

**The Dimensional Mastery Model**  
A Perspective For Assessing  
And Planning Manual Therapy Treatments

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**Introduction:**

Human behavior is complex. The manner in which the structure of the human body and how that structure functions in its environments is extremely difficult to unravel in any meaningful way. A model that enables human structural / functional relationships to be dissected offers opportunities for therapeutic benefit. Such a model would need to fragment the structural / functional attributes into more manageable composites, which have testable behaviors. However, these composites should not be so small that they lose the contextual framework of the whole. Additionally, knowledge with therapeutic efficacy that can be linked to these composites enlivens the model and enlightens working with the part in the context of the whole of the organism.

Presented here is a model for therapeutically engaging the structure and functions of the human being that appears at least to some degree to meet the above stated requirements. The model is based on two key concepts: The obvious one that life inhabits a four dimensional time / space continuum, and the less obvious one that life emerged into this continuum one dimension at a time. Essentially, this model is an application of the seminal work of Charles Darwin published in: "The Origin of Species", applied to analyzing and influencing the structural and functional dynamics of human behavior. This model attempts to build on this foundation, connecting as many diverse therapeutic modalities as possible, organizing them in a way that offers an explanation for their effectiveness, and guidance to their application.

Although the model may seem novel, the information presented here is widely available from many sources. However, in addition to Darwin, my own insight into this material required exposure to the work of some notable researchers. George Goodheart, Wilhelm Reich, Antonio Damasio, Svetlana Masgutova are pivotal influences. What all of these researchers share is that their work extends beyond the Cartesian mind / body dichotomy, shedding light from different angles on the structural / functional confluence which inspires our awareness, the movement of our experience, our e-motion. That we share almost all of our functional attributes with other animals, and indeed other life forms, can no longer be seriously questioned as each year more research is published describing shared attributes at an ever finer scale. Additionally, our cherished "uniquely" human qualities, such as tool making, continue to be recognized in a wider range of species. That these qualities had a functional role for our animal ancestors before we adapted them for our own purposes is no longer a novel or radical proposition. The purpose of this model is to collect these functions into primary categories with their structural mechanisms, thereby clarifying innate behavior. It is hoped that this clarification will help identify dysregulation of innate behavior and afford guidelines to influence its function towards the tasks for which it is designed to perform.

The basic tenet of evolution is that life evolves by modifying an already existing organism. The branch of the tree of life upon which Human Beings perch is supported by our lineage of ancestral species. These species consecutively altered their structural and behavioral attributes, and our unique form and function is the cumulative result of these adaptations. Climbing far enough down the trunk of the tree of evolution you will find organisms that are the ancestors of all living things. As you climb the tree towards our branch, you consecutively encounter more specialized organisms that more closely resemble ourselves. By scrutinizing specific attributes of our form and behaviors we can identify the sequence of alterations that collectively synergistically and exponentially expanded our possibilities as a species. These collective adaptations have then served as a foundation for exploring the opportunities of further specialization. The model of neuro-motor organization presented here is organized around the progressive evolution of our attributes, confined and defined by the parameters of the four dimensional spacetime within which we evolved.

Evolution can be viewed from the perspective of the story of life sequentially mastering each dimension of our four dimensional spacetime, and then using the gained capacity to expand into another dimension. In the beginning living things conquered the dimension time, essentially embodying life. Plants, by far the most dominant life form, still express their life cycles confined to a single place, persisting through time. Relatively recently animals evolved, sequentially mastering each of the dimensions of physical space. The challenges and opportunities living things encounter extending their reach through each of these dimensions is recreated in human development, from the living embryo to the fully matured human being. This model of dimensional mastery correlates the skills and competencies that we master in each dimension as a developmental layer, linking the myriad attributes of survival success in that dimension. Successfully mastering the skills to fully engage in each dimension relies on maturation of the skills needed to function in the dimension(s) that emerge developmentally earlier. When a child is challenged with new learning, it is often a reflection of incomplete functional maturation (or pathology) in an underlying layer, rather than with some innate inability to function at that dimensional level. When these immature skills become embedded in more complex activities, they are adaptive and compensatory, and inherently stressful. Using the Dimensional Mastery model we can frame therapy to work from the foundation upwards, building neuro-motor skills that can automatically support more complex functional and behavioral activities, and thereby eliminating sources of chronic stress that can inhibit new learning.

The statement that we use 5% of our brains, that at any specific moment most of our neurological capacity is dormant, relates to conscious awareness. Non-conscious cognition, which includes neurological activity in the Brain, the Brainstem as well as internal, and external, to the Spinal Cord, easily exceeds 95% of ongoing cognitive activity at any given moment. Non-conscious awareness includes all of our motor control systems, the capacity of our organs to respond to changes in their environment (eg: blood sugar level), most of the internal awareness of our bodies, and much of how we sense our

surroundings. We experience the effects of these nonconscious processes in our drives, instincts, emotions, feelings, and self awareness.

Each developmental layer has its own fully functional cognition, awareness and behaviors. Many of these processes never sleep. In its day, each of these cognitive modes was the ultimate in sensory processing, which was then surpassed by adaptations to further extend behavioral possibilities. With fully functional present moment non-conscious awareness, each layer can efficiently play its role in the larger system, supporting both its own skills and competencies as well as the further maturation of the organism. Unfortunately, for an organism as complex as a human being, this ideal is rarely achieved.

In industrialized societies, it is common for children to skip some developmental steps. The problem solving capacity of the human brain makes it possible, given the opportunity, for us to figure out a behavioral response before our innate reflexes have fully matured and respond automatically to sensory cues. Early walking is a good example of how many children skip over full development of the symmetrical, cross lateral reflexes that manage crawling. Consciously controlled movement depends upon consistent response from the underlying reflex response patterns, and consequently the maturation of functional reflexes is inhibited at the point which our modern brains solve the movement problem. Movement dependent upon immature reflex responses is by its very nature adaptive and compensatory, and inherently stressful. For example, early walking may result in a dislike of running, low energy, poor posture, low self esteem, aggressive and controlling behavior, low stress tolerance and many other adaptations and compensations. These behavioral dynamics can persist a lifetime.

Repetitive exercise of the stimulus / response attributes of a reflex will allow the reflex to mature in isolation from the reflex's dependent conscious behaviors, which may then lead to improvements across the range of associated behavioral attributes. After therapeutically encouraged reflex maturation has occurred, conscious behaviors must then adjust to the new, improved level of skill. A child's capacities may appear to be degrading while the recalibration occurs, which can be quite stressful, and pacing is of paramount importance so that the child does not adopt a protective response. However, the end result is less stress, with greater potential and adaptability.

In animals as complex as primates, all of these different evolutionary layers are tightly interlinked. The highest levels of brain function influence visceral function both Neuronally and Hormonally. Many of our lower level functions are triggers for higher level responses. It is not possible to clinically isolate a specific function without also engaging functions in all other layers. This can make working with a specific function challenging, as much an art as a skill. However, it is this global inter-relatedness of function that enables work at a specific layer, or with a specific function, to have global ramifications.

## **Point (Time)**

From a dimensional perspective, life begins as a point in space, persisting through time. At this evolutionary level, life is primarily absorbed with continually regulating its internal processes, which from a biological perspective is called Homeostasis. Optimally, life at this layer swings between digestion and absorption of nutrients and energy, growth, restoration, reproduction and protective responses. For example, light penetrates the organism and is converted into sugar, which is then, at a later time, fabricated into structures used for maintenance and growth. Changes in the surroundings create stress, which must be managed, always bringing the organism back into balance (homeostasis). In humans, this is expressed in the cyclical processes of our organs, our viscera. Cognition and memory at this layer is genetically encoded, and which we experience as drives and instincts, such as hunger, sexual arousal and our freeze response. These are intrinsic stimulus / response patterns which have minimal integration with our conscious awareness. For example, we experience being startled long before we are consciously aware of that which has startled us. Essentially, we can block our drives, but fail at trying to change their underlying structure.

In Human Beings homeostatic processes live in our core and are associated with the functions of our organs, our viscera. The elements of the core are extensively neurologically and hormonally interconnected, but not centrally organized. This vast nerve net is known as the Enteric Nervous System (ENS). The ENS interacts with what is outside the boundary of the core through an array of nerve endings at that boundary, specifically at the hair follicles of the skin. Our gut feelings emanate from the ENS, and demonstrate how it is continually engaged in our daily activities. We can experience how the ENS interacts with our other neurological functions when we are being tickled. The complete absence of willful control of our response is a great example of the minimal control the conscious mind has on the ENS. The ENS protective response is to Freeze. We experience this in our startle response, or any instantaneous response. These responses for many of us are as close as we get to experiencing “being in the moment”, as they have no past or future, only “now”.

When the triggers for startle are set too low, this protective response can remain continually active, resulting in many behavioral, emotional or cognitive imbalances. These imbalances manifest in a broad array of symptoms ranging from anxiety, ADHD, OCD to allergies and dysbiosis of the gut microbiome. When the startle response does not settle quickly, our more complex protective mechanisms such as fight / flight function less efficiently. As the ENS interacts tactilely with the outside world, we can therapeutically engage with it through tactile therapy. The perfect example of this is how a cat responds to being stroked. As the cat is soothed by the touch, it enters a deep state of rest and regeneration. Children that exhibit tactile hypersensitivity will almost certainly benefit from therapy focused on this layer. These therapies will often improve issues with hypersensitivity, allergies, digestive issues etc.

Point (Time)	Attributes shared with all of life
Dominant Tissue Type in Animals: <b>Endoderm</b>	The job of Endoderm is the persistence of life. This is the tissue of our organs, blood and the other internal structures which are collectively known as our Viscera. These tissues either continually or intermittently work to keep us alive. Their focus is rest and digestion, as well as replication. Often the delicate dance that these tissues perform is described as Homeostasis.
Dominant Senses: <b>Tactile</b> and <b>Olfaction</b>	Awareness stops at the boundary of the organism. Sudden stimuli associated with threat. Vibration and pressure changes are the dominant tactile senses, and can be used to assess an individual's protective responses. No centrally organized neurological processes.
Dominant Reflexes: <b>Visceral</b>	<ul style="list-style-type: none"> <li>● Homeostatic functions</li> <li>● Rest and Digestion</li> <li>● Freeze / Startle</li> <li>● Breathing</li> <li>● Perez</li> </ul>
Dominant Cognition: <b>Instincts</b> and <b>Drives</b>	<ul style="list-style-type: none"> <li>● Diffuse stimulus / response nuclei</li> <li>● Arousal / Reproduction</li> <li>● Self Preservation</li> <li>● Tiredness / Sleep</li> <li>● Endocrine / Hormones</li> <li>● Enteric and Parasympathetic nervous systems, non- centralized control.</li> <li>● No distinction between self and other. The boundary of the organism is the boundary of awareness. Purely present moment.</li> <li>● In Humans Beings from conception to 2 years of age.</li> </ul>
Dominant Protective Response: <b>Freeze</b>	We experience Freeze as any instantaneous response to stimuli. Usually, these are responses that occur before we cognitively process what transpired. When well integrated, Freeze acts as a trigger for more complex protective responses (fight / flight). Triggers for Freeze are tactile vibration or pressure changes, or abrupt changes in light or sound levels.
Effects of Poorly Integrated Responses to Stimuli:	<ul style="list-style-type: none"> <li>● Allergies / Auto-immune issues / Digestive issues</li> <li>● Fear of embarrassment / clinging behavior</li> <li>● Stress - (PTSD)</li> <li>● Anxiety / Phobias / sleep or eating disorders / Depression</li> <li>● Hyper-vigilance / tactile hyper or hypo sensitivity</li> </ul>
Therapeutic Options:	<ul style="list-style-type: none"> <li>● Tactile Therapies: Tapping, Emotional Freedom Technique (EFT), Emotional Stress Release (ESR), Embracing Squeeze, Fear Paralysis tapping protocol.</li> <li>● Energy Medicine: Traditional Chinese Medicine, Energy Kinesiology.</li> <li>● Homeopathy</li> <li>● Cranio-Sacral Therapy to enhance cranial rhythms</li> <li>● Somato-Emotional release to integrate visceral functions.</li> </ul>

## Line

The evolutionary leap to movement stemmed from centrally organizing the processing of sensory inputs and directing responses, in other words, a central nervous system. Vision plays a dominant role in identifying what to move towards or away from. Animals organized bilaterally along a single axis (the spine) most successfully embody this evolutionary layer. For most of the history of animal movement, these movements were purely linear, oriented towards or away from a stimuli, or motion in the front / back plane. In animals, and in the neurology we have inherited, these actions are symmetrical, employing both sides of the body repeatedly performing same task, as in crawling, walking and swimming.

Although animals dominant in this layer often have capacity to learn, their underlying thinking processes are primarily genetically encoded, rather than learned. In our brains these regions are described as dispositional nuclei, which recognize patterns and respond: "If this is so, then do that." Learning a new stimulus / response pattern required evolving another dispositional nuclei. We experience how dispositional cognition is still fully engaged in our present moment awareness through our raw emotions, such as anger, fear and arousal being the primary response initiators. Decisions about movement options swing along an axis from projection, which is competition for energy and reproduction, and protection, which at this layer is Fight or Flight. The most famous of these dispositional nuclei is our Amygdala, well known for its role in processing aggression. When we experience an emotional response emerging 1 - 3 seconds after stimulation, or responses of which we become aware of after the fact, we are observing our dispositional cognition at work. These raw emotions in their time were the state of the art in cognitive processing for animals that could move, and were more than adequate to populate the lands and seas with animals.

Movement requires complex interactions between opposing muscles and between muscles that act synergistically to generate the motion. These patterns of changing activation and inhibition through time are written in the deepest layers of our central nervous system and combine genetically encoded and trained skill, a combination of "hardware" and "software". These are the locomotor reflexes. Training these reflexes requires repetitive movement. The quality of movement is quite different from that which we associate with exercises. Nerves establish new connections slowly, usually somewhere between 15 seconds and several minutes. This allows them to integrate multiple sensory / motor sets of inputs and not "over build" the functional network. Consequently, when training these systems, we need both slow movement or stationary holding against resistance, and many repetitions. It is not the strength of the muscle we are concerned with, but rather functional control of the action that the muscle performs. However, as functional control improves, muscle strength also improves as the muscle(s) and its antagonist(s) are working with stronger (cleaner / clearer) signals.

<b>Spatial Line</b>	<u>Intentional Movement (Animals)</u>
Dominant Tissue Type: <b>Mesoderm</b>	This is the tissue of our muscles and skeleton. In animals and humans these are symmetrical movements, directed towards or away from stimuli. Metabolism is generally slower. Cold Blooded animals are dominant in the line.
Dominant Senses: <b>Vision and Vestibular</b>	<ul style="list-style-type: none"> <li>● Vision: Convergence and divergence. This is vision more closely linked to the head position than to independent eye movement. See STNR below.</li> <li>● Proprioception: muscle, tendon, ligament and joint tension / compression and relative position.</li> </ul>
Dominant Reflexes: <b>Proprioceptive / Motor</b>	<ul style="list-style-type: none"> <li>● Moro, All Tendon Guard Reflexes.</li> <li>● Synchronous Tonic Neck Reflex (STNR): This reflex links Vision to the position or orientation of the body through the organization of the neck muscles. The specific neck muscle orientation is what we experience in nodding YES and tilting in our head to the side as if touching ear to shoulder. Associated with Vestibular reflexes.</li> <li>● Trunk Extension: Apparent when posture is hyper flexed or hyper extended.</li> <li>● Symmetrical Hands and Feet Grasp. (Uses all fingers together)</li> <li>● Symmetrical Hands Supporting and Hands Pulling.</li> <li>● Head Righting in flexion and extension. Eye tracking using head.</li> </ul>
Dominant Cognition: <b>Emotional</b>	<ul style="list-style-type: none"> <li>● Emotionally controlled dispositional cognition. This is essentially pattern recognition. We may experience a variant of this when someone cuts in front of us in line.</li> <li>● Centralized nervous system: Brain Stem and Cerebellum. Planning is generally present moment and oriented towards or away from emotionally processed content. Goal oriented.</li> <li>● In Human beings from 2 to 7 years of age.</li> </ul>
Protective Response: <b>Fight or Flight</b>	Freeze should give way to Fight or Flight within a fraction of a second. When Freeze is poorly integrated, Fight / Flight does not work well, leading to feelings of insecurity and impending threat. Herd instincts.
Effects of Poorly Integrated Responses to Stimuli:	<ul style="list-style-type: none"> <li>● Aggression, difficulty adapting to change or making choices, Territoriality</li> <li>● Shyness / insecurity / low self esteem</li> <li>● Strong will / inner resistance. Poor stamina</li> <li>● Easily triggered emotional outbursts</li> <li>● Toe walking</li> <li>● Trouble staying on task, difficulty sitting still, clumsy, gross motor control</li> <li>● Hypersensitivity to light, trouble picking out a hidden object in a picture.</li> <li>● Poor posture in flexion / extension</li> </ul>
Therapeutic Options:	<ul style="list-style-type: none"> <li>● Reflex integration exercises for associated reflexes.</li> <li>● Symmetrical Exercise: running, walking, crawling</li> <li>● Structural Bodywork for fascial release in flexion / extension</li> <li>● Cranio-Sacral Therapy for releasing adhesions in flexion / extension. (Sphenoid / Occipital / Atlas)</li> </ul>

## Plane

Lateral movement evolved relatively recently as a strategy or tactic for thriving in a world dominated by animals ensconced in linear movement. Mammals epitomize the planar dimension in that they took a body plan that could move forward and backward and modified it to enable movement at will in any horizontal direction. Structurally, this involved getting the weight of the torso over the legs. Improvements in balance, muscle tone and sensing the weight of the body through the legs had to occur to realize lateral movement, and combined into what we know as our postural dynamics. The defining characteristic of movement in the plane is asymmetry. Asymmetrical movements require each side of the body to do different things to perform an action. Racket sports are good examples of this type of movement. If the underlying Point and Line layers are adaptive and compensatory, these type of movements can be very challenging and stressful, as they require quick integration of the motor primitives to produce an accurate behavior. Muscles dedicated to lateral movement have a differing tone and quality from the muscles used for locomotion, which have great endurance and power, but less speed. The muscles used in lateral stability have great speed and strength, but little endurance. These muscles are usually much smaller, and can be visualized as thrusters, making small course corrections as we propel ourselves forward.

Along with the ability for lateral movement came the emergence of the cognitive capacity to employ the new options. Continuing awareness of the surrounding space, through time, enabled planning and group cooperation. The parts of our brains that manage this type of cognition are much more complex and are classified as associative, integrating individual clusters of neurons, the dispositional nuclei and other neuronal circuitry in myriad, seemingly infinite ways. Hearing evolved as a dominant, primary sensory system, enabling a continually updated map of the surrounding horizontal space, and more complex maps (time / space / history / anticipation) to be interlinked. Forward facing eyes and stereoscopic vision evolved to refine details of the surroundings. Cognition at this layer is driven by feelings, which integrate primary emotions with experience, and complex sensory inputs, centered on a "sense of self". Longer developmental cycles, from placental embryology to parental nurturing, and play emerged. Whereas simpler animals can depend on their genes to transfer inherited information, more complex animals become increasingly dependent upon information embedded with the protein structure code (Epigenetics). Parental nurturing and teaching emerges as an integral attribute of species dynamics as information is passed from one generation to the next through the modeling of beneficial behaviors. These enhancements enabled much greater evolutionary rigor as animals became functionally, rather than structurally adaptable.

Functional training follows the same pattern as the line layer. However, as the neurology is much more complex, training requires each side of the body to work through differing movement patterns. These then need to be repeated for the other side of the body, resulting in much longer training exercises.

Spatial Plane	Stable Adaptability (Mammals)
Dominant Tissue Type in Animals: <b>Endoderm and Ectoderm</b>	Expanding into the horizontal plane required many evolutionary changes, some of which counterbalanced the purely directed qualities of linear behavior. Linear movement is oriented to power, lateral movement to control, and the muscles and their tone regulation function quite independently and differently from our powerful flexors and extensors. Metabolism faster and found primarily in warm blooded animals.
Dominant Senses: <b>Auditory and Tactile</b>	<ul style="list-style-type: none"> <li>● Auditory: Our ears are made from Endoderm and function using an adaptation of tactile sensitivity (hairs). We can observe auditory processing by watching the ears of some animals.</li> <li>● Tactile: Awareness of the surrounding space using 20+ different types of skin sensors.</li> <li>● Visual mapping employing stereoscopic vision</li> </ul>
Dominant Reflexes: <b>Tactile / Motor</b>	<ul style="list-style-type: none"> <li>● Asymmetrical Tonic Neck Reflex (ATNR) organizing the orientation of the body to auditory information through head position. The neck movement is what we do when nodding NO.</li> <li>● Gallant: Lateral trunk organization.</li> <li>● Leg Cross Flexion: lateral leg / torso organization</li> <li>● Babinski: lateral foot organization.</li> <li>● Asymmetrical Hand and Foot Grasp</li> <li>● Asymmetrical Hand Supporting and Hand Pulling</li> <li>● Head Righting in abduction / adduction.</li> <li>● Eye Tracking independent of head position</li> </ul>
Dominant Cognition: <b>Feelings about Emotions</b>	<ul style="list-style-type: none"> <li>● The ability to integrate information for the senses, memory and basic emotions into complex and variable decisions. We experience this decision making capacity as our feelings.</li> <li>● Planar mapping: The ability to maintain a map of the surrounding horizontal space through time and compare new information to this map. Maps within maps. Related to our sense of direction.</li> <li>● Maps oriented to innate sense of self persisting through time.</li> <li>● Human beings generally track this level of development between 7 and 11 years of age.</li> </ul>
Dominant Protective Response: <b>Learned</b>	Learned responses to specific threats using Fight / Flight instincts in novel, more advantageous ways. Many of these are group responses. Pack instincts.
Effects of Poorly Integrated Response to Stimuli:	<ul style="list-style-type: none"> <li>● Hyper / hypo activity / fidgeting / attention issues</li> <li>● Auditory processing issues</li> <li>● Reading, handwriting, math and spelling difficulties</li> <li>● Poor sense of direction</li> <li>● Poor posture medially / laterally (scoliosis)</li> <li>● Confused handedness</li> </ul>
Therapeutic Options:	<ul style="list-style-type: none"> <li>● Reflex integration therapy</li> <li>● Structural Bodywork for fascial release in abduction / adduction, torsion</li> <li>● Cranio-Sacral Therapy for adhesions in lateral stability (Parietal / Temporal / Occipital / Atlas)</li> <li>● Asymmetrical: Baseball, climbing, Tennis, playing a musical instrument.</li> </ul>

## **Volume**

In the chaotic world of animals, some had the idea to look up. Soon they were hanging out in trees. Structurally, forelegs became arms and hands and movement became dominated by the hind legs, leading to bipedal locomotion. From the perspective of behavior utilizing three dimensional space (volume), the body in addition to moving around, provides a stable platform for tool manipulation. This capacity for dynamic stillness of the locomotor system while actively manipulating objects using the fine motor control of the hands and arms, is the hallmark of animals that have attained this capacity. The body here can be divided into two systems, the ribs, spine and pelvis and legs making up the base- the moveable platform. The shoulder girdle arms and head combine into the tool manipulation mechanism, manipulating objects inside an ellipsoid whose foci are the shoulder joints. The spine is evolving to handle static compression.

Cognition developed to the point of manipulating complex images and maps in a virtual four + dimensional space. Conscious thought emerged from abstract manipulation of feelings which can be described as feelings about what you are feeling, essentially a third order integration of emotion. All of the senses have strong linkages to volume. Additionally we have developed virtual senses, which for example, enabled Ludwig Von Beethoven to compose his 9th Symphony while deaf.

Many of us have gained a high degree of competency in manipulating our environment in three spatial dimensions without fully maturing the mechanisms dedicated to locomotion and lateral stability. Additionally many of the activities we engage in compromise our Point Layer parasympathetic functions, engendering feelings of unease or overwhelm. It is additionally extremely challenging to manage these more ancient structural / functional mechanisms "from the top down", as they are layered "from the bottom up". Our nervous systems have four times as many nerve pathways leading into the higher level functions, as there are from these functions into the body. It follows from this fact that our conscious awareness is a tool to extend to potentials of what we experience as non-conscious neurology, rather than the body exists as a mechanism to accommodate the conscious mind, as is commonly believed.

Incomplete maturation in any of the underlying layers results in consciously acquired adaptations in compensations. An analogy for how we experience this is if we have ever driven an old car. As the car wears, we adapt and compensate for its reduced structural and functional integrity, but to do so requires increased vigilance on our parts, forcing us into a heightened state of alertness that over time can become depleting. After acclimating to such a car, driving a well maintained car can feel exhilarating, even joyful, as our level of vigilance, and therefore stress, relaxes. We often experience something quite similar to this when we enhance the functional skill of our point, line or plane competencies. Reducing stress is the goal of many therapies, and it is often most quickly accomplished by enhancing the vigor of these underlying functional layers.

<b>Spatial Volume</b>	<u>Intentional Manipulation (Human Beings)</u>
Dominant Tissue Type in Animals: <b>Ectoderm</b>	Movement at this layer provides a stable platform for integrating higher level cognitive functions with fine motor skills. Mapping forms an internal three dimensional workspace linking images formed in the different sensory-motor mapping systems. When the deeper layers are well integrated, behaviors at this layer can reach for their full potential.
Dominant Senses: All: <b>Neo-Cortical links</b>	<ul style="list-style-type: none"> <li>● Fine touch receptors in the hands. Complex independent movement of the fingers as in tool use.</li> <li>● Auditory: Broca / Wernike, complex symbol processing.</li> </ul>
Dominant Reflexes:	<ul style="list-style-type: none"> <li>● Robinson Grasp</li> <li>● Toe Grasp</li> <li>● Oral - Fascial Reflexes</li> <li>● Babkin-Palmomental</li> </ul>
Dominant Cognition <b>Neo-Cortical</b>	<ul style="list-style-type: none"> <li>● Conscious thought including self awareness, and awareness of the internal states of others.</li> <li>● Manipulation of abstract concepts. Visual Cortex</li> <li>● Feelings about feelings - 3rd order cognitive processing.</li> </ul>
Protective Responses:	<ul style="list-style-type: none"> <li>● Co-operation.</li> <li>● Socially organized - laws, conventions, social mores</li> <li>● Extremely long developmental cycle and complex cortical maturation.</li> </ul>
Effects of poorly Integrated Reflexes:	<ul style="list-style-type: none"> <li>● Adaptive behaviors such as dislike of reading, attitudes and preferences.</li> <li>● Limited creative thinking</li> <li>● Hand eye coordination</li> <li>● TMJ</li> </ul>
Therapeutic Options:	<ul style="list-style-type: none"> <li>● Psychology</li> <li>● Formal Education and socialization, parental nurturing</li> <li>● Cranial Therapy for the facial bones and Thoracic Inlet</li> <li>● Fine manipulation of the joints of the hands, wrist and jaw, and their muscles and well as the muscles of the eyes.</li> </ul>

## **Summary:**

The perspective of this text may create the impression of a mechanistic, soulless idea of reality. The idea of individual soul, from which our self awareness emanates, is indeed deeply challenged by current work in neuro-science, anthropology and other areas of research. As I explore this knowledge, I am deeply challenged to re-evaluate the relationship of soul to the role of individual qualities in my unique identity. However, the gap between things that are living, and things which do not, is so vast that the idea of some form of universal soul remains unquestioned. My current reasoning is that there is some form of energetic life force, perhaps a fifth dimension, that linked with cyclic chemical processes, to emerge as the unique expressions of life of which we are aware.

About the researchers mentioned in the text:

**Dr George Goodheart** pioneered merging Eastern and Western non-allopathic medicine into a body of knowledge known as Applied Kinesiology. Although much of his work is not accessible, a good foundation for the techniques can be experienced in “Touch For Health, The Complete Edition” by John and Matthew Thie. The reach of Applied Kinesiology over the past 60 years has been immense, with some fraction of the techniques showing up in nearly all Energy Medicine healing modalities. For example, his work persists in the neuro-motor reflex work of Dr. Svetlana Masgutova by way of Touch For Health / Brain Gym.

**Dr. Wilhelm Reich** was a peer of Carl Jung and student of Sigmund Freud’s who recognized the role of the body in disturbances of the psyche. His use of deviations from the norm in body morphology to analyse character, summarized in his book “Character Analysis” was revolutionary. Recognizing that soma and psyche were two ways to view the same thing launched touch therapy from its origins as means of treating aches and pains into the vibrant area of exploration of the human condition which it is today. Reich’s work persists in some form in all but the most rudimentary Manual Therapy modalities.

**Dr Antonio Damasio** is still actively researching and publishing. The books: “The Feeling of What Happens” and “ Self Comes To Mind” are the two works which for me have most clarified the mechanism of action of self awareness and experience.

**Dr. Svetlana Masgutova** is actively researching, teaching and working with clients. Her contribution has been to link the work of Vogotsky, Piaget and other researchers of reflex function, with the cognitive development work of Paul Dennison (Brain Gym) and energetic dynamics work of Goodheart through Touch for Health. What is revolutionary about Masgutova’s work is its capacity to fragment dysregulation of the soma / psyche dynamics into manageable parts, build function, and re-assemble the system in a way that enables the enhanced functionality globally. Although she specializes in working with severely challenged children, the protocols support all human beings who wish to maximize the potential of being human in our four (or five) dimensional continuum. More information on her can be found at [www.masgutovamethod.com](http://www.masgutovamethod.com)