interdependency.

The need for describing non-linear systems required the introduction of iteration in mathematical equations. Iteration, the repetitive execution of one mathematical equation with the previous result of that equation, simulates the working of a feedback loop.

Henri Poincaré developed a mathematic known as “topology,” which Capara describes as “a mathematic of relationships, of unchangeable, or “invariant,” patterns” (Capra, 1996, p. 127). This geometry describes properties of geometric figures, like the intersection of lines, or the hole in a torus that does not change during the mathematical transformation of the figure. These invariant properties that represent stability in a changing system were later dubbed “attractors”. These “rubber sheet geometry” equations (Capra, 1996, p. 126) could no longer be solved analytically, but only numerically, in a multi-dimensional phase-space where every variable is plotted on a coordinate in abstract space. Chaos theory found out that there are a limited number of attractors, which in turn can be divided into three broad categories of *point attractors, periodic attractors,* and *strange attractors*. The attractors are constituent parts of the inner organization of chaotic systems.

The term chaotic may be misleading, as attractors give the seemingly unordered system structure and direction, even though there is unpredictability of outcome. Characteristic features of chaotic systems are:

- the general dynamic properties can be deduced from the shape of the attractor
- the mathematical trajectory of a system has a fixed point, the attractor, which invites exactly that trajectory
- chaotic behavior is not arbitrary but deterministic and patterned
- the seemingly random data can be plotted into distinct visible shapes

- the strictly deterministic equations produce unpredictable results (!)
- through repeated geometric operation (iteration) one cannot predict the value of variables, but can predict the qualitative features of the system behavior
- chaotic systems show extreme sensitivity to initial conditions ("butterfly effect" - see Lorenz, 1963)
- the system comes to an unstable bifurcation point far from equilibrium, where the system suddenly evolves in a different direction

Fractal geometry, developed by the French mathematician Benoît Mandelbrot, complex numbers, as introduced by Karl Friedrich Gauss, and iterative procedures in the complex plane, as executed by the French mathematician Gaston Julia, were further developments that advanced chaos theory. Fractal geometry in particular, made the description of natural, irregular phenomena, like coastlines, form of clouds, or cauliflower possible, where at descending scales, a replica of the original shape can be found over and over again.

It is amazing to see that the highly abstract chaos theory has abundant ramifications in practically all disciplines of life. The illustrious collection of 11,151 titles which result when the term “chaos theory” is entered into the www.amazon.com search function, displays a domain of application in the English-speaking world alone that makes me wonder about the generalizability of this theory. Reviewing a few of the applications (Evans, 1996; Hock, 1999; Masterpasqua & Perna, 1997) gives me the idea that the main appeal of systemic worldview lies in the need for more fluid concepts, including non-knowing, instability, self-organization, enhancement of creativity, change, adaptation, and acknowledgement of differences. To me, this shows how the mechanistic worldview has obviously excluded vital aspects of dynamic change and essentials of life. However, the unreflected transference of concepts like attractors, initial conditions, pendulum swings, and self-organization to social systems may be as daring as the interpolations from rat experiments to human systems.

Properties of living systems

Humberto Maturana and Francisco Varela have highlighted the difference between the *physical* structure of living organisms (read as substance, matter, quantity) and the corresponding *pattern of organization* (read as form, order, quality) as well as the fundamental principle of self-organization. The structure of a system consists of its physical

make-up. The reciprocal interaction of the structural parts result in a pattern of interaction, a configuration of relationships that results in a characteristic pattern of organization.

Varela and Maturana (Humberto R. Maturana & Varela, 1980; Humberto R. Maturana & Varela, 1987; Varela, 2002) coined the term autopoiesis ("self-making") to describe the self-organizational nature of living systems. They point out that "the most striking feature of an autopoietic system is that it pulls itself up by its own bootstraps and becomes distinct from its environment through its own dynamics in such a way that both things are inseparable" (1987, p. 46ff). According to their view, living systems differ in their structure but are similar in their organization. A living system as a *unit of interaction* with a circular organization is maintained by the unbroken continuation of this organizational cycle. Consequently, "that allows for evolutionary change in the way the circularity is maintained, but not for the loss of the circularity itself" (1987, p. 9). The maintenance of self-referential self-organization creates autonomy as all components of the autopoietic web of interconnections are produced within that web, even if molecular building components are introduced through the semi-permeable cell membrane. Maturana and Varela expound, "That which is not in it is external to it or does not exist."

However, while the organisation remains stable, living systems are open systems which depend on an influx of matter, and the physical components are continually broken down and reassembled. Capra refers to that process as "continual embodiment" (Capra, 1996, p. 160). This openness to material influx, however, does not impair the stable, closed form of inner organisation. This organizational autonomy is, according to Maturana and Varela, the feature which distinguishes a living system from a non-living system. Life is not a property of material components but a characteristic of a particular form of organization, namely a self-referential, structure-determined, autopoietic organization. In this view, a virus is not a living organism, as it lacks this inner form of organization. A virus is but a chemical message that is in need of exactly that metabolic function of a living host cell to create an effect (Capra, 2002, p. 10).

Given these autopoietic premises, life always requires a network, a weblike pattern of organization whose sustenance creates an identity of being and doing. Being and doing is one and the same at an existential level or our existence. To be alive is an active process at every moment. The maintenance of the inner organization is the specific form of being.

Despite this autonomy of inner organization, the system is defined by its boundary with the environment. Between the two exists a close interconnection, as all living systems are open systems (Humberto R. Maturana & Varela, 1987). In *Autopoiesis and Cognition – the Realization of the Living,* Maturana and Varela make very clear that the circular organization of autopoietic functioning is closely interrelated with the environment and is heavily dependent upon the connection with its environment, as "they exist in ambiance" (1980, p. 9). However, the inner organization of a living system can create a stable organizational survival structure that may be limited in its adaptive capacity. In that way, a living system will relate to its environment in an organizationally structure-determined way to maintain its integrity. What usually makes for continuity can turn into rigidity under changing environmental conditions. It would be most instructive to see under which inner or outer conditions living systems are able to modify their inner organization and build new adaptive capacities to different environments, without losing their identity as living organisms. Consequently, all forms of life need to be understood in close relationship with their surrounding ambiance, environment, or encompassing reality. One could say that a system becomes a system by building a specific kind of inner organization which differs from its environment and takes place within particular boundaries.

Maturana and Varela define the distinction between physical and biological phenomena by the difference in relationships. Physical phenomena develop relationships among static components whereas living phenomena develop relationships among *processes*. Living systems appear to connect the stability of structure with the fluidity of adaptable organization. Gregory Bateson insisted that the language of nature and the living world is a language of relationships (Bateson, 2002). The movement in relational processes allows for novelty, creativity, and change on a time scale that is crucially different than that of inanimate matter.

The foregoing also sheds new light on the way of seeing intelligent or mindful behavior. Maturana and Varela identify the process of cognition with the circular process of life. In that way, the very process of life *is* the intrinsic intelligence of life. It is this uninterrupted way of relating and re-relating to inner organizational processes and environmental states that makes for mental processes called cognition.

Note, that the integration of the autopoietic process as essential to knowing goes beyond the idea of cognitive thinking, beyond the idea of needing a brain for the mind to exist, and beyond the idea of thinking as the defining criterion for intelligence. In the human world, conceptual thinking and its expression in talking or writing may be part of the activity of the mind, but at the same time, acts of perception, emotion and doing are indispensable parts of the mindful relational activity which sustains life. Mind here becomes *a process of life* that is not primarily related to the brain as an anatomical structure but rather emerges from the integrative operation of the nervous system, immune system and endocrine system (Capra, 1996, p. 176). Mind is an interactive process that is no longer related to the structural brain but emergent from its interaction with its surroundings. Intelligence is the capacity to use previous life experience and apply it to novel situations, thereby creating a new way of relating to the external reality.

Introduction into enlistment of Kabbalah

In my work as a psychotherapist and traumahealing teacher there is a constant need to provide a good enough holding space, inviting containment, or energetically-felt serenity that transmits to the clients. Although the client may not pick it up consciously, the mirror neurons within the autonomic nervous system of the client model the therapist's inner state and indicate arousal states or calmness (Gallese & Goldman, 1998). As the client models the inner state of the therapist, it is essential that the therapist stay centered, rooted, grounded and calm. In other words, although the traumatic arousal of the client' autonomic nervous system is contagious and is modelled by the therapist's autonomic nervous system the therapist still has to find a way to keep his own autonomic, self-regulatory processes down-regulated.

However, as mentioned above, any system tries to maintain its inner structure, as the quality of its organizational processes safeguards the very existence of the system - its survival. For that reason, systems respond in a self-referential, structure-determined, autonomous, selective way to outer stimuli to maintain the organizational identity. Therefore, we usually relate to what we already know without going through the motions of complex adaptive processes. We can relate to what matches our inner structure and organization of experience. Healing is a change that requires a re-organization and re-integration of the inner structure. It has a direction towards wholeness and completion. To get into a relationship to wholeness requires a connection to a larger holding system that will prevail once our inner organisation is re-structured. This is no small endeavour as the system will try to maintain its current inner structure which has so far insured survival during all positive or adverse experiences of life.

The stability of the inner organization of a living system is an integral part of its being. In order to change this integral process of existence we need to provide conditions for its inner, almost intimate, transformation to take place. Without stability, in the form of a solid holding from outside, the transformation of the inner organization may be experienced as a lethal endeavour and may actually result in death. In this critical situation, safety and holding has to come from outside. Change is enabled by favorable conditions in the environment or by the creation of a context safe enough for change. The provision of a larger system, that provides safety, stability, integrity, and reliability from outside, allows for renewal of reorganization.

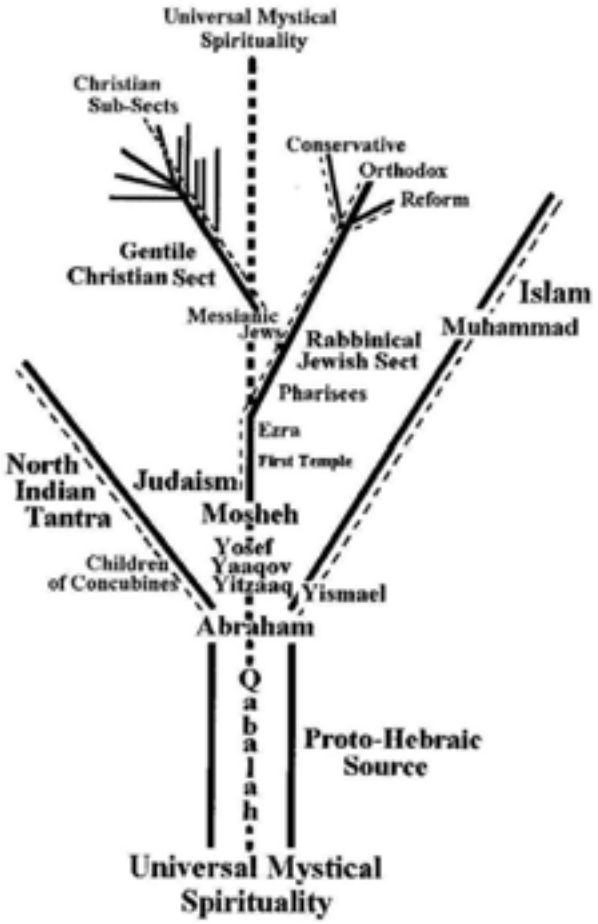
When it comes to human change processes, the envisaged holding can take different forms at different stages of biographic bio-psycho-spiritual development. In childhood it may be caretakers; later on friends, partners, psychotherapists, consultants, religions, nature, routines, rituals, behaviors, etcetera, that carries one through this organizational restructuring.

Although the nature of the holding may vary from person to person, the longstanding positivistic denial of our spiritual core meets with increasing anger, spiritual hunger, and dissatisfaction. Especially in the last few months, I see in my seminars a clear demand for the inclusion of the spiritual. As Kabbalah claims to impart the Universal Mystical Heritage of Humankind (see below) and – in its oral tradition – precedes the Bible and any other mystical or religious tradition, I choose it as an explorative starting point for understanding the "larger" system. As will become clearer in the following paragraphs, Kabbalistic mystical knowledge is seen by some as the seedbed or spiritual matrix of all spiritual and religious systems to come.

Kabbalah

The word Kabbalah is derived from the Hebrew word “receiving” meaning “welcoming of God” (Feldman, 2001, p. 23). In the following, I will refer to the mystical Kabbalah, as opposed to the magical or practical Kabbalah. According to Feldman, the mystical Kabbalah is assumed to contain the universal mystical heritage of humankind and precedes any other religion, whether it be Hebrew, Judaism, Christianity, Islam, or Tantric Buddhism. Kabbalistic wisdom is assumed to feed into virtually all mystical sub-branches of the world religions (see Figure 1.1 cited from Feldman, 2001, p. 29). Its universal claim is based on premise that “*the Divine Source alone exists*” (p. 27), a statement that is more radical than the

FIGURE 1.1 Tree of the Children of Abraham



idea of monotheism. Feldman points out that the term Quabalah, as he writes it, “alludes to a dynamic state of direct communication and mystical union of the individual soul with the Divine” (p. 23). In his view, the early Hebrews did not live in our contemporary dualism of God there and the mundane world here. As “the Divine Source alone exists,” everything is in its very nature, God. The commonality between all the different mystical traditions of the

world's religions is reflected in "the primacy of love, surrender, and discrimination as the means for spiritual awakening from dualistic sleep" (Feldman, p. 28). Mystical traditions guide the awaking consciousness to ascend through different reality planes to finally merge with the Divine. In that respect, Kabbalah offers a map of ascending stages of consciousness and thus pays homage to the physio-spiritual entirety of all creation.

Kabbalah offers a metaphoric chart, called the "Tree of Life", to explain the inherent relationship between embodied human consciousness and the "Mysterious Unknown at the Roots of all Things." .It appears that the mysterious escapes our common, exclusively goal-oriented, over-focused daylight rationality, verbal language and sequential reasoning just as our psychological shadow will always be existent in the shadow and thus inaccessible to our daylight consciousness.

If we use our bright, analytical daylight consciousness to explore the unconscious part of our existence, it is as if we use a torch to find the darkness in the dark. Wherever we point the spotlight, the darkness is dispelled and we can never have an original experience of darkness. Similarly, we will have to revise our epistemological tools to relate to the mystical, transcendent part of the Kabbalistic messenger. As the divine is everything there is we may turn to every manifestation of our phenomenological lifeworld and engage in finding a way of relating to its nature. As the divine is everything around us and within us it may escape our noticing, similar to the set of twins who start the intrauterine argument of whether there is something like a "mother" and life after birth. Whereas one finds no evidence for life after birth and the existence of a mother, the other relies on hearsay and hears a distant, muffled singing which (s)he takes to be a manifestation of his mother's presence. Similarly, the proverbial fish who cannot account for water - we may end up with a rather intellectual, written and metaphoric description of the Divine, as a crude approximation of its actual reality. St. Teresa of Avila's attempt to make her intimate relationship to the divine intelligible to her contemporaries gives testimony to this struggle (Avila, 2004).

Shulman (2004, p. 24) resorts to the following present-day drawing as a means for understanding the relationship with our source, or encompassing holding.

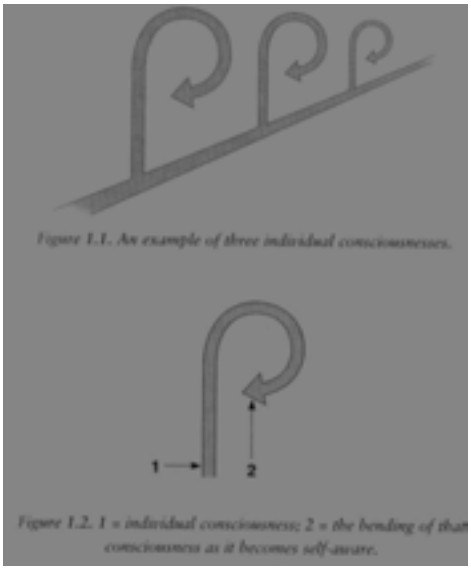
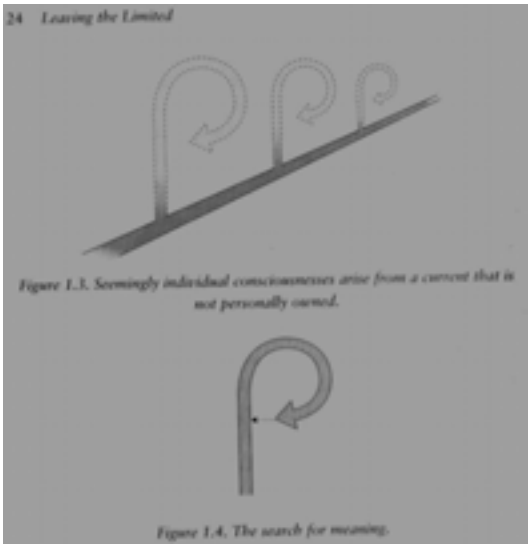


Figure 1.1. An example of three individual consciousnesses.

Figure 1.2. 1 = individual consciousness; 2 = the bending of that consciousness as it becomes self-aware.



24 Leaving the Limited

Figure 1.3. Seemingly individual consciousnesses arise from a current that is not personally owned.

Figure 1.4. The search for meaning.

In Shulman's view (2004, p. 24), consciousness can be represented by a bent arrow. As our daylight consciousness is identified with the tip of the arrow we may end up looking at ourselves oblivious of the root of consciousness. As long as we stay within the confines of our habitual inner organizational structure and thus in the closed circuitry of self-referential autopoisis, the common holding escapes our perception. The expansion of our perception to our inner participation in the collective divine substratum seems to be a more promising approach. Kabbalah teaches about an inner reality and relationship that is secondarily also reflected in the material world around us. Kabbalah is about this participatory relationship between ourselves and the existential source of *all* creation.

Just as the root of consciousness emerges from a source unknown, Kabbalah, which appears as a participatory principle, seems to emerge from an oral tradition and later from a number of ancient texts of unclear origin. The authorship of these texts is unknown and what is referred to as different "books" are very often single sheets of paper of Hebrew text which have never been printed (Kaplan, 1997).

What still exists of these sheets of paper is spread in libraries all over the world, far from being a coherent body of interlocking texts. Some of the most primary or original texts, according to the work of the Chariot study group, are the Sefer HaTorah (Books of the Law), Sefer HaShmoth (Book of the Names), Sefer Yetzirah (Book of Formation), The Sefer HaZohar (Book of Splendor), the Ma'aseh Merkabah ("Work of the Chariot"), The Qur'an, The Peshitta (Gospel), the Etz HaChayim (Tree of Life). For further differentiation see Feldman, 2001, p. 53ff. These primary "books" are very often just one page of ancient

Hebrew texts that allow for a myriad of interpretations and ceaseless commentaries. The complexity of the texts originates from the fact that in the Hebrew alphabet, the twenty two graphs or letters were not considered pure symbols but *real designations* of "different states or structures of the one cosmic energy" (Suarès, 1992, p. 12). They do not, according to Suarès, just symbolize a reality; they *are* direct manifestations of that reality.

Hence, reading is not a symbolic process but the finding of an actual relationship to a particular part of cosmic expression (see also Appendix below on 'The function of text in early oral cultures'). This makes reading a creative and inspiring act where the vowels have to be placed in the structural layout of Hebrew alphabetic consonants. This filling in requires getting into relationship with the cosmic structural energies as primarily represented by our relationship to breathing and the surrounding air. The interplay of structuring consonants and formless vocals, in combination with the intent of the readers, and their vocalizing, their quality of inhalation and exhalation, *creates* the phenomenon of consciousness. Thus, reading becomes a practical way of relating to the divine and boosts the personal development of consciousness. The intonation of reading becomes a "dynamic state of direct communication and mystical union of the individual soul with the Divine".

One of the foundational Kabbalistic texts, the *Sefer Yetzira,* is believed to have been "received" in biblical times and first references to it can be found in the first century BC (Kaplan, 1997). The *Sefer Yetzirah* (Book of Creation) exists in different versions. The shortest version is only 1.300 words and the longest about 2.500 words. Around such a text of structural cosmic energies many interpretations evolved through rabbinical dialectic, different intonations and interpretations and were finally laid down in the Talmud. However, Feldman notes that the Karaite movement, a group of Persians revolting against Rabbinical Judaism in the eighth century CE, rejected the Talmud "as a conspiracy of the rabbis to separate ordinary people from the simplicity of the Torah" (Feldman, 2001, p. 37). The intention of the mystical Kabbalah is to introduce the novices to "the wonderful possibilities for deep spiritual awakening, intensified devotion, and selfless service to the Divine Will" (Feldman, 2001, p. 23) rather than confining them to engaging in limiting and constraining religious, rule-base practice. Rabbi Schneur Zalman of Liadi explains that

> we are a veritable amalgam of opposites, comprised of two forces with opposing visions of how we should think, feel, speak and act. … The animal soul is the

> materialist, desiring the physical, the here and now. The G-dly [(sic) added] soul, by contrast, is of a transcendent, spiritual nature, yearning for that which lies beyond the pale of our physical existence, longing to be one with the Source of all things (Kehot Publication Society, 2004, p. 13)

In Feldman's view, likely practices to realize this intention of unification with the divine source were "ablution, prostration, invocation of Divine Names, devotional singing, prayer offerings, ritual use of sacraments and sacred regard for the elements, community-building rituals based on the mystical significance of rites of passage and seasons of nature, and the special treatment of guests" (p. 27). In this sense the Kabbalah is also a practical guide that defies later encoding of behavior as found in the exegetic texts of the Talmud. The practical application of Kabbalistic practices can be found in contemporary books intended to reach a wide audience (see for example Roland, 2005; Schusterman, 2003; Shulman, 2004).

For the purpose of this paper it is interesting to understand that the metaphoric and illustrative pictures and descriptions of the Kabbalah describe a four-fold reality that mostly lies in the meta-physical. Like the Tibetan Book of the Dead or current Buddhist teaching, which gives an account of the different Bardo states in the hereafter before assumed reincarnation (Evans-Wentz, 2000; Khenchen Thrangu Rinpoche, 2004), the Kabbalah offers an encompassing account of overarching realities that comprise the totality of our somato-psycho-emotio-spiritual existence. It describes a reality that is definitely beyond the realm of mainstream psychology and positivistic science. Writings about the Kabbalah clearly widened my scope beyond the confinement of uni-dimensional thinking and experiencing. The kabbalistic cosmology offers a comprehensive, unified view that expands our reality beyond the sensuous and the immediate. As it is cosmological in its claim, it offers a wholistic description of all existence. It comprises the totality of reality.

As sequential language makes it difficult to express the totality of wholistic and holistic reality, Figure 2 may stir the imaginative mind of the reader to relate to the phenomenon and understand the reciprocity.

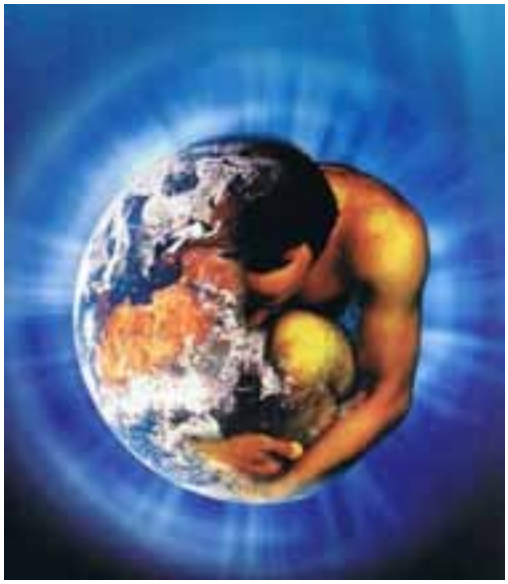


Figure 2: Detail of an advertisement from the Center for Human Emergence/Don Edward Beck, issued in What is Enlightenment? Redefining spirituality for an evolving world, Issue 35, January – March 2007.

The need to understand the reciprocity of all reality is mentioned in diverse fields and disciplines. Jim Jealous, DO, who is one of the leading developers of osteopathy in the cranial field, criticizes our view of reality as manifest in the healing profession. From his point of view, we need to come to a more integrated view that comprises science *and* philosophy. He is convinced that the osteopath needs to "consider questions of the soul, death, transcendence…." Jealous asserts that

> one must see one's position relative to the Whole and not try to 'destroy the disease' (allopathic) but support the health of the Whole. … We need to focus not so much on cause and effect but on the priority of the Whole as it moves in relation to a Great Mystery.

> And further:
> Giving tea tree oil for nail fungus instead of a potentially toxic chemical is a much more natural remedy, but it's still not an alternative view of healing. Any form of "mindset" that goes after the disease to override it is only partially alternative. What supports the Whole at its interface with the wisdom of the natural world is alternative. It supports the Health, the non-divisible, the

> transcendent wisdom of life, first. … Most alternative healthcare is still re-focusing into an allopathic model. (Jealous, 1997, p. 1ff)

In a similar vein, Bernstein urges us to get into a different relationship with the ecospiritual world as an embodied acknowledgement of the oneness of creation. He challenges us to overcome the limited, dangerous confinement of the intellectual mind. He criticizes the psychological Western idea of an ego construct as *the* organ of inflated, debilitating rationality and coins the term "Borderland consciousness" as the current expression of the collective consciousness moving towards a "transrational reality". Bernstein explains that "there are thousands of people in our culture – people I refer to as 'Borderland personalities' – whose transrational experience is nothing short of sacred" (Bernstein, 2005, p. xvi). The urgency of the author's appeal has a popular analogue in Al Gore's mission for the development of an ecological consciousness (Gore, 2006).

Nobel laureate Gore reminds us of the Apollo 8 mission, where crew commander, Frank Borman, on Dec. 1968, read from the Book of Genesis during an expected radio silence. In this moment, a photo, which became known as the "earth rise", was taken which later on "exploded into the consciousness of humankind" (p. 12) and instigated the now globalizing environmental movement. In systemic terms, the need to acknowledge the relevant, encompassing system can no longer be denied. The encompassing reality forces its way into the consciousness of humankind irrespective of the reservations of our rational mind. Jean Gebser (1995a) offers a very impressive description of the evolution from rational to integral and aperspectival consciousness that includes the totality of reality.

In this context, it is amazing to see recently, workshop participants reporting about increasing, almost universal, anger which seems to have no specific cause. This anger is described as an "existential" and "huge" one. People are puzzled about the enormity of this anger and can not attribute it to anything. However, when I start talking about our participatory spiritual nature in non-religious neutral language there is immediate nodding of heads, confirmation and relief in these people.

This makes me wonder if this anger can best be understood when reframed as an existential anger resulting from the collective social denial of our spiritual roots. The workshop participants feel uneasy about common psychodynamic or psycho-developmental

explanations. They appear to be relieved whenever I widen the context of this anger into the existential dimension of our spiritual nature and interconnectedness with assumed source. It seems that the tolerance threshold for exclusion of transrational, spiritual dimensions is ever lowering and the denial of our spiritual roots is ever more resented.

As Karlfried Count Dürkheim pointed out in the 1980s: “Reduced to a functionary of a rampantly growing ‘consumer society and meritocracy’ which follows its own odd and solitary laws, the human of the West has missed the own inner course to a degree that by now a rebellion of the depth-layers of his soul begins to enforce a world historical turn-around of his mental development” [translation by author] (Dürckheim, 1989).

In that situation, knowledge of the Kabbalistic cosmology may help us to reclaim our full human nature, the inner and outer reality of our existence, and the interconnection of the different qualitative, immaterial realities or systems. As a starting point, Kabbalistic cosmology and thinking may provide an outline for a reality that is beyond the immediate (con-)sensual reality of our senses and our cognitive safety cage, which Ken Wilber refers to as the rational consciousness structure (Wilber, 2006). Revising the ancient ideas of Kabbalah, cast in more accessible contemporary language, may pave our way into a deeper understanding of the holistic, interconnected nature of ourselves, the world around us and the realities around our world, as well as the inner realities we strive to develop. All this appears to be basically one whole self-organizing unit and we will need to grasp how the compartmentalization of different realities is yet an integral part of a whole. Although we draw mental distinctions, the diverse interlocking systems are inseparable, an in-dividuum. Or, as the founder of the club of Budapest, Ervin Laszlo, pronounces:

> the cosmos is an organic, highly coherent, strongly interconnected integral system…. Space and time do not *separate* things. They *connect* things, for information is conserved and conveyed in nature at all scales of magnitude and in all domains (Laszlo, 2006, p. 35).

Let us see if we can get a taste of the different qualities involved in creating the whole.

Kabbalisic tradition claims to give a coherent and comprehensive account of the realities that make up every aspect of our existence. It describes different energetic qualities that manifest

in different spheres and forms. This totality of different energetic qualities brings about the different phenomenological worlds as we experience it in all different phases of embodied or dis-embodied existence. However, as original kabbalistic texts are written in metaphoric, cryptic language, immediate understanding in today's world and mindset is almost impossible. I had to resort to "popular" present-time texts that offered intelligible transliteration into contemporary understanding and mindset.

Kabbalistic Cosmology

Kabbalah's central idea is the basic premise that there is nothing except God. Everything is a manifestation of God and there is virtually nothing that is not the divine. What a simple statement and yet how difficult to appreciate! What makes this statement so critical is the further elaboration that a transcendent God (Ayin) is experienced as "no-thing" (Halevi, 1977, p. 7). But how do you experience a 'no-thing' in a world that is almost entirely held in mental captivity by the ubiquitous fascination of material things?

No-thing-ness is the result of God's withdrawal (tzimtzum) from a tiny part of his own body, which is described as pure divine light, or En Sof Aur. The prime cause for this creative act is the fact that "God willed to see God" (1977, p. 7) and so he withdrew (Zimzum) from a tiny little part of himself to create an empty space of Grace for the divine energies to manifest as ever denser qualities. Hence, out of the uppermost of the four worlds of existence, Azilut, which means "to stand near", God's energetic qualities emanate into a void. As all of creation takes place in this void, this empty space offers the possibility of (human) being. We experience the divine as a basic nothingness from which different reality manifestations come into being.

Out of the Absolute Nothing, different aspects of God emanate as different experiential forms and energies. These different forms can only be experienced in different forms of reality or states of consciousness. They can not be experienced casually or at will. Thus, our life is suspended between the creative tension of the transcendent, En Sof, and its manifested, immanent qualities of our physical, psychological and spiritual existence.

En Sof manifests as an entering divine beam of light. It can be experienced in all creation and all levels of reality as an orderly progression of 10 different qualities, listed here in the Hebrew followed by the English translation: Keter (Crown), Hokhmak (Wisdom), Binah

(Understanding), Hesed (Judgment), Gevurah (Mercy), Tiferet (Beauty), Nezah (Eternity), Hod (Reverberation), Yesod (Foundation), and Malkut (Kingdom). These names are not taken literally. They are rather descriptive portals into an experiential reality that reflect levels of consciousness. They are inner experiences. The letters of the Hebrew alphabet are like locks that require those unversed in Kabbalistic knowledge to find the key for accessing the qualities of splendor and beauty. According to Glazerson, the qualities are concealed within the letters (Glazerson, 1984) and probably within the actual human being alike. The letters and names challenge us into a particular relationship to unlock their knowledge and reality, and to decipher the inner significance of their relationship. The pronunciation of the divine energies in letters, words and texts connects us with the rejuvenating effect of divine vitality, spiritual power and inner meaning.

The 10 different qualities of light (called sefirah, pl. sefirot) are interconnected by the 22 intertwined energies of the letters of the Hebrew alphabet. These interconnective energies bring four different worlds into being: Assiyah, the Universe of making and action; Yetzirah, Universe of internal feelings or formation; Briah, universe of creation; Atzilut, integrated Universe of the essential truth of God or emanation, which is a state of surrender and grace. Although the description of these different realms will vary according to the particular Zeitgeist, Jason Shulman's present-time descriptions may help to make these four worlds more accessible (Shulman, 2004, p. 20):

Assiyah: the universe that we consider our tangible, everyday reality. It is the physical world around us as representing our separation from the spiritual world, as the Garden of Eden, Heaven, Shambhala, Shangri-La, Vallhalla, Nirvana.
Yetzirah: the interior world which psychology usually deals with. It is the world of our inner experience, which represents the unstructured, intangible reality of an interior self. Entering Yetzirah requires a shift in orientation from outward to inward. Here the quest for knowledge, enlightenment, or connection takes place.
Briah: "This universe stands at the interface of Oneness and Separateness" (Shulman, 2004, p. 20). In this universe we are one with the creator and experience at the same time our uniqueness. Oneness and duality are experienceable realities. Briah contains paradoxes as it reaches into an underlying truth of "I am" as a unifying, containing matrix of all reality.
Atzilut: represents the unperturbed universe of God's unimpaired shining light, no matter what is happening. Atzilut is the omnipresent essence that is at the base of everything. This

fact brings God closer to us than we can ever think. We are God and in God and tapping into the quality of Atzilut is the completion of our return journey to our source and the concomitant healing.

According to Halevi (1977, p. 103), humans are the creatures who can reach through all the four worlds and participates in them. The four different worlds provide the matrix for experiencing ourselves in ever increasing density. The friction of embodiment helps to dim the Atzilutic light in our head to fade our prenatal knowledge and diminish our resistance in getting into the arena of Assiyah. We are meant to come from the "Upper Worlds" of Atzilut and Beriah and descend through the worlds only to ascend in a transformed way back to our source. In this way, it is assumed, we transit the different systems to create in the cosmos a sensitive place, the earth, for God to experience himself. Hence, intensification of sensitivity and consciousness makes us increasingly aware of our inner nature and participation in the divine. Hence, in the long run, it will be impossible to deny our divine core as this implies denying our true self.

As three of the designated worlds are intangible and veiled from our worldly Assiyatic existence, Kabbalah offers metaphorical, structural accounts, termed Jacob's Ladder and Tree of Life, to acquaint us with the qualities we need to explore, develop and integrate in our inner, experienceable reality. Seen in this light, the similarity with Swami Chandrasekharanand Saraswati's observation, "to help the soul and psyche experience reality, spirituality is required," is striking (Saraswati, 2008).

Part B: In-Depth

Juxtaposition of Systemic Theory and Mystical Kabbalah

After this introduction into Kabbalistic cosmology, I would like to juxtapose some aspects of the systemic and mystical approach. Both systems describe complex, interactional wholes as opposed to dissectional, singled-out aspects of reality. Due to this universal endeavour, both systems make ample use of abstract, metaphoric, sometimes figurative language. The comprehension of this language goes beyond the common, uni-dimensional, sequential, analytic focus and requires a change in our perception.

Our perception is commonly dominated by the perceptions stemming from the oculomotor region of our brain. As the eyes reach out in a linear way to the space in front of our body we

are locked into and driven by this forward perspective. Jean Gebser (1995a) marvellously illustrates the delimiting consequences for our consciousness when we stay identified with a perspectival focus, as the perspective is always a limited sector of the whole. Even taking different perspectives does not free us from this unintegrated, fragmented and compartmentalized perception of reality. Taking different perspectives may, however, offer different points of view and thus increase diversity, but says little about the comprehension of and participation in one unified whole.

Given this situation, I wonder how anyone can internally bring about full comprehension of wholistic realities which are being presented in sequential verbal or symbolic language. Heylighen and Joslyn explain that systemic theory is

> the transdisciplinary study of the abstract organization of phenomena, independent of their substance, type, or spatial or temporal scale of existence. It investigates both the principles common to all complex entities, and the (usually mathematical) models which can be used to describe them (Francis Heylighen & Joslyn, Nov 1,1992).

From my point of view, the mathematical elaborations of the originators of systemic thinking (see Bertalanffy, 1969; Weinberg, 2001; Wiener, 1948/1961) as well as Niklas Luhmann's ultra-abstract verbal language (see Luhmann, 1999), or the "hidden wisdom" (Hokhmah Nestorah) of the Kabbalistic scriptures which requires for its understanding the "key of esoteric knowledge" (Halevi, 1985, p. 11), challenge our capacity for wholistic, participatory understanding. An active, inner adaptation process is needed to come to a coherent, multidimensional experience (sometimes referred to as felt-sense or, in its elevation as felt-self), that is not pre-rational but post-rational. Post-rational has to do with altered modes of information processing that allow for simultaneous, parallel, integrative rather than sequential, serial, or dissecting processes of knowledge incorporation.

Ken Wilber asserts that the development of consciousness, although experienced as successive, possibly linear, stages of conscious development, takes place in a "space" (2006, p. 68). Within that space, which is consciousness itself, consciousness is self-referentially unfolding in stages.

Jean Gebser (1995b), who advocates an arational, aperspectival approach to future integral consciousness, assigns the rotating sphere as the representation of future consciousness. The rotating movement signifies the necessary integration of time as temporal aspects of development. This integration of time makes us transcend our current three-dimensional, perspectival, rational consciousness structure, which, according to Gebser, goes along with terms like “reflection”, “thinking”, “abstraction”, “imagining”, “brain”, “opposition”, “eye”, “seeing”, “looking”, “outward-oriented”, “goal-focused” , “directed”, “will”, “attainment”, “formula”, “measuring”, “causal”, “dual”, “space-bound”, “material”, “exhaling” (1995a, p. 173ff).

Consequently, truly wholistic perception will result in a different, integrating relationship with time, where the totality of time - what we consider to be past, present, future - becomes holistically experienceable in every moment of the now. The Dutch embryologist, Jaap van der Wal, expresses this necessity by saying: “The rose in the vase is not the rose. I have to include time in my image of the rose: out of seed to plant, to knob and flower, to withering, and so on (Jaap van der Wal cited in Shea, 2007a, p. 85). Similarly, van der Wal asserts that a human being in his beingness is always a person integrated over biographical time. The person can only be wholistically understood if I can perceive a person in his embeddedness with his total past, present and future.

Jean Gebser clearly asserts that this kind of integrative perception can not be “imagined”. It can only be “perceived” (1995a, p. 366). He uses the term “diaphane”, which may translate as “translucent”, to signify the new perceptual quality involved that reaches beyond the immediate and includes the totality of reality. The up-coming consciousness structure is thus related to the sense of inhalation and inner space rather than the one-sided orientation to the outside world (see also Schmidt, 2006).

One conclusion of the foregoing is that in order to engage in the systemic theory for understanding interconnected wholes as well as “understanding” Kabbalistic truth, we need to develop a participatory mutli-dimensional perception and dissolve our occulomotoric, over focused, perspectival over identification. Jerome Berstein elaborates that this perceptual shift implies an inclusion of “truth derived from other than rational sources” (2005, p. 19) (see also Abram, 1996). In his view, the inclusion of the “transrational” comprises manifestations of the collective unconscious, revelations from the divine and the integration of one’s inner

experiential world. We find similar ideas expressed by Bie (2003). Jaap van der Wal expounds that “ex-act”, detached and observing rational science, which is not “in-act”, not participatory and phenomenologically sensitive, cannot bring about the inner process required for this perceptual shift (personal communication on Dec. 22, 2007 in Limmen/Netherlands).

The propagation of inclusion of the transrational opens a gateway into research points of connection between metaphoric, mystical Kabbalah and abstract systemic theory. The divine can be understood as an extra system that is the encompassing environment for all the subsystems systemic theory tries to describe. On the other hand, mystical Kabbalah can be re-interpreted from a systemic point of view to make its message more accessible in present-day language and from the point of view of an evolving integral consciousness structure.

From a Kabbalistic view, creation is an ongoing process that serves the descent and ascent of human consciousness to participate in the self-experience of the divine and its continuous creative evolution. It may be worthwhile to find relevant connections between systemic theory and Kabbalistic descriptions that further the integral unification of our fragmented reality.

The integration of these two and further realities may speed up evolution of our conscious evolvability. According to complexity theory, an acceleration of evolution is due to the observation that the integration into ever more complex realities brings about a reduction of uncertainty (Francis Heylighen, 2007). The reduction of uncertainty is based on continuous selection, which is an exclusion of options and creates knowledge and experience that enhances adaptability to changing conditions. At the same time, selection creates links and workable connections which may bring about ever more adaptability, stability and flexible relationship with the environment. This entails a growing intensification of consciousness in the moment of now, as Gebser pointed out.

Immaterial organizational structure

A commonality of both descriptive systems is their focus on immaterial interconnectedness rather than the physical structure. It is, in particular, the systemic recognition of the physical composition of a system versus the *organizational* structure of a (living) system that allows the transference of systemic theories to the inner experienced realties of psychological, spiritual, or even divine mystical experience, as alluded to in Kabbalah. And, as an element of a system becomes an element due to its *specific relationship* with other constituent elements,

its function is completely dependent on its embeddedness within the delineating difference between system and surround (Luhmann, 1999, p. 43). Luhmann explains that in social systems, boundaries have the double function of connection and separation. However, particular elements may be excluded from passing certain boundaries whereas relationships convey effects across boundaries (p. 52). It is this boundary transcending quality of relationships which sustains the almost indestructible inner structure and reciprocity of living systems rather than the viability of its material components. This boundary-transcending quality of relationships also makes for the privileged "bonding" between the divine and humankind in the Kabbalistic system. The quality and nature of relationships supersedes actual manifestation of appearance. This explains the meaning of transformation along the Kabbalistic Jacob's Ladder, a metaphoric depiction of the interrelatedness of the four Kabbalistic realities, which not only comprises the divine, spiritual, psychological and material world but reaches holistically into the social, chemical, physical subsystems as we know them today.

Taking the inner relational structure as well as the dependence on surrounding, conditioning relations into account, there is a similarity between an integral systemic perspective and Kabbalistic cosmology. This comprehensiveness literally encourages an at-one-ment of the scientific and mystical worlds. The detachment from the physical and the acknowledgment of different spatial and temporal scales, as well as disembodied abstractness, offers the possibility of transcending boundaries and acknowledges interdisciplinary and intersystemic continuity and unity.

Boundaries and the in-between

The meeting point of different systems is their boundaries. This is a place where negotiation and reciprocal coordination, as separation or connection, take place. The negotiation, assessment, and appraisal of possible adaptation and connectivity are not easy processes, and require the coordination of an appraisal of behaviour, as qualitatively largely different realities check for interconnection.

Jerome Bernstein (2005) draws on the insights of chaos theory to understand recent phenomena in the human psyche and its interconnection with the surrounding ecosystem, nature. His concern is the degree of resonance of our psychic evolution with nature. In

Kabbalistic terms, this is the connection between the Assyatic with the Yetziratic worlds. He sees the maintenance of this connection as a prerequisite for survival and sustainability.

Bernstein claims that the rigidity of the Western ego-structure is out of step with the co-evolving surrounding environment. This creates a critical yet hard to handle situation that can not be resolved from within the system. Bernstein refers to the concept of complexity theory, where evolution in "'complex adaptive system' (CASs)" (2005, p. 52) takes place at the edge of chaos. From his point of view, we need the "transrational", or in Kabbalistic terms, access to the world of Beriah, as a mediating common ground that unites opposites and re-organizes dynamic structure. At this point, re-ordering of chaos can be likened to the adaptive association of one's own autopoietic dynamical states breaking down the isolated rigidity of the mental consciousness structure. Although Kaufmann makes clear that the upheaval of the "creative reordering phase" is driven from within the structure of the system itself (see also Kaufmann, 1993), the question arises as to what or which is the relevant system to look at? Systemic theory stops at the idea of self-organization without being able to describe the driving, uniting force behind it. In Bernstein's view, the evolvability of our intrapsychic evolution is related to "*our willingness to linger in that very uncomfortable liminal space*" (2005, p. 52). This is the space where boundaries of different systems meet. In that space we behold our not-knowing, non-understanding and stand at the edge of inner chaos, without prematurely clinging to our dominant inner (ego) structure.

It takes some skills to face that challenge. We need to bring to the task an extensive understanding of diverse forms of relating, which are often metaphorically described as *listening*. This qualitative listening is not just related to auditory processes but to a particular relationship to our body, psychological reality, environment, different states of consciousness, and other manifestations of our performance. We come to the conscious performance of in-act, or participatory approach to science and life, rather than an ex-act, or detached oppositional, approach to them.

Besides, a particular quality of relationship is needed that allows us to hold "the transrational terror of that threshold at the edge of chaos" (Bernstein, 2005, p. 53ff). The subsiding of that terror generates a sense of humbling awe and pervasive peace. It is experienced as "transition from profane to sacred space." It is the suffering of this internal moratorium on the edge of seemingly chaotic annihilation that poses the challenge when it comes to practical experience

versus mental reasoning. Our staying within that liminal space shakes the foundations of what we identify with and hold true, and reaches into the very essence of our sense of self. We cannot live through an inner moratorium and die out of our own self-regulatory, self-referential, autonomous, and thus systemic structure without a holding from the environmental supersystem. Kabbalistic cosmology complements our rational system by offering an explanation of its encompassing environment. It charts the territory where our rational consciousness structure fails to integrate and turns idle.

We can see from the foregoing description that the inter-boundary - the in-between - is a crucial coordination space, like a transformative cauldron, that transforms the quality of relational interaction “from profane to sacred”. The sacredness of the sacred appears from its functional integration into the whole. In that sense, boundaries are transcendent places where the transition or connection is negotiated creating relationship with the overarching wholistic totality. These may turn into places of integration into the larger system if reduction of chaotic and unrelated complexity takes place. This is usually done by selective processes that limit contingency and allow for relevant interconnection with the neighboring system.

The sustained interconnection of the four kabbalistic worlds and their continuous interaction, diversification and re-integration on all levels of manifestation is the act of creation. The overcoming of the over-identification with rationality, and thus the mind-matter split, reveals the nature of interconnectedness across dissimilar realities. This interconnectedness of systems is in systemic language, a two-way street which Heylighen conceptualizes as “upward and downward causation” (2007, p. 7). In Kabbalistic terms it is the bond between God and humankind. The hierarchical higher supersystem constrains the freedom of the subsystem, whose properties feed back on (upward causation) the properties of the whole. In Kabbalistic texts, this interconnectedness is laid out as an ongoing process of reciprocal creation which is based on the participation of the human being in the divine act of creating. It is the idea that the superprinciple God is immanent and transcendent at the same time. The inner and outer development of humankind is in relationship with a boundary-transgressing creation principle – God.

Emergence

Emergence is the scientific term for what is described as the phenomena of ongoing creation in the kabbalistic world. Let us look at a piece of complexity theory, a modern form of creation myth, as put forward by Waldrop:

> These agents might be molecules or neurons or species or consumers or even corporations. But whatever their nature, the agents were constantly organizing and reorganizing themselves into larger structures through the clash of mutual accommodation and mutual rivalry. Thus, molecules would form cells, neurons would form brains, species would form ecosystems, consumers and corporations would form economies, and so on. At each level, new emergent structures would form and engage in new emergent behaviours. Complexity, in other words, was really a science of emergence (Waldrop, 1992, p. 88).

The acknowledgment of the encompassing realities of the four Kabbalistic worlds puts the idea of *emergence,* in systemic language, and *continuous creation,* in Kabbalistic language, in a larger, unified context. Awareness of these Kabbalistic systems makes Waldorp's enthusiasm about the discovery of "*fantastic* amounts of similarities [between scientific disciplines, added]" which even lead to the emergent vision of "a unified science" not any smaller, but redresses its scale.

Arising questions for further inquiry

Heinz von Foerster's remark that hard sciences deal with soft issues and soft sciences deal with hard issues (Foerster, 1999, p. 17) alludes to the complexity of ever changing systems that are just as much driven from inner relational states as from outer relationships with relevant environments. Consequently, it is no wonder that every rational inquiry into a highly interconnected and complex reality will stir ever more questions and drive us to the limits of our methodology and epistemology.

Besides, the claim of universality, cosmological totality of systemic theory, and Kabbalistic scriptures respectively does not exactly reduce complexity. As we cannot leave our cosmos, we stay within our inner and outer systems of experience. In that respect, an epistemological added value may arise when we acknowledge the limits of our sequential, language-based heuristic and engage in the inact experience of immediate participation. The following

questions are only pointers to a reality that cannot be articulated but can only ultimately be found individually in the inner experience of the engaged and engaging inactor:

- How can wholeness, like Beriatic Oneness or systemic interconnectedness, be perceived and experienced?
- What are relevant modifications in our perception and how can they be brought about?
- In what way do the Kabbalah describe systemic ideas and does system theory validate Kabbalistic ideas?
- Where are the intersections and where are the differences?
- How can the interconnection of different systems be portrayed?
- What behavioural consequences follow from a deeper understanding of the nature and quality of interconnection?
- What is the relationship between downward and upward causation in different systems or the four Kabbalistic worlds?
- What makes for interaction and integration rather than separation at the boundaries or meeting points of different systems or worlds?
- In what way is the experience of wholeness related to the integration of ever more, like never-ending expansion of consciousness, or an intensification of sensitivity and consciousness ?
- How is the interconnection or separation between the collective and the personal seen?
- What phenomena describe system theory and Kabbalah in relation to outer and inner realities?
- What do they say about Universality versus Individuality?
- What makes for the unifying agent and the interrelationship between lower and higher systems?
- What moderates transitions from one system to the other?
- What will we learn by applying the neutral language of systemic thinking to the spiritual accounts of Kabbalah and the metaphoric language of Kabbalah to system theory?
- How can we bridge the gap between these two descriptive systems to integrate them both in one wholistic view of reality?
- Where are the limits of verbal/experiential description?

These questions are not only relevant for individual, or dyadic people-work, as practiced in psychotherapy, counseling, consulting, education, nurturing, leadership, or conflict-resolution,

but also for the plethora of contemporary social, political, religious, spiritual, economical, ecological and scientific disciplines as well as relevant transitions and relationships between theses systems. Transformations are hardly easy or painless. They are *experienced*, as annihilation or dying. We die out of one system and get born into another. Ultimately, systemic theory as well as Kabbalistic metaphor will have to describe the universal living/dying/living/dying circle alluded to by Clarissa Pincola Estés (1995). This cycle is the experiential equivalent of the cosmic breathing, referred to in Kabbalah as ongoing primordial re-inspiration. Participation in this cosmic contraction and expansion connects us with the basic rhythm of life. This is reflected in our constant inhaling and exhaling. Or, in other words, if we refuse to die we may get killed. In Michael Shea's language this becomes: "If you do not change you die. If you change you are dying as well. That is the terror of change" and "If God breathes in, we breathe out and vice versa" (Shea, 2007b). Is there a better expression for intimate reciprocity of interconnected systems?

Part C: Applied

Practical consequences

The writing of this paper naturally fed back on my inner reality as well as the outer behavior and the experience of my workshop attendees. It changed me in the following ways:

1. To overcome oculomotoric overidentific-ation, I use exercises to orient workshop attendants to the three-dimensional perception of their body. Michael Shea, an American teacher of Craniosacral Biodynamics, drew my attention to the relevance of this perceptual shift as a precondition to develop a felt-sense of three-dimensionality which is a prerequisite to experiencing wholeness. The perception of spaciousness and different qualities of space allows one to move from a felt-sense to a felt-self and thus to increasing integration of perceptual wholes

2. I speak more frankly about the spiritual dimension of our being nature and see the quality of the in-between space in the actual seminar room soften and change. The acknowledgment and re-owning of our spiritual origin, as mentioned above, appeases restless attendants who can no longer bear the denial of the totality of personal experience.

3. When the processes get difficult in teaching or therapeutic interaction I *drastically* slow down the ongoing interaction. Sometimes the slowing down reaches almost complete standstill in order to allow for a refinement of perception. This helps me to disengage from my intention and reset my perception. I invite an ever subtler perceptive refinement of the current in-between space in the moment of *now* to explore the current reality in the liminal space. By attending to this piece of immediate reality, I usually attain a shift in somatic, emotional, or interactional systems. Finer, spiritual energies become engaged. This may go along with a silence that turns into stillness and allows for the influx of unifying forces from Beriah. The inquirer experiences a touching moment of unifying connectedness.

Appendix

The function of text in early oral cultures

(Extract from Knowledge Area 702 on *Theories of Consciousness*)

David Abram (1996) directs our attention to the non-human forms of consciousness in indigenous, oral cultures. He explains that it was not the shamans' primary task to heal people but to keep watch over the relationship of the community with the non-human forms of intelligence found in the surrounding nature. These forms of consciousness included ancestors, animals, plants, stones and water and even the all-pervading and surrounding air. Wind and air were seen as a sacred power that can and, due to its holiness, should never be tracked or recorded. This sacred and all encompassing power "suffuses all of nature, and is that which grants life, movement, speech and awareness to all beings" (Abram, 1996, p. 230). It surrounds the totality of our being as enveloping sky and different forms of wind. Abram brings home to us the connection of our verbal and mental processes with the element air. He makes clear that "spoken words are structured breath" and cannot consequently be separated from the medium that surrounds us. He elaborates:

> Indeed, the ineffability of the air seems akin to the ineffability of awareness itself, and we should not be surprised that many indigenous peoples construe awareness, or "mind," not as power that resides inside their heads, but rather as a quality that they themselves *are inside of*, along with other animals and the plants, the mountains and the clouds. (Abram, 1996, p. 227)

Abram reports that in the Navajo tradition, the mind is not a human possession but is imposed upon us by the encompassing world, by the air we breathe. He makes clear that our individual consciousness, the air within us, is simply part of the "enveloping Air" that is considered sacred and the source and origin of all creativity of life. Abram points out that the terms "psyche", "soul", "anima", and "spirit" can all be etymologically derived from the word "air" or breath", as the encompassing, enveloping, invisible quality around us. He posits that

> it is difficult to avoid the conclusion that, for ancient Mediterranean cultures no less than for the Lakota and the Navajo, the air was once a singularly sacred presence. As the experiential source of both psyche and spirit, it would seem that the air was once felt to be the very matter of awareness, the subtle body of

> the mind. *And hence that awareness, far from being experienced as a quality that distinguishes humans from the rest of nature, was originally felt as that which invisibly **joined** human beings to the other animals and to the plants, to the forests and to the mountains. (Abram, 1996, p. 238)*

I do not think that evidence-based science can ignore the collective, ancient experience of consciousness as large scale, transpersonal reality. The current idea of Gaia - the earth - as a living organism, is a modern version of this partially animistic concept. However, the actual connection with the individual human being is still missing in this broad idea of large-scale, transpersonal consciousness. Abram offers a compelling argument that the connection between transpersonal consciousness and the individual experience of consciousness occurs in the interplay of breath, vocalization and its relationship to the reality of letters.

The ancient texts of the Hebrews used an alphabet that had no vowels. Hebrew writing was always incomplete. On the one hand, it marked the transition of oral cultures to literate cultures where the emergent form of written language was supposed to carry the wisdom of the ancestors. On the other hand, it should not and could not "concretize the ineffable, t*o make a visible likeness of the divine*" (Abram, 1996, p. 241). The vowels are created by the sound of the breath, which is basically a structured flow of air, in contrast to consonants, which are created by mechanical movements of lips, teeth, tongue, palate, or throat. For that reason, it is the vowels that reach into and participate in the mystery of the holy wind, spirit, and thus the source of life and awareness.

The Hebrews left the vocals out of their writing in reverence to the invisible. Thus, they had to be generated each time anew when reading, or rather relating, to a text. And as the vowels where not signified in the text, every reader added various vocals according to his own flow of reading. This generated different meanings and left ample space for different interpretations. Kabbahlistic texts are the inspired interpretation of different intonations of the Hebrew Bible. The reader had to find a way of connecting to the invisible breath present in the moment of reading. A creative interplay between vocals and set consonants ensued. This was the re-enactment of inspiration as a vital part of the process of "reading". The reader had to inspire the text. Consciousness, interpretation and co-gnition appeared to be an act of instantaneous co-creation and relationship of reader and the invisible. Reading was a moment of retrieving formless air, structure it through inhalation into one's body and exhale it as

vowels into a set of consonants. This process generated conscious meaning, knowledge and in-form-ation. In this sense, this process may serve as one model for the generation of consciousness. Consciousness occurs at the interaction of a somatic structure with the formless reality that is described by traditional religious texts as spirit. Consciousness becomes an act of participatory co-creation of structuring the formless.

In our language today, we could say that consciousness is an phenomenon at the interface between a particular structure and a volatile reality that is newly created each moment. The active engagement of the reader in the reading process is a key in the generation of consciousness, as well as in the mindful relationship to the process of intonation. The ancient potential of this act may become clearer to a mind-ful academic when listening to Abram's explanation:

> By meditating, when reading, not upon the written phrases, or even upon the words, but upon the individual *letters* that gaze out at him from the surface of the page, the Jewish mystic could enter into direct contact with the divine energies. By combining and permutating the letters of particular phrases and words until the word themselves lost all evident meaning and only the letters stood forth in all their naked intensity, the Kabbalist was able to bring himself into increasingly exalted states of consciousness, awakening creative powers that previously lay dormant within his body (Abram, 1996, p. 245).

In the Hebrew alphabet, the twenty two graphs of the alphabet were not considered pure symbols but rather real designations of "different states or structures of the one cosmic energy" (Suarès, 1992, p. 12). They do not, according to Suarès, just represent or symbolize a reality; they are direct manifestations of that reality. Hence, reading is not a symbolic process but the finding of a relationship to a particular part of cosmic expression. This makes reading a creative and inspiring act where the vowels play around the consonants, the structural energies. This interplay of the structured with the formless, in combination with the intent of the reader and his or her intonating relationship to breath, creates the phenomenon of consciousness.

What can we learn from the foregoing description? Perhaps our inability to find the relevant system for understanding consciousness has to do with disconnection from the sensuous

environment and the ensuing detachment from vital, embodied and very basic experiences of natural reality. We are locked into our (academic) heads. Perhaps we are suffering from an uninspired intellectual Gnosticism that has lost its “co”, as Wilber noted, or the actual inspiration as indigenous cultures knew it.

This disconnection began with the Greek dominion and the ensuing desacralizing of the relationship to literate texts. They excluded the relationship to the invisible by including vowels in the written language. By doing this, less interpretation was invited and the previous ambiguity of vowel selection and intonation gave way to an exclusively defined meaning that sacrificed variety. Furthermore, the Greek considered letters mere symbols, just representations of reality. This practice ignored the actual and sacred reality of letters assumed by the Hebrew. The Greek insertion of vowels into the text forwent the instantaneous co-creation of meaning in the immediate context of reading. Creative instantaneous action was replaced by more abstract consideration and reflective thinking.

This insertion of vowels gave every text a defined, stand-alone quality, an autonomy and authority previously unknown to oral cultures. Text was stripped of the mystery of the embedding, invisible atmosphere. Reading became disconnected from the power of surrounding air and became routine. It no longer required the same degree of personal production and involvement. Text evolved into a detached, abstract reality that no longer included the felt aspect of a sensuous connection in the moment of its (re-)production. The stand-alone quality turned feel-o-sophy into the disconnected, abstract philosophy of Platonic ideas or Aristotle detachment. Text became linked to the literate intellect and had an existence of its own in an incorporeal realm of invisible ideas. The disconnection from the embedding sensuous reality of air lead to a shift away from the reality of the here-and-now and moved the psyche into an even more remote abstractness. The loss of touch with the sensuous reality can be felt by reading almost any scientific text today.

The implications of the foregoing insights are slowly clarifying my long-standing confusion and dissatisfaction about psychological concepts of consciousness. I can finally understand why the idea of words signifying reality in an arbitrary way never made sense to me. Arbitrary representation ignores the interconnection and inner meaning of the world. The idea of Hebrew letters having an existential cosmic quality in their own right spurs me to learn more about the implications of that understanding. In my practical work as a psychotherapist

and coach the generation of meaning, conscious and unconscious experiences, as well as different relational skills are essential for my client's sense of my psychological delivery. Ignoring the existential relatedness to an encompassing reality might leave some of them with the starving sense of rational emptiness. The experience of holding that is provided by the existential containment of spiritual embeddedness might help them live through an existential crisis.

With the knowledge of transition from Hebrew to Greek literate culture, I am beginning to understand that we can experience consciousness generation as a boundary, or interface phenomenon. Consciousness evolution could be conceptualized as a particular space, which was seen as sacred in previous times, where the interaction of our somatic endowment, our senses and our dawning reflective capacity with an intangible reality takes place. It is this boundary, between the tangible and the intangible, the sensuous and the non-sensuous, that cannot be put into words, where the in-form-mation of the way in formless generates something new.

Consciousness might be described as a process of meeting, connecting with, metabolizing, or relating to something that is not us. At the same time, it reaches deeply into our being, even deep into our bodies. Consciousness depends on an interactive reciprocity with what ever term we choose to denote this transpersonal entity. On this boundary of meeting the other, the phenomenon of consciousness emerges. Or, as Michael Shea observed at a seminar in Craniosacral Biodynamics in Kassel/Germany in May, 2007, "When God breathes out, man breathes in. When man breathes out, God breathes in". The intimacy of interaction is striking.

This view of consciousness requires an elaborate discussion, which will challenge us to reflect on and review our relationship with the transpersonal and spiritual aspects of our existence. We need to look into the trans-form-ational aspects of this intimate process. We also need to reconsider the role of the embedding field in the major human transformational states, namely birth and death. They are the major transition points of our existence where the basic relationship to breath undergoes a significant shape-shifting. I wonder how we can generate empiric knowledge about this area of human transformation. The Tibetan and Egyptian Books of the Dead and the Kabbalah may be the first authorities to consult in order to structure this inquiry. Also the Dutch Embryologist, Jaap van der Wal, who propagates a phenomenological

embryology, as well the concept of Breath of Life in Craniosacral Biodynamic, may offer valuable insight about where and how to look further.

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