A Unified General Theory of Health Part 2: The Origin of Health

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The Origin of Health

The short answer to “what is the origin of health?” is interaction. Interaction here refers to the movement, exchange, or reciprocity of information. Information here refers to patterns of material and energy, to which humans and other organisms often ascribe meaning. Information is the substance of all life and all life systems. It is the substance of the entire living earth system. Information is the environment, and environmental interactions both result from and contribute to the conformation of the whole environment system or earth organism.

Environmental interactions are continuous and dynamic, constantly refining the innumerable connections to achieve a balance of efficacy and resilience. In regard to the entire living earth system, this continuous self-organization and self-regulation is in response to cosmic information (solar energy, gravitational forces, etc.) as it interacts with the present moment pattern of earth information. Both sources of information, taken in total, define the earth’s environment. It is both “external” and “internal.” This is true of the environment for all scales of nested systems or organisms. The environment in the case of human-environment interactions, is that which is external to the human organism, but also the human organism itself.

The environment has an external domain and an internal, reflective domain. A great deal of this information is sensible and perceptible, but we have no way of knowing what proportion of the total environmental information is detectable by the human organism. The human organism is essentially a system patterned, for efficacy and resilience, after a limited information niche within the whole earth system. We are tuned to interact with (and therefore sense, perceive, and interpret) that niche only, though it may very well be a broad and heterogeneous niche. The sensory capacity of the human organism includes the sensation of the physical body (internal environment) as well as the external environment. As previously mentioned, the separation of these domains is conceptual only (more on this below).

The first very simple organisms arose from the information of an informational or ecological niche. The organisms thus became a representation in another material form of that subset of information. The organism IS the niche, just as the website IS the html code. As the niche changed, the organism changed concordantly, redefined its niche, or perished, and as the organism changed the niche changed concordantly or the organism redefined its niche or perished. This is obviously evolution through natural selection. The concordance between organism and environment is maintained as the organisms which are able to self-create and self-regulate are “selected.”

The environment, however, consists of other organisms and their material products, all responding to information across scales. They continuously evolve as well, so evolution is co-evolution or holistic evolution. It self-creates and self-regulates together, as a whole. Efficacy and resilience is scale-free. Health is scale-free. The parts of the whole progressively move toward greater concordance, the dynamics of the system become progressively refined and less volatile, the balance between efficacy and resilience is progressively tightened and optimized. It is the total circumstances, the cohesive dynamics of a system that provide the
context for co-evolution and progressively concordant interactions, not simply direct relationships between specific components.

It is common to discuss co-evolution in terms of such specific relationships, like flower shapes and the beaks or behavior of humming birds and insects that harvest and pollinate them. These examples of tightly coupled compatibility, of course, provide powerful evidence of co-evolution and should be innumerated and examined, but should not be taken to imply that this co-evolution occurred in isolation or is limited to such obviously coupled pairs. An insect with anatomy which appears perfectly selected for one rare plant, was still selected by the total informational system (the entire earth system as it regulates cosmic input). Likewise, a butterfly with anatomic features conducive to pollinating dozens of flowers, rather than just one or two, has also co-evolved with these flowers in the context of the total informational (earth) system, arriving at a resulting phenotype compatible with many flowers. Likewise, the flowers co-evolved with multiple insects or butterflies within the context of the whole system.

Perhaps it is more prudent to speak of direct and indirect relationships when considering co-evolution. In the case of tight anatomic compatibility between a specific butterfly and flower shape, the primary direct relationship of course is that between the butterflies proboscis and flower shape. The secondary direct relationships, on the other hand, may be mutual or specific to either player. For example, soil characteristics, climate and seasonal weather patterns, humidity, proximity to water sources, oxygen partial pressure, solar radiation, co-existing vegetation, and all other interactions with animals, insects, and microorganisms are secondary direct relationships for the flowering plant. For the butterfly, secondary direct relationships involve other characteristics of the flowering plant such as its distribution, leaf shape, color, symbiotic relationships with other plants and insects, seasonal variations, and etc. as well as all other co-inhabiting life forms, climate and seasonal patterns, ambient barometric pressure (oxygen partial pressure), solar radiation, etc. etc.

Indirect relationships would include those that potentiate all the primary and secondary direct relationships of which there may be many, such as latitude, ocean cycles, regional variations in animal and plant life, solar and lunar cycles, earth’s orbit and climate, microorganisms, the presence or absence of natural events like volcanoes, hurricanes, fires, and the list goes on. Interestingly, indirect relationships at the biospheric level (note the reference point has shifted now from the butterfly and flower to the biosphere) are partially the result of direct relationships with the regional and local ecosystems, which we just explained were influenced by biospheric characteristics, as well as cosmic and deeper geologic inputs. It can still be argued that selection in co-evolution or holistic evolution is active at the gene level, but always within and as a result of the entire system. Evolution is holistic. Organism-environment concordance is holistic. Efficacy and resilience at any scale is holistically determined through continuous interaction. Health is holistic.

Thus far, the health (efficacy and resilience) of the human organism (and all organisms) is based in the ability of the organism to create and maintain itself through interactions with a unique yet dynamic set of information (the ecological niche) which is continuous with the entire earth system.

For human’s, this niche changes as the organisms which define it change, as the human organism changes it’s interactions with the available information outside the niche, or as the human organism changes the information available within the niche. The niche changes from within and from without.

Niches are open and arbitrary, and information from any one niche influences all niches and all niches collectively are the living earth system. The earth system as a whole is influenced by cosmic information. So
the health of the human organism is influenced by the entire earth system and beyond. Simply interacting (i.e. living) alters the niche from within. Interacting differently in response to niche changes from outside the niche, say cosmic information, also leads to further changes.

For health, the human organism must interact for the optimal balance of efficacy and resilience. The interactions which achieve this optimal balance at any one moment are referred to here as concordant interactions in that they achieve organism-environment concordance. The needs of both organism and environment are aligned and in agreement for mutual sustainability. Sustainability is the product of efficacy (self-making) and resilience (self-regulation). Self-organizing systems essentially manifest a trajectory toward holistic concordance.

The earth system has been holistically evolving toward concordance, with manifests as continuously improved concordance at all scales of nested organisms. The health of the living earth system is the ability to utilize the dynamics of cosmic information for perpetuation. The ultimate origin of the informational dynamics underlying human health, therefore, is also cosmic.

**Mother Organism Earth**

James Lovelock referred to the earth as Gaia, the Greek earth goddess, after founding the discipline of geophysiology. He noted that life on earth has generated an atmosphere far from equilibrium and contributes to the homeostasis of the earth habitat. The earth is an organism with a physiology. It is remarkably accurate to say that the earth organism is like the human organism. The oceans are earth’s blood circulating around its body, the many life forms on earth are its cells which do the biochemical work, the atmosphere is the earth’s breath moving through its lungs and exchanging oxygen and carbon dioxide at its cellular or life form level, the great land masses and the earth’s core are its bones and muscle giving structural support and movement. Each one of us is part of Gaia’s body. Each decision we make and action we take alters her physiology, self-organization, and her future.

But just as we are part of the earth’s body today, the earth has become and continues to become our bodies. Over 4.5 billion years, small units of self-organized matter have developed and combined as part of this process of holistic evolution. Atoms became molecules, molecules became self-replicating automatons and then single cells, cells became multi-cellular organisms and organelles, and eventually we have the diversity of life we see today. A microscopic examination of any part of our body will reveal that we are these past others, these endosymbiotic organisms, commensal bacteria and fungi, and common biochemical reactions. We are the present past.

Essentially, we achieved our current form through the progressive enfolding of earth’s life and life supporting matter. The oceans became self-contained as our blood and body fluids and the waves continue within us as pulses of circulation, the atmosphere enfolded into our lung cavities and the wind continues to blow within us as our breath, the earth’s crust accumulated into our bones and muscles and continues in continuity with its origin through our feet. The little known discipline of medical geography confirms this relationship and illustrates its moment to moment fluidity. The salts of our blood are quite similar to the oceans. The minerals of our bones are quite similar to those in the earth’s crust.

This is not simply a result of holistic evolution, however. The environmental influence upon any organism is immediate and above the genes (epigenetic). The body is continually remaking itself and the material, energy,
an information for this reconstruction is taken from our past and present (even immediate) environment. For example, the unique mineral or chemical characteristics of one’s local environment can be observed in one’s body. The rhythms of our solar system and nature become incorporated into the multitudes of biorhythms in the body. Everything in the body has a rhythm. The rhythms of light/dark, sun and moon, and earth’s surface electron flux all have corresponding changes in the human body. The connection of bare feet to earth embeds the body in the earth’s daily electrical flux. Changes in the body’s connection to these rhythms, due to the substitution with or interference from artificial environments (i.e. lighting, electronics, etc.) or disconnection from the earth (shoes, cars, mattresses, etc.), degrades the body’s rhythms.

Further, one’s body adopts the microbial characteristics of one’s geographic habitat. Our skin and gut flora pick up the local environmental flora. Any immediate change in environmental interaction produces a corresponding change in the organism. Physical movement, sights and colors, noises, smells, eating, and etc. will alter the expression of thousands of genes.

To change environments or environmental interactions is to change our bodies. We become our environment, moment to moment. What happens to the environment also happens to our bodies. Environmental contamination results in a growing body burden of chemicals. Infants are born with 287 chemicals in their blood. All adults have hundreds and possibly thousands of chemicals in their blood. The chemicals have not been evaluated for health effects. Of the 80,000 chemicals produced today, the EPA has only been able to require independent study of 200 of them and has only been able to ban production of 5 of them. Nothing is protecting our environment from our selves. What causes cancer? Birth defects? Neurodegenerative disease? Any disease? 79,800 possible answers have not been researched.

The body is not constructed according to our genes. Instead, our genome reflects a range of phenotypic potential and waits for direction from the environment. Our phenotype, our body at any given moment, is the product of past and present genome-environment interactions. Our genes respond to the environment, the environment is incorporated into our body, and our body then acts upon and influences the environment, which continues to direct the expression of our 30,000 genes. One’s phenotype and one’s environment are plastic and interdependent. They are co-created through one’s ecology (total relationship with the environment). Changing the environment changes our ecology which changes our body-mind. Immigrant studies and twin studies have shown the powerful effect of different environments. The risk for and incidence of most degenerative diseases changes with one’s environment, not one’s genes.

So we create the earth and the earth creates us, continuously. In fact, the dichotomy of earth and US is an illusion. The idea that humankind has transcended nature somehow is a conceptual illusion. We are wholly dependent upon and immersed in nature, regardless of how much our built environment and technology confines us from nature and alters the dynamics of nature. A more accurate individual perspective is to view humankind as nested organisms within a larger organism called the earth. But if we could perceive holistically, from the whole, we are, in fact, one with the whole. We are continuous with nature and the earth. The boundaries are arbitrary. Is your hand not you? If your body is only made of parts, where is the “you” you think you are? A cut on your hand is pain for you, not your hand. Contamination of one pond is contamination for the entire earth, including you and your hand. Disease in one person is disease for all of us and the whole planet. Sadness and suffering in one person, in one animal, in one tree propagates through the system and the whole suffers as one. No matter where you are, we are all in it together. The local becomes global and the global becomes local. Such is true of happiness as well! These are experiences thought to occur in the mind, but they are experiences of concordance of discordance nonetheless, and they are experiences which result from the same information exchanges which shape physical efficacy and resilience.
The Mind Between Body-Earth

To understand mind-body unity, let’s look more closely at the internal reflective environment of the human organism. We can talk about the internal environment and the mind because of the interpretation and conceptual manipulation of sensory information, and we can then struggle to reconcile this “psychological” representation of information with the somatic experience of it. The result is mind-body dualism. As most modern and ancient views would agree, however, the body and mind are not truly separate. It is important to discuss this point and ground the mind in the human organism as a whole since the subjective experience of health involves experiences we commonly ascribe to the mind or psyche. We must understand that health is a single process with a common origin despite the appearance of having multiple forms. Further, the mind is the first step upward in the vertical regulatory system I will describe later. This system which involves society, culture, and the built environment, is a critical piece of the human regulatory system which ultimately determines individual human-environment concordance.

The sensation of both the internal and external environments together provides the essence of the mind. From this perspective, the conscious mind can be said to arise from the sensation of the body sensing the external environment as well as itself. This leads to several possible ascending loops of sensation. The foundation of mind we can call the unconscious mind and this level is the fundamental process of detecting information and responding to it. It is the fundamental process of cognition. This level is synonymous with sensation and is inseparable from the body. The body is capable of somatic cognition thus establishing the foundational process of mind. A single order of reflective sensation (i.e. the body/brain sensing the body’s sensation of the environment) gives rise to the perceptual/phenomenological mind. This second level of mind we can call the perceptual or phenomenological mind because it involves pure perception in the absence of interpretation or judgment. A second order reflection (i.e. the sensation of the perceptual mind) gives rise to the interpretive mind. Here the sensory information is looped through memory centers of the central nervous system to give the information meaning and identification by relating it to past perceptions. It is here that judgment occurs and an emotional response can accompany the interpretation to decide if this information is good/bad, safe/harmful based upon previous experience. A third order reflection (i.e. the sensation of the interpretive mind) gives rise to the conceptual/paradigmatic mind. Here, interpretations are integrated into systems of understanding and relationships, thus establishing concepts and paradigms which help to manage the incoming information. Further degrees of reflection may be rare or impossible, perhaps in keeping with the average degree of connectivity in complex systems of around three (2.8).

This internal, intra-organism connectivity (body interacting with body), is the focus of new research on “coherence,” which is the rhythmic entrainment of various organ systems including the cardiovascular, neurological, respiratory, and immune systems. Coherence occurs when there is entrainment or resonance of the organ systems physiologic variability, typically around 0.1Hz. Such coherence is associated with optimized physiologic function of the organs systems, which includes greater cognitive function, improved mood, intuition, and contentment. In short, the body achieves improved efficacy and efficiency, and manifests improved sense of coherence as per Antonovsky.

Approaching the mind from the subjective perspective might be more intuitive. For this we can ask the question, “where are YOU?” Where is your mind with which you observe and experience yourself and your environment? The explanation of mind above would suggest that the mind is nowhere… YOU are nowhere in particular, but you emerge from the continuous information and energy exchange between the body and the
environment. YOU are greater than the sum of the parts, YOU are brought forth by your ecology. YOU exist
diffusely. Not within your body, but between or throughout your body and your environment. YOU are as
much your environment as your body (and the environment is your extended body). YOU are neither body or
environment in isolation, but both in integration. The mind emerges between the sensing and the sensible.
And the sensible environment consists of sensing entities itself. For those sensing entities, we are included
within their sensible environment. Another way to examine this is to consider that without sensation (the lack
of either sensing ability or a sensible environment) there is no perception. Without perception there can be no
thought and, therefore, no mind. To sense and be sensible is to co-create the present and our presence, or our
sentience.

Sensation and perception precede thought and the self-referential awareness we casually call mind.
Perception first requires the bi-directional coupling of the sensing and the sensible, the body and the
environment. The sensing of the sensible by the body is, at once, also a response to the sensible or a form of
somatic cognition. I believe this somatic cognition underlies the concepts of the subconscious as well as the
collective conscious. One’s ecology is engaged holistically, in total, at this level. I call it ecological
embodiment, and it is the subjective experience of the 1st mind-body level described above (and see diagram
below). This is pure being or rather, becoming. This is engagement with the “other” in which “self” is lost.
This experience is the origin of the saying, “to lose oneself” in an activity.

An awareness of this cognition is the 2nd mind-body. This is pre-conceptual, pre-interpretive, and pure
ecological awareness or perception. It is the pure sensory or somatic awareness of the body-environment
exchange. It is to observe our continual becoming, the advancing edge of our existence within nature. This is
the realm of phenomenology. Not the tree but the entity we call tree. This is the actual terrain before we
generate the map. This is also the level of mindfulness. Labeling, judging, and evaluating our environment
intellectually is to step out of the terrain and into the map, it is to leave the awareness of ecological
embodiment and institutionalize our awareness in interpretation and concept. Ecological embodiment is one
level before mindfulness. Mindfulness is observing oneself doing, but ecological embodiment is only doing.
The body is sensing and responding in a near fusion with one’s surroundings. The angle of a rock or the
leaning of a tree becomes an angle or leaning of the body and it moves within this space. The movement of
the body becomes the movement of the grass or the ferns. It is a dance without a lead. So the 1st mind-body
is somatic cognition or the body sensing and responding to the environment. The 1st mind-body is an eco-
somatic phenomenon. The 2nd mind-body is the sensation of this sensation. It is a somatic reflection into
(usually filtered or directed) awareness. This is now occurring in the attentional centers of the nervous
system. I refer to this type of awareness as pure perception.

The 3rd mind-body is then the sensation of this awareness or perception. It is a recapitulation of pure
ecological awareness into a disembodied representation. Perception is essentially looped and now escapes a
temporal and spatial connection to the environment. At this level of mind, the perceptual information is
related to memory to allow interpretation. This is where judgment and objectification occurs. The eloquent
and unique moment of ecological embodiment is reified at this level to a judgment or label, which I consider
to be interpretation. The 4th mind-body is yet another iteration upon the interpretive mind in which past and
present interpretations can be manipulated for cohesion and relativity. This is where concepts and paradigms
emerge. The content of this mind-body is purely a map, a pragmatic representation of filtered and interpreted
somatic experience. In more than one way, somatic experience has been fragmented, consolidated, and
reassembled into a lower resolution and abstract reality.
Perhaps the only way to know the raw sensible information of true reality, therefore, is to experience it at the first and second levels of mind. While the 1st mind-body is an eco-somatic phenomenon, the 2nd, 3rd, and 4th mind-bodies are iterative somato-somatic phenomena building upon this primary eco-somatic connection. Our culture operates almost entirely upon 3rd and 4th mind-body cognition, and the result is a disembodied perspective separate from nature and earth.

If the mind is between the body and the environment, why does it seem that YOU are in your head? This is because most of our sense organs are in the head. The awareness of a visual, auditory, olfactory, or gustatory exchange of information and energy generates the perspective being in the head or eyes, ears, nose, mouth, respectively. But think about when you might primarily use your tactile sense in isolation. A dark room, the electric is out, and you are slowly sliding your feet along the floor to locate and avoid stepping on that toy or piece of furniture you know to be somewhere close. Have you ever reflected back on this intense tactile encounter between foot and environment and noticed that YOU seemed to be in your foot? It is true, YOU can appear to be in any body part, but YOU are emerging between the body and environment. Stop and think about the general sense of touch for a moment. Do you feel your hands becoming more prominent or as if you are extending out into your environment through your fingers? Think about audition, in isolation of the other senses. When you hear something distant, is your consciousness, your mind, not at that distant location? Think about olfaction. When you pick up the scent of something in the air, is your consciousness not hanging out there, swirling, in the air as well? It is not at the plant which generates the pollen in the air that you smell, but it is in the field defined by your nose and the air containing the scent. Before we discuss ways to develop and experience this awareness, let’s consider the implication of the emergent mind, or mind-earth nondualism.

We know the body and mind are a unity and these entities are different perspectives of same process. Now we have mind-body-earth as a single unity in which the mind emerges from both the body and earth, which are actually in continuity. The landscape is the mindscape. Just as changes to the body equal changes in the mind and these changes can be experienced and measured, changes to the environment or earth must equal changes to the mind. What effect, then, does a polluted earth or environment have on one’s mind? This is the subject of ecopsychology. It could be said that the earth’s mind is diffuse throughout biosphere, emerging at the interface between sentient life and the environment. Since we are part of nature and the sensing
environment, we contribute to the earth sensing itself. As the equivalent of our body sensing the sensible and itself and manifesting our mind, this self-sensing earth manifests an earth mind. Your mind would be nested in this diffuse mind, Gaia’s mind. We can even look at mind as a diffuse biospheric field and the individual mind is the experience of this collective mind from one unique vantage point, one ecology, within this field.

When you feel sadness or happiness, you could say that the earth, known to you locally, has sadness or happiness. It’s not that your feelings contribute to the earth’s feelings, or that the earth’s feelings contribute to your feelings, it’s just that the feelings are there, emerging with the mind from the interactions of life on earth, from the ecological information currently available to sensing entities. In this way, it can be said that these feelings (the emotional mind) are shared or communal, but most certainly experienced differently on the subjective scale. Emotions are in the environment, as an information potential, to be manifested and perceived through interaction. So is there an association between environmental destruction, loss of biodiversity, ecosystem distress disorder, pollution, climate change, and etc. and the epidemics of depression, ADHD, and rage and violence in our world? When we pollute the environment do we pollute our minds? When we endanger ecosystems and sentient life forms, do we endanger our own sentience? When we fragment nature with concrete and steel, do we fragment our minds and feel broken? Do we destroy ourselves with the environment? There is another way to look at this more personally. Why do you feel joy, energy, and peace when you enter a beautiful landscape or lush ecosystem? And have you ever felt flat or empty in a sterile looking built environment (think hospital or government building hallways)? This is your body-earth connection manifesting your mind and emotion according to the degree of concordance or discordance.

An affinity toward nature and living entities is a natural characteristic, though this affinity is being diminished by modernity. E.O. Wilson called this affinity “biophilia” and explained it evolutionarily… that favorable habitats for survival make us feel good and spend more time in these habitats. Living near water, visiting the ocean, gazing across the mountains and valleys, walking barefoot in the grass, being surrounded by lush vegetation, observing wild animals, listening to bird song, or scanning a vast horizon are all pleasant experiences associated with (usually) healthy and productive ecosystems. In our modern built environment, however, our minds are left to emerge from relatively non-sentient partners and fragmented ecosystems. To engage the 4.5 billion year lineage of earth’s ecological symphony is to reconnect to wholeness, fluidity, and balance. Engaging these ancient threads of life is like finding your mother in a crowd of strangers. There is a resonance from which emerges a balanced and pure mind. We all seek this wholeness, richness, and simplicity, but in its absence we experience a complicated and hyperstimulating incompleteness. All too often we try to suppress the mind, prevent it’s full emergence through desensitization, distraction, or numbness. How do we get back to wholeness? How do we heal our body-mind-earth? The answer is simple.

The Regulation of Human Ecology

If the subjective components of efficacy and resilience do indeed originate with, and are the same phenomena as, the physical manifestation of efficacy and resilience, and this origin is organism-environment interactions (the process of ecology), then we need to focus there. Health (psychological and somatic) is maximized when these interactions are optimally matched or concordant. As touched upon earlier, holistic evolution has been continuously revising organism-environment interactions toward closer concordance and greater health. Darwinian evolutionists would certainly like to refer to gene-environment concordance, and this is acceptable. Genes are very much central to organism-environment concordance over long periods of time, but the organism as a whole must be considered to explain concordance over short periods of time. Present moment
concordance is heavily determined by epigenetic phenomena (i.e. phenotypic plasticity, physiology, and the interpretive mind). Therefore, I prefer organism-environment concordance, which remains inclusive of genes as well as everything above the genes. An organism’s genome does not change, but the expression of that genome does change and changes moment to moment. The total present moment state of gene expression is influenced by the past and present ecology. That is, the health of the organism is shaped by evolutionary ecology, life history ecology, and present moment ecology. From our ecology, our interactions with the environment, emerges our body-mind. From the sum of our individual human ecologies and body-minds, emerges our built (anthropogenic) environment, social dynamics and culture. Mind-body dualism creates a dualistic and now divergent regulation of human behavior and ecology.

Our mind, society, and culture exist as an emergent regulatory system with muti-directional feedback loops. I call this the vertical regulatory system and this system is critical for human health and balance (see illustration below). However, a problem arises when the foundation of this system, our biophysical integration with the biosphere, becomes disconnected from the mind. This occurs from near exclusive existence in the interpretive and conceptual minds (3rd and 4th levels of mind). Our individual ecology and ecological embodiment (at the 1st and 2nd levels of mind) connects us to and includes us within the self-regulating horizontal regulatory system of earth. This is the principle regulatory system for life, and the vertical regulatory system emerges from the human component of this system to manifest human society and culture. If the vertical system looses connection with the horizontal, the vertical system drifts away from self-regulation or balance and sustainability. Its influence upon itself (mind, society, and culture) and on the environment is not kept in check. The imbalance which results impairs human and ecosystem health. This imbalance is responsible for much of our modern distress and discord. The disconnection from the horizontal primarily occurs on the scale of the individual. When nature is unavailable or ignored and our ecology becomes mostly man made, the mind emerges from an ecology that is already mostly vertical. The body is essentially uprooted and the earth is viewed only from above or from an illusionary external or independent perspective. Our experience of life becomes more map than terrain and wholeness becomes fragmented. The body and its senses atrophy and the connection to the natural environment further deteriorate. The sensory abilities of urban dwelling people are a fraction of those observed in hunter-gatherers. Without being rooted in the rich soil of nature, the body almost literally wilts. In these circumstances, true positive health cannot be achieved or maintained by the individual or the whole. Disease, dysfunction, and imbalance, across all scales and systems, become ubiquitous.
The Bio-Psycho-Socio-Culturo-Earth (BPSCE) System

As a practical example of the vertical system emerging from the horizontal, let’s consider knowledge. It is commonly thought that knowledge is culturally transmitted and evolved. It is handed down across generation though this system of paradigms and regulations we call culture. However, it is quite interesting how indigenous populations completely separate geographically and with different culture and world views tend to develop similar practical understandings of the world around them. It is also interesting to note how often “novel ideas” or “breakthroughs” are developed simultaneously by different intellectually isolated individuals. The anthropological work of Tim Ingold makes a powerful case that knowledge is not necessarily contained within culture, but is present in the environment and repeatedly discovered by maturing individuals and new generations. Knowledge is the conceptualization of the information contained in nature. The non-conceptual observation and understanding of (or resonance with) this information is what we call wisdom. The source of wisdom, therefore, is one and the same as the source of mind. This information is not the special privilege of the human animal, it is the domain of all life coming together as one. All life possesses this wisdom. The human mind filters, interprets, and transforms this wisdom into concepts and paradigms which become knowledge. Knowledge is in the vertical system, wisdom is in the horizontal system. Disconnection from the horizontal allows the vertical, including knowledge, to become dysfunctional or imbalanced. Dysfunctional knowledge would be the proliferation of concepts and paradigms which do not enable wholeness or health.

This disconnection of the vertical from the horizontal, or disembodiment from the earth, may, in part, begin during the transitional phase of early childhood as defined by the psychologist Donald Winnicot
and the object relations perspective of psychology. Winnicot considered this phase as the weaning from maternal dependence and identification and the beginning of individual independence. He postulated that a gap opens during this time in which self becomes separate from non-self and this void produces anxiety. Usually a transitional object such as a blanket or pacifier becomes a surrogate mother during this transition to cope with this anxiety. In my opinion, this gap or void may be the origin of our modern alienation from the earth and from our bodies. Ideally, and what appears to happen in hunter-gatherer populations, the child moves from oneness with the mother to oneness with the other mother, or the first mother, nature. It seems fairly obvious that the fetus, in utero, is inseparable from the mother. After birth, a similar oneness or intense symbiosis is maintained and some have called this the fourth trimester. As the baby begins to ambulate, he or she begins to experience the depth of the world and naturally, would be experiencing the animate and dynamic world of nature. This is the beginning of the transitional period where the baby’s identity slowly shifts from that as one with the mother to that as one with the surrounding living world we call nature. In modernity, this transition is blocked by the early conceptualization and intellectualization of nature and the immersion in a largely built environment isolated from nature. The built environment is much less embracing and does not provision for the baby in anyway like nature, it is not motherly or fatherly. Further, our eagerness to teach infants how to talk and function in society results in the very early objectification and conceptualization of the environment and nature. Infants are told that the image of a bird is a bird, before they may even see a real bird flying and exhibiting the essence of birdness in nature. Often we present a photograph in a book and say, this is a bird. The actual somatic and sensual experience of the bird in nature is absent and an interpretation (label) of a bird representation is given instead. Therefore, the bird exist in the interpretive and conceptual levels of mind only and without a somatic or ecological context to connect it to the purely perceptual and embodied mind. The same may actually occur with the child’s body, when they are taught their name and self-identification through mirrors and photos of themselves. They know their body then as an image in their mind, rather than through the somatic awareness of interacting with their environment. The infant, then, is left to transition not to the embodiment of nature and the wholeness this provides, but to the reified and conceptualized world in the mind and the vertical chain of society and culture. Therefore, the void is never resolved and the transition to wholeness with the other mother, nature, is not established. Nature is devalued and seen as inanimate and non-sentient and a pervasive anxiety provoking void chases us throughout life. In fact, it has been commented that the transitional object is never outgrown in modernity. The object simply changes from a pacifier or blanket to toys, electronics, cars, clothes, houses, assets, occupations and titles, alcohol and other addictions. We remain on a constant quest to identify with an entity which re-establishes our sense of wholeness, oneness, and health or to simply suppress and numb the anxiety from the void. Unfortunately, wholeness and true health cannot be found in the vertical system and is only available by reconnecting with the horizontal, first with our bodies and then, through our bodies, with nature (ecological embodiment).

The disconnection of this vertical (anthropogenic) system results in its liberation from natural regulation and allows the human influence on nature to occur at an unnatural rate and magnitude. Without the finely evolved regulatory restraint of the horizontal system, the vertical system is able to achieve massive imbalance. This occurs on an individual as well as population level and the resulting societal and cultural imbalance drives further individual imbalance. This imbalance is ecological and both from changes of the physical environment and from changes in one’s interaction with that
environment. The result is disease or dysfunction propagating through the vertical system and driving disease and dysfunction in the horizontal system. The diagram below provides some examples. The only real locus of control is individual ecology (also referred to more narrowly as lifestyle or behavior). Thus, most, if not all, of our modern challenges can be connected to this scale.

Further Explorations

To validate the optimal organism-environment concordance hypothesis and realize concordance in modernity, we will need to examine human evolutionary ecology, the evidence that concordant ecologies lead to excellent and measurable health (efficacy and resilience), the evidence that concordant human ecologies contribute to ecosystem and biospheric health, and methods of approximating or simulating a concordant ecology in modernity. The ultimate requirement for the recovery of individual and cultural concordance is the recovery of individual ecological embodiment, the reconnection of mind-body-earth! These are the subjects of forthcoming articles.