APPENDIX B

Embryogenesis

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The work of Erich Blechschmidt (1977, 1978, 2004) in human embryogenesis is profoundly important in understanding the dynamic stillness and its unfoldments. His principle of a phenomenological understanding of embryology is an important influence on Biodynamic Craniosacral Therapy. He coined the term "biodynamic". The actual sensation and lived experience of a Biodynamic Craniosacral Therapy session of work is found in contacting the formative forces in the body of the Long Tide and the body of the Mid Tide. These are found in the embryo during the first 8-10 weeks post conception and throughout the lifespan. Thus, the practitioner may have more contact with embryological principles than with anatomy and physiology when laying hands on a client. All the formative forces arise out of the stillness. The dynamic stillness at the core of the notochordal midline invites and organizes the form (geometry and proportion) in the embryo to arise. This is the meaning of biodynamic.

Biodynamic Craniosacral Therapy is a metabolic model. It seeks to form a relationship with the sum of the metabolic processes found in the fluids that are involved in the build up and breakdown of the shaping processes found in the cytoplasm and fluids that make up the majority of the human embryo. Metabolic fields of activity have two principles. The first is that these large fields of fluid activity have spatial relationships with adjacent metabolic fields such as the relationship of the fast developing neural tube in the embryo to the slow growing vascular system attached to it. The second important principle is that the submicroscopic molecular movements in the fluids are motive and decisive for the process of differentiation. This movement passes through every structure in the embryo as well as the adult. Furthermore, these metabolic movements are ordered and precise in terms of their direction and tempo (Blechschmidt 2004).

A blueprint of one's totality, essence, wholeness and form is maintained and is accessible throughout life as a perceptual experience via the medium of the Long Tide and the Mid Tide located in the fluids rather than through the genetic structure. The Long Tide and Mid Tide are symbols for a range of unique tempos or movements in the fluid fields throughout life (Seifritz 1954). They start in the fluid fields of the embryo as metabolic movements that cause organization, orientation and form in the whole. As Dr. Sutherland said this is not an "idle dream".

An interpretation of Blechschmidt's work includes:

1) Dynamic Morphology, the principle of the intrinsic movements shaping and forming the embryo as the gestures of sentience and behavioral expression.

2) Epigenesis, the principle that the motive forces (Long Tide and Mid Tide) in the fluids carry the blueprint of wholeness rather than being pre-formed in the genes.

3) Dynamic Stillness, The principle that the metabolic fields in the embryo carry the original
formative intention from the *dynamic stillness* located in the fulcrum and the midline.

4) Metabolic Fields, Primary Respiration catalyzes the body of the Mid Tide (after it originates from the stillness) as an embryo condenses into precise shapes and spatial relationships.

Some of the embryological principles incorporated in Biodynamic Craniosacral Therapy are:

1) The human embryo is distinctly human and whole from the moment of conception. It is a whole and complete human being at each stage of development, from the cell nucleus to its total form. *Conception is viewed as the next phase in a developmental process rather than the start of a new life* (van der Wal 2004b). A human embryo cannot be known from the comparative study of other vertebrate and non-vertebrate embryos. One can only know the human embryo by studying the human embryo.

2) The embryo develops in approximately the first seven weeks, guided by the creative impulse of Primary Respiration moving throughout it. Genes are passive but necessary at this time. The fluids and the membranes covering it are the active influences. *This is called epigenesis.* Dr. Blechschmidt said the genes make the letters, the fluids create the words. The blueprint of the human body is not preformed in miniature in the genes. Biodynamic metabolic forces (discreet tempos) in the fluids, rather than biochemistry, direct the process of differentiation. *Movement is cause.* The deeper forces initiating and maintaining human development are found in the fluids. *Thus, motility of the fluids precedes mobility of the tissue.*

3) The embryo carries the Intelligence of the Divine (Long Tide) and the Intelligence of Nature (Mid Tide), expressed as a simultaneous polyrhythmic harmony. The embryo’s interconnectedness to such is embodied in the fluids. *This describes Incarnation as a continual process of becoming over time, with constant renewal, revelation and creation available as resources.* Health requires biological synchronization with the tempo of the Long Tide and the Mid Tide.

4) The dynamic morphology of the embryo is an expression of Primary Respiration and the potency of the Mid Tide. *Embryonic motion and growth are viewed as sentient gestures.* The consciousness of the embryo is capable of expressing itself as having an aversion to pain and a preference for pleasure. The embryo is the visible gesture of the invisible act of incarnation. In other words, the growing gesture is a form of unique psychological and spiritual expression from a phenomenological viewpoint (van der Wal 2004a).

5) Order and orientation are carried in the human body throughout life as coupled biodynamic functions (homologous links). The embryo must learn to orient to survive. *The capacity to orient is one of its primary functions and remains so throughout life.* Firstly, it occurs through radial symmetry around a fulcrum in the first two weeks of embryonic development and secondly as axial symmetry around a midline that forms at three weeks post conception. Thirdly, the embryo cycles through a period of flexion and finally extension during the final weeks of its growth (van der Bie 2001). These principles of how human development is ordered (organized) remain throughout the life in the body.

Clinical work in a Biodynamic Craniosacral Therapy is focused on the interchangeable context of the fulcrum, the midline, and embryonic flexion and extension as the core organizational and orienting processes in health and healing. The function of the metabolic fields of the embryo is to create structure and maintain form. This is because a metabolic field has a unique fluctuation of movement, specific direction and is spatially oriented (proportioned) to the whole via the fulcrum or the midline.

6) The fulcrum appears first at conception as mentioned above. The midline then arises two weeks
post fertilization. Both the fulcrum and the midline are at their core dynamically still. All midlines are fulcrums, however, all fulcrums are not midlines. The stillness invites all differentiations to arise in the embryo and adult (Blechschmidt 1978). In other words, the fluids are spatially ordered around the core of stillness in both the fulcrum and the midline. All proportion, orientation and geometrical proportion in the form and structure of the body are in direct relationship to the stillness.

7) The dynamic stillness generates Primary Respiration via the Breath of Life. The potency of the Mid Tide simultaneously energizes the total soma. These two states and their resulting tempos individually arise from the stillness and are also coupled to each other throughout life in order to synchronize all biological functions.

8) The embryo also responds to its trans-generational history and will take shape accordingly. Inertial issues brought forward genetically are being recognized and held by Primary Respiration and The Mid Tide from the first moments of life. These imprints are carried in the cell nucleus, the cell membrane, within the cytoplasm and the morphogenic field surrounding the body (Sheldrake 1995). Thus, two things arise in the process of conception: one’s relationship to the divine and one’s trans-generational history. The morphogenic or quantum field (McTaggart 2002) outside the body (periphery) informs the body via its connection to the midline and the fulcrum.

9) The embryo generates two bodies. One is the peripheral body composed of the membranes of the embryonic cavities. This represents a field of function outside and around the inner central body. It maintains visceral-endodermal functions (such as liver and kidney) by projecting them out to the periphery prior to the actual body structure being formed. The second body is the central body which will become the actual soma. During the early stages of embryonic development, the central body is an envelope consisting of two layers of cells. It has no middle in the form of body parts or viscera.

This means that function precedes structure, and projection of function outside the body until the structure is built to bring the function back in, is a natural process throughout life.

10) All adult function is pre-exercised in the embryo. For instance, thoracic respiration starts at conception with the initiation of a suction motion in the embryo. Thoracic respiration is the oldest function in the body.

11) There is no growth without resistance. The development of the cardiovascular system is slow and dramatically inhibits the rapid growth of the central nervous system. The gesture of the heart is to tell the brain to slow down.

12) The necessity to hold space for a 3rd function or possibility to arise out of the polarity of center and periphery in the embryo. This is seen in the transitions between the four stages of dynamic morphology. Homo sapiens has the highest known rate of embryos that do not come to term. Many are lost in the transitions between each of the stages of its morphology. Stage one corresponds to the first week post-fertilization. The second week corresponds to the second week, the third stage to the third week and finally the fourth stage corresponds to the remaining time in the embryonic period. This is from week four through week eight.
REFERENCES


