

# The Development of Energy

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## Introduction

This is the second article in a series describing how we are trying to understand how child development is linked to the Chinese descriptions of energy. We have found that certain aspects of movement develop in the first year of life along precisely those lines traced by the classical Chinese meridians. Traditionally, the eight extra meridians are linked to the basic development of human anatomy<sup>1</sup>. This work suggests that the principle meridians are similarly linked to movement development and, as we shall see, to the growth of personality.

The last article described how the Stomach meridian orchestrated the neonatal skills of Grounding and Eating<sup>2</sup>. This article will show how developmental skills can be grouped into Themes which describe an holistic energy skill. These Themes are learnt through the development of related movements which are connected through the body by meridians. The meridians that govern each Theme are linked by Interior/Exterior connection and thus each theme is associated with one of the Elements. However, there are six themes rather than five, and this means that the Fire element is divided into *Ministerial Fire* (Associated with Triple Heater and Pericardium meridians) and *Heart Fire*.

In this article we will explain each theme, its linkage to orthodox western theories of child development and also to the meridian system. The last two themes will be dealt with in more detail in the next article of this series. We will then show how the same sequence can be seen in the development of personality. Finally we will outline how this theory can be used in the diagnosis and treatment of chronic postural and behavioural problems. First we need to define some words:

## What is Energy?

When we use the word 'energy' or 'Qi' we will mean a quality or abstract function that can manifest in many different dimensions of a living organism. It can manifest as anatomy, as posture, as movement, as personality or as social behaviour. What is common to all these manifestations is the intuitively understood, abstract concept called the energy or Qi. In other words, energy is an abstraction that links different dimensions of existence.

For instance, Stomach energy is described traditionally as Rotting & Ripening and its direction to be receptive and downwards. When this manifests in the dimension of physiology it is the process of digestion by which outer energy (food) is broken down into form that we can use. In the dimension of the mind this same energy manifests as the ability to accept and process new ideas; to let go of held belief and to incorporate new possibility. In the dimension of posture the same energy manifests as the ability to let go of holding up weight by muscle tension and yield downwards accepting the support of the ground. All of these manifestations are related to our ability to accept and to trust the outer world to nourish us and this give flesh to the intuitive understanding of the energy.



## The Angels of Movement

A baby is born with very little 'voluntary' motion. (Since the concept of a 'self' is unclear when talking about babies, we can clarify the phrase 'voluntary motion' by defining it as movement initiated by the motor cortex.) Instead, most of a baby's movement is initiated by the lower brain and manifests as automatic reflex movements.

However, these primitive reflexes are sometimes quite complex. The rooting reflex, for example turns the head towards an object touching the face, which needs a complex sensory-motor collaboration. This facilitates the baby latching on to the nipple, but also the motor cortex learns from the reflex how to voluntarily turn the head. When a reflex has 'taught' the motor cortex a movement, it usually disappears from the baby's movement. It is said to be integrated.

Poetically, reflexes are like angels which visit the baby to teach him how to inhabit and move his new body and then leave when their job is done. It is probably more accurate to say that the cortex inhibits the reflex; that the movement is then under cortical control and not elicited by sensory stimulation. Reflexes that are not integrated in this way are more like demons than angels. The random patting movements of Rett syndrome<sup>3</sup> are a good example, possessing the child and interfering with any fine motor control of arm and hand.

As a general rule babies integrate movements progressively down the body from head to tail and then from proximal to distal parts of the body. For instance, arm movement develops first in the shoulder, then elbow, then wrist and finally in the thumb. The lines along which this integration takes place are in many cases, exactly the principal organ meridians. We could say that the meridians are the pioneer trails that the Mind travels as it learns to inhabit the Body.<sup>4</sup>

## Developmental Themes

Babies are learning to live in the world. In the first year they are learning the basic skills necessary to function as a human being and, in that time, learn these energy skills physically through movement. It is widely believed<sup>6</sup>, that the way these basic movement skills are learnt affect how the older child develops personality and social skills.

Bonnie Bainbridge Cohen has described how the process of integrating certain movement skills is linked to the development of the holistic human being. For instance, in describing how postural tone is developed in the first three months she says: “*Difficulty in bonding to the Earth and inefficient postural tone are common problems in both children and adults. As well as affecting one’s basic posture, they underlie problems in bonding with one’s parents and others*”<sup>5</sup> This holistic skill of relating to the Earth is learnt through several reflexes and righting reactions and was explored in detail in the last article.

In general we will say that a Developmental Theme is any such collection of energy skills, with a common general function. The next section describes how the six basic Themes manifest in movement development.

### 1. EARTH:

#### EXPLORING THE KINESPHERE

This theme could be called “*Having your cake and eating it*”! The Kinesphere is the space around us which we can reach without moving through space. Basically, the kinesphere is that part of the world which is where we already are. This is the first exploration a newborn undertakes. They have just left the primeval sea in their mother’s womb and, like the ancient lung fishes, have pushed out onto dry land. Their first month is spent learning how to relate to gravity and to the new experience of getting hungry and having to eat. Their first movements are of cuddling, of actively relating to the mother and to Mother Earth, learnt through the Tonic Labyrinthine Reflex (TLR) and finding the nipple, sucking and swallowing to satisfy hunger.

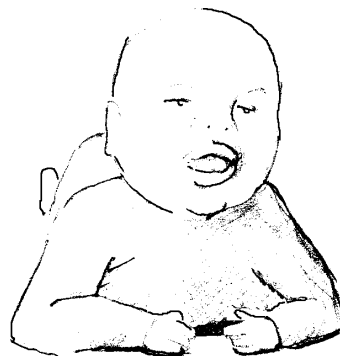
The last article described how both of these actions were manifestations of the Stomach and Spleen Organs and how the Stomach meridian traced the actions of the oral rooting, sucking, swallowing reflexes in the head while the meridian in the torso and upper leg traces the development of the muscle tone down the front of the body. The latter is similar to having enough air in a bicycle tyre. If the tyre is flat, pushing on the pedals will flatten the cycle into the ground and make it difficult to move. If the tyre is full then downward pressure will bounce elastically off the ground actually giving support to motion. In a similar way the baby learns to use the support of the ground to push away from it by developing tone in his front

muscles and inner organs.

The theme common to all these activities is *being supported by what is already here*. For example, the rooting reflex is stimulated by *touch*. This means that the baby is reaching for what is already there. Newborn babies do not reach for food at a distance. They just cry because they are hungry. If needs are not met at this stage then there is a tendency to inwardly collapse which has a profound effect on the later development of personality.

#### Rooting & Grounding

Mouth leads the reach. Eyes do not focus outside kinesphere



However, if needs are met then the tone of the baby’s ‘inner tyres’ are good which means that pushing movements will be buoyantly reflected back from the ground to produce inner sensation, allowing the baby to develop a sensory map of its body. If the Earth theme is not active then the sensory map is fuzzy. The baby cannot fully inhabit its physical flesh because of a lack of sensory feedback.

### 2. MINISTERIAL FIRE:

#### CONNECTING TO THE CENTRE

Even when a baby has explored his whole body there is much evidence that he does not have a clear picture of it as an individual unit. All the different sensations from different parts of the body have not joined to make a *gestalt* image. Jean Ayres in her excellent book *Sensory Integration and the Child* describes the distress in children who have not learnt to integrate their senses in this way. Many forms of learning difficulty can be traced to this.

This process continues until about age seven years but its beginning is in special movements most of which appear shortly after birth and are usually integrated by the fifth month. For example, the abdominal and galant reflexes activate muscles in the lumbar back and abdominal region. Through them, the baby learns to connect his movements to his centre of gravity and thus also to connect the upper and lower parts of the body. The Moro reflex, which appears in the womb about 10 weeks after conception, and the Babkin, which appears after birth, both use the symmetry of movements of the head and arms to define a midline and thus to connect the sensations between the left and right halves of the body.

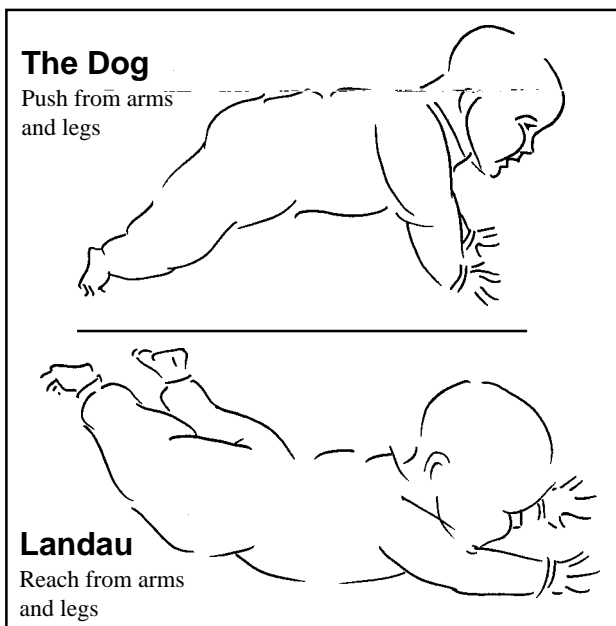
Thus the energy theme is of integration through connection. We cannot say that a baby at this stage has a sense of self but his body feels like a single unit and when he is picked up, he can be lifted without bits flopping all over the place. Through this theme he also learns to sit without falling over and to roll from back to front, both of which need good tone in the deep abdominal muscles and coordination between left and right. This physical

integration provides an important foundation for later development of a sense of autonomous self.

The Pericardium and Triple Heater meridians trace the movements of the Moro and Babkin reflex. In fact, the Babkin is actually stimulated by pressing P8 in the palm of both hands. It brings the head to midline and flexes the head and upper torso towards the navel. The Moro is stimulated by a loud sound and is a primitive reaction to a shock. In the Triple Heater phase, the arms open wide and the neck extends; this connects the arms to the chest and the head and thorax to the centre of gravity. In the Pericardium phase everything flexes towards the centre. Both reflexes connect left and right sides of the body and establish a midline for stereoscopic vision by bringing the head to centre. The movements follow not only the surface meridians but also the deep branches of both meridians flowing into the heart and down the centre line connecting the three burners.

Finally, the deep branches of these meridians govern the tone of the **crura** and **psaos** muscles which connect upper and lower body to the baby's centre of gravity (in an infant, almost directly behind the navel.)

When these reflexes have been integrated, the baby practices centering by using symmetrical pushes and reaches. These are called *Homologous movements*. In one, very like the yoga position called the Dog, the baby pushes with both legs and both arms and the two pushes meet in the centre and raise the pelvis (see picture). The line of force from the ground to the centre follows the Pericardium meridian. The other is a reach from the head, the arms and from the legs simultaneously so that the baby comes up off the ground only resting on his centre. This is initiated by the Landau righting reaction (see picture). The line of extensor tone which connects periphery to centre in this movement traces the Triple Heater meridian.



From these we can see that the developmental meaning of both meridians in the Ministerial Fire phase is of connecting the centre to the head and limbs, thus integrating the body. This corresponds to the classical function of the Triple Heater as an avenue for Yuan Qi, spreading the deep energies out to the periphery.<sup>7</sup>

### 3. WATER:

#### EXPLORING OUTER SPACE

The first two themes complete a major phase of development: **inhabitation of inner space**. The baby's attention has been focused on inner sensation or on things within reach. The integration of the left and right visual fields creates a new possibility, stereoscopic vision, which allows the sense of vision to focus on distant objects. The baby's exploration of the outer world has begun.

Just as the connection of left and right allow the sensory nervous system to define *distance*, the connection of upper to lower body creates the context for movement through space. In explaining this statement we will show, in a very precise way, the developmental function of the Bladder Meridian. First we have to understand the function of the spine and this requires a digression.

#### Evolution and Movement

It is well known that embryological development retraces stages of evolution<sup>8</sup>. It is one of the most convincing confirmations of Darwinian theory, since, if the human form came about by a long series of genetic changes which slightly altered embryological development, then it is almost inevitable that the history of these changes is recorded in the way the embryo grows. Bonnie Bainbridge Cohen<sup>9</sup>, Moshe Feldenkrais<sup>10</sup> and David Gorman<sup>11</sup> have all pointed out that the development of movement in babies also traces an evolutionary history. This shows that the nervous system also evolved progressively; one skill growing from existing ones rather than a new skill appearing from nowhere. Thus a human baby starts off with fish like spinal movements, progresses to homologous movements like frogs, then to crawling on the belly like reptiles and then learning to crawl on four legs like a mammal before getting up on two legs to be human.

During this evolutionary development, anatomical structures such as the spine have modified their function. In the adult human, the spine is a support structure as well as an aid to movement. However, originally the spine was invented in the weightless ocean purely to make forward movement more efficient. This does not yet explain the meaning of the spine for other creatures such as insects move forward without them. But, by comparing insect movement to mammals', we can get a clue to the spine's developmental function. Most insects move by pulling themselves forwards on alternating left and right legs which cannot produce much impulse. However, insects like crickets who push with their back legs need to push with both at the same time, otherwise they fall over sideways. Creatures with spines can push with alternate legs, if they have them. The spine and the muscles surrounding it elastically transform the sideways force into forward impulse.

*This shows that the spine's first function, both evolutionarily and developmentally, is to transform a sideways push from the legs or tail into forward motion.*

## The Development of Forward Motion

Forward motion has two parts, a reach and pull from the upper body combined with a push from the legs. (If both upper and lower body push then we get the centering movements described in the last theme *but no motion through space.*) We will now describe how the Bladder meridian is involved in the development of the ability to move forward.

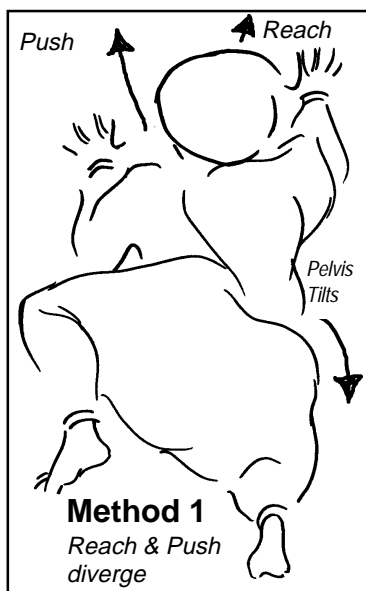
The Bladder meridian starts in the eyes at a point called Eye Brightness, which links the Stomach and Bladder channels<sup>7</sup>. Vision is our main stimulus for motion. We see something that attracts us or that repels us and we move towards it or away from it accordingly. Developmentally, the act of reaching starts in the mouth, stimulated by touch around the Stomach channel. After birth, vision starts to grow more important as a stimulus for reaching, and the focus of outer attention moves up the Stomach channel to the eyes. While reaching is only stimulated by objects inside the baby's kinesphere, the object can be grasped and maybe eaten; the energy then moves down the Stomach meridian and the reach is relaxed. But, once vision is stimulated by objects outside the kinesphere, the reach is not immediately satisfiable. The intention continues from the Stomach channel into the Bladder channel to mobilise the body to move through space. The reach takes up slack in the spine and tonifies the surrounding muscles thus creating an elastic connection to the centre.

The Bladder meridian from BL11 to BL31 is concerned with the support and elasticity of the spine. Sam and Ana McClellan have analysed how this part of the meridian 'contains' the spine<sup>12</sup> and coordinates the support the inner organs give with the tone of the surface muscles. If organ support is low in one place then another part of the spine needs to be held rigid to compensate, which in turn will mean that asymmetrical forces will produce further stress at these points. If the dorsal section of the Bladder meridian has balanced tone then the spine is neither rigid nor slack. This is exactly what is needed to transform force from the legs into forward motion.

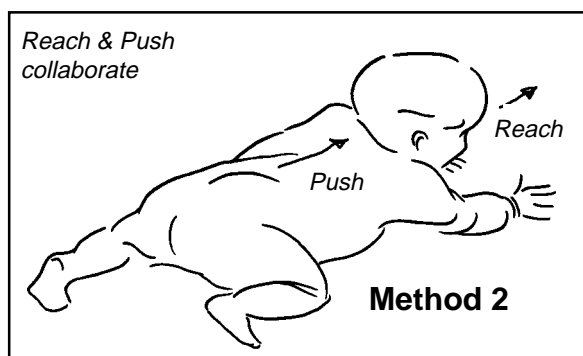
The Bladder meridian in the leg has a more subtle developmental function and the clue to it came from an analysis of Bonnie Cohen<sup>13</sup>.

She observed that when a baby crawls on his belly, he can flex the hip in one of two ways. Flexing the hip lying face down with the knee facing downwards is impossible since the leg pushes into the ground. Hip flexion is made possible by either:

1. *Tilting the pelvis sideways which means the hip can flex forwards, or*
2. *Everting the foot, thus rotating*



*lower leg so that the knee joint can flex in the vertical plane of the body. This means that the hip can flex out sideways without tilting the pelvis.*



Bonnie Cohen noticed that if the baby pushes forwards having flexed the hip by the first method then the line of force from the leg cannot be turned into forward motion without a great deal of muscular effort in the upper back. In effect, the asymmetry of the force was too great for the spine to cope with and the force 'broke out of its container'. This pattern of back tension is carried forward in later development and results in postures where the upper spine is held rigid and the lumbar spine is over loose.

Method 2 creates maximum cooperation between legs and spine and, without going into extreme detail, this allows the psoas muscle to smoothly transfer the leg push into forward impulse up the spine. In later development this gives the foundation for upper and lower body integration in all forward movements.

Finally, the movements of method 2 exactly trace the Bladder meridian in the leg. The eversion of the foot uses the peroneal muscles which run underneath the lower branch. The meridian in the ankle runs along the calcaneofibular ligament which transfers foot eversion into fibular rotation. The meridian in the lower leg and knee follows this rotation into the menisci and the branch in the upper leg follows the line of force that the push gives to the sacrum.

Thus the Bladder meridian connects all the patterns needed for forward motion, the initial visually stimulated reach, the elastic containment and support of the spine and finally the patterning of the leg to spine connection. The Kidney meridian has a related role in coordinating the leg and torso flexor muscles which progressively guide the force from leg to spine and thus to the upper body. The Triple Heater phase helped the baby to make the connection of limbs to centre. This Water phase choreographs these connections to provide motion through space.

Mobilization of the body to move through space is supported by the sympathetic nervous system (associated with the Fight or Flight response) and the secretion of adrenaline. Subjectively, this is experienced as excitement or fear, both of which can give wings to movement or, in excess doses, freeze it. This gives more insight into Water's linkage with fear, though maybe it is more accurate to say that the *Water element is related to sympathetic nervous system activation*. Excitation is the physical sign of interest in the outer world. The baby has not learnt fear but he feels excitement and it motivates him to move and to explore the outer world beyond his immediate reach.

#### 4. METAL: DIVIDING THE WORLD

From about the seventh month, the baby has an enormous spurt in development triggered by his growing ability to move through space and explore the world.

In the first months the baby will play with objects in a very specific way which we could call *Sensual Play*. It seems that he plays in order to create sensation and the toys he likes are ones that make a sound, that glitter, that feel soft. The object itself does not seem to matter so much as the sensation produced. Sensory integration is achieved by repeatedly getting different sensations from the same object, looking at it, shaking it, (heaviness and sound), sucking it (texture and taste). By this means the brain learns that it is experiencing the same 'thing' in different ways. Certain rules start to be made which 'make sense' of the world, such as "Shiny things will feel smooth". The baby is learning the ground-rules of experience.

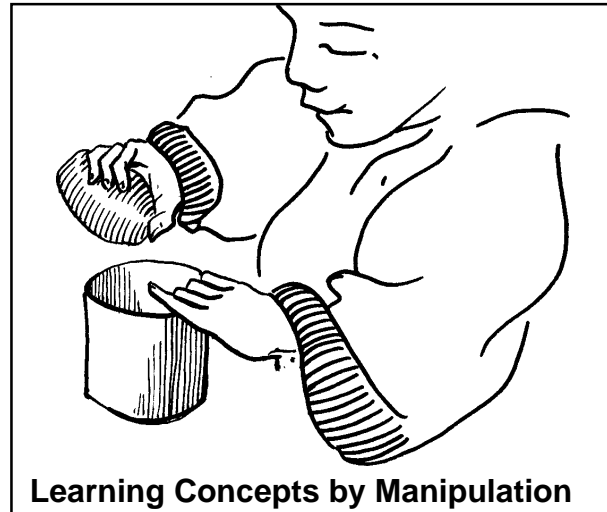
After the baby learns to move through space, he is learning that the world is not just subjective. Because he has greater control over his own body he can start to differentiate himself from other objects simply because the other will not move to his nervous system's command. His arm is part of him because, when he wants it to move, it does! This is the start of the process of categorizing the world and one of the most fundamental boundaries is between Self and Other. To a baby the division is still very vague; his mother's breast moves towards his mouth when he is hungry so, to him, it is as much part of him as his arm! Weaning is thus an important part of this process of mapping the boundaries of the world.

The baby is not only defining himself and his personal space but is also starting to analyse the world and form concepts. Jean Piaget showed that concepts are formed before the words that name them and that they are developed by action<sup>14</sup>. For instance, when our baby daughter Chloe discovered the concept 'INSIDE' for the first time, she did so by manipulating objects. A plastic cow she was playing with fell into a cup. She spent the next two days putting different things inside other things, rattling them around, taking them out until she had tried all the variations of this division of the world. As babies we learn categorization through manipulating objects and by pointing at them. We have found that the development of manipulation skills is governed by the Lung meridian and of pointing by the Large Intestine meridian.

#### Manipulation & Concepts

By manipulation we mean finely controlled movement of an object. This is usually done with hands and the development of the thumb movement is of primary importance. Until this time, the arms have been used mainly as legs for crawling. The hands can grasp an object but the wrist and elbow do not articulate smoothly and most movement is from the shoulder. Fine manipulation of objects is achieved by the thumb, wrist and elbow learning to move independently. In humans this specialised use of arm and hand is much more highly developed than in any other creature and, in the brain, the movements of the thumb and index finger are linked to the same centres as are the movements of the vocal tract for speech. This

shows that language and manipulation probably evolved together.



The hand is divided into three functional parts: the Thumb and Index finger (the METAL HAND) connect to the scaphoid bone and to the radius, the fourth and fifth fingers (THE FIRE HAND) connect to the lunate bone and to the ulna, the middle finger connects to the capitate bone which acts as a central pivot for rotation of the hand. In humans and many other mammals, e.g. rodents, bats and monkeys, the Metal Hand and the radius are more active within fine movements; the Fire Hand and the ulna more related to larger, proximally initiated movements.

The development of these progressively finer movements follows the Lung and Large Intestine meridians. As each joint becomes more independent, points on the meridians gain tone. The Lung meridian traces the development of flexion of the Metal Hand and supination. The Large intestine meridian traces the development of pronation and extension of the hand. For instance, LU5 acts as a focus for the differential outward rotation of the humerus, LU8 for supination of radius, LU 9-11 for fine thumb movements.

#### Pointing & Naming

Another important movement in this theme is pointing. Most mammals point with their noses. Primates, including man, point with their index finger. Pointing is another act of defining the world and babies around 10-12 months start to point at objects and say 'DA!'. This action is often but not always a prelude to moving towards the object. It is very tempting to believe that this pointing and sounding is the first step towards Naming objects. One thing that is certain is that they only point at objects that are not part of them. Things in their space they grasp. So pointing is clearly defining a boundary and is saying 'That!' rather than 'This'. The evolutionary development of pointing connects the nose to the index finger as does the Large Intestine meridian and this clarifies the Large Intestine's function of excretion. In holistic terms this energy defines that which is Outside the organism and Foreign to it. Healthy organisms do not hold on to unassimilated outer energy but push it outside.

## Expression & Defence

This Metal phase defines the world and packages it into namable concepts. At this time the baby suddenly seems to “become a little person”. They become more defined as themselves which means that their characteristic energy can manifest in ways of moving, reacting and sounding. They have started to clearly express themselves.

Another manifestation of this process of developing boundaries is the birth of the ability to say NO! Babies in this phase start to push things away, decisively turning their head away from food. It is tempting to also link this with the maturation of the immune system and the growth of teeth, both of which peak within this time and both of which are clearly part of the same energetic process of defining the difference between inner and outer.

We can see that both expression and defence (related to Ying Qi and Wei Qi) are aspects of the same direction of energy, an outward movement which fills the personal boundary, clarifies self and other, prevents invasion and expresses self to the world. The Metal Meridians trace the manifestation of this energy direction in movement.

The next two themes will be explored in detail in the next article of this series but we include summaries for completeness:

### 5. FIRE : EXPLORING RELATIONSHIP

In this theme, which starts at about 12-18 months, the child is developing language. Language is different from naming, which many creatures other than man do and we have evolved extraordinarily subtle movement of the tongue, pharynx and larynx to give full expressive power to language. The driving force behind this evolution was the refinement of relationship and the birth of self-awareness. Relationship is explored by the child quite early but self-awareness is slow in coming. Until age three or so, the child will usually talk about themselves as ‘Me’ rather than ‘I’. Grammatically they are still seeing themselves as an object rather than a subject. This theme explores the development of a sense of ‘I’ and ‘You’ as independent subjective entities; conflict, communication and play are all part of this process.

### 6. WOOD: MODULATING IMPULSES

This theme is more related to Liver Yin than Liver Yang. Liver Yang aids the upward movement of Yuan Qi on its way to manifestation as action and so is more related to development of motion through space. Liver Yin is concerned more with modulation of impulse through storage to produce smooth flow.

Until age three or four years, the child’s energy has been primarily developing outwards. Even the development of ‘I’ has been mainly in terms of ‘I want’, ‘I am’ etc. The baby’s body has been developing more skill at manifesting desire and impulse by simple contraction of muscle groups. About 2-3 years old the child starts to practice self-control, starting with anal and bladder sphincters and going on to develop graceful, athletic skills by using the braking action (eccentric contraction) of antagonists to modulate movements. This process continues until about age 8 and develops free and flowing movement.

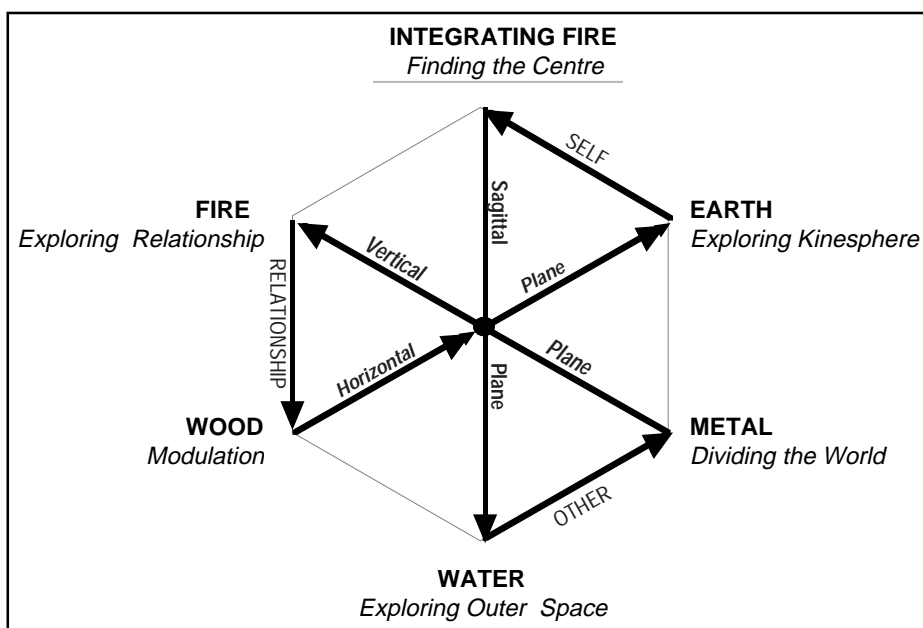
## THE DEVELOPMENTAL CYCLE

We have shown how Movement Development follows a thematic sequence in which the energies associated with each Zang-Fu Organ are manifested in the learning of specific skills.

If we look at the development of personality then the same sequence of energies appears, only this time manifesting in the psyche. Most of these stages derive from Freud<sup>15</sup>, Erikson<sup>16</sup> and Piaget<sup>14</sup> but the Wood (Liver Yin) and the Old Age Earth stages are more optimistic than Erikson and come from Oriental Tradition.

### DEVELOPMENT OF PERSONALITY

- EARTH:** Oral Stage (Freud) -  
Develops Trust and Hope (Erikson). (0-2 yrs)
- TH FIRE:** Anal Stage (Freud) -  
Develops Autonomy (Erikson) (2-4 yrs)
- WATER:** Phallic Stage (Freud) -  
Develops Initiative & Creativity (Erikson) (3-7)
- METAL:** School Stage -  
Peer groups and Defining Image (6-19)
- FIRE:** Adult -  
Development of Ego, intimacy and care. (20-50).
- WOOD (Liver Yin):** Maturity -  
Development of Wisdom and Awareness (50 - 65)
- EARTH:** Old Age -  
Self Acceptance, Integrity and Death (65+):



The familiar Shen and cosmological cycles of Elements describe a progression through cyclic time such as the seasons and the rhythms of daily life and physiology. This sequence of Elements seems to describe how energy evolves in the process of development, when time is linear rather than cyclic. The development of the body also follows this sequence during embryological development.<sup>8</sup> The same sequence repeats for the development of movement and then again for the development of personality. The sequence spirals in turn through the three great dimensions of human existence described in Buddhism: the Body, the Energy and the Mind.

### THE NUMBER THREE

The Tao Te Ching states:

*From the Tao is born One  
From One is born Two  
From Two is born Three  
and from Three comes all things*

We can see the meaning of this clearly from the developmental cycle. The baby is born, becomes separate from the universal. In the first two themes he inhabits his body and is integrated into One being. From his new central viewpoint he can start to distinguish between Self and Other and in the Water and Metal Themes learns to explore Outer Space. Twoness is born. Once he can distinguish Self and Other then he has to explore the relationship between them in the Fire and Wood themes. The conscious Ego is created as a mediator between the primal impulses of Self (Freud's Id) and the parental restrictions of the outer world (Freud's Superego). *Three* is the central mediator and from this centre all Things are born; meaning that from the Ego's viewpoint concepts become the outer reality.

It is surprising in how many other ways the number three appears within the developmental process. The above example of Self, Other and Ego corresponds to the lines running along the outside of the hexagon in the cycle and they describe the Taoist realization that any duality is a threesome because their relationship is a third entity.

### 3 BURNERS, 3 PLANES, 3 BRAINS

A different division into three dimensions is shown by the connections in the cycle crossing the centre. These correspond to the baby's ability to relate to the three planes of movement described by Rudolf Laban<sup>17</sup>. We will show how these dimensions correspond to the Three Burners<sup>7</sup>. In Chinese medicine the three burners are a division of energy functions into three major groups.

- **The Middle Burner (Related to Stomach and Spleen)** is related to accepting support and nourishment and processing it to make it useful to the organism. The Middle Burner's movement is inward towards centre.
- **The Lower Burner (Related to Kidney, Bladder, Liver Yang and Intestines)** is concerned with movement. Either in the form of excretion or impulse. It initiates movement upwards and forward.
- **The Upper Burner (Related to the Lung and Heart)** is concerned with the manifestation of energy in the body and in outward expression. This outward pressure is also the root of our protective function. Its movement is outward.

In terms of movement, these three groups of energy functions manifest as movements in the three anatomical planes :

- **The Horizontal Plane (Laban's Table Plane)** . This plane is the Earth. Movements parallel to this plane are rotations and movements towards this plane relate to the earth. Rotating takes our energy inwards and downwards, processing. Relating to the Earth allows its support to help us rise. Inner organs, the head and the torso are particularly involved in movements in this plane.
- **The Sagittal Plane (Laban's Wheel Plane)** Movement parallel to this plane are forward motion . Movement towards this plane focuses energy like a lens. Fight or flight happen in this plane and extensor muscles are used to reach forward and also to push us through space.
- **The Vertical Plane (Laban's Door Plane)** Movements parallel and towards this plane open the body for expression and relationship or protect it from invasion. Just as a door opens to let something through or closes. The upper body is particularly involved in these movements.

It is clear that:

- Middle Burner** manifests in **Horizontal Plane** movements
- Lower Burner** manifests in **Sagittal Plane** movements
- Upper Burner** manifests in **Vertical Plane** movements

Kiiko Matsumoto describes how tradition links the formation of the three anatomical planes in human body structure to the eight extra meridians<sup>1</sup>. This correspondence shows that the ability to move in these planes is guided by the Organ meridians.

### The Movements of The Three Brains

Another related threesome is found in the brain. Since the brain evolved progressively and grew in size and complexity as it did so, its anatomy is like an archeological site, with more recent structures overlaying older parts. There are three layers of structure which store and govern distinct types of movement.

- **The Reptilian Layer (The Medullar Oblongata and Vestibular Cerebellum):** This part of the brain governs the basic tone patterns of the muscles which support our skeletal structure in the gravitational field. **Postural Movement** is developed through the first two Themes. These movements, relating to gravity and support, are associated with the **Horizontal Plane** and **Middle Burner**.
- **The Mammalian Layer (Basal Ganglia & Spinal Cerebellum):** Is concerned with patterns of movement through space. These are called **Transfer Movements** and are related to the Water Theme. Conscious decisions to move initiated in the cortex are translated by this part of the brain into activation of muscle groups. They are associated with the **Sagittal Plane** and **Lower Burner**.
- **The Human Layer (Cerebral Cerebellum & Pyramidal System):** Is concerned with fine movements of the hands and mouth. It governs the so called **Manipulative Movements** and is related to the Metal Theme. Movements of the mouth and throat necessary for speaking are also governed by this layer. They are associated with the **Vertical Plane** and **Upper Burner**.



In the developmental cycle, the baby starts in the Horizontal Plane, exploring the Earth Theme. Finding the Centre through the Triple Heater then initiates his interest in the outer world and lays the foundation for sagittal motion. The Water theme completes this development of the Sagittal Plane movements. The Metal Theme initiates self-expression as the baby rises upright into the Vertical plane, freeing the hands for manipulation. The Fire Theme completes the development of the Vertical movements. We will explain in the next article how the Liver Yin initiates and lays the foundation for a return to the Horizontal Plane, thus completing the cycle.

## CONCLUSION:

In this article we have outlined how the Chinese concepts of energy are related to child development. In the next article we will examine in detail the Fire and Wood themes and also describe how this theory is used in clinical practice.

We are attempting to understand development in terms of traditional concepts of energy and this throws light on some of the mysteries surrounding the theory of Qi. We are not trying to explain the entire tapestry of Chinese Medicine in this way. However, clinically, this theory seems to be effective in working with deep and chronic energy patterns. Usually, these express themselves in posture and behaviour.

Development is like building a tower. If you have firmly built previous floors then the next floor is stable and easy to build. If a floor is incomplete then this produces an instability in the whole structure which has to be compensated for by props and stresses. Similarly, in the human, if a stage of development is missed, a deep instability remains and many of the postural and health patterns of that person can be seen as either collapse or compensation relating to this unstable platform.

As in traditional oriental medicine, our primary aim is to treat disorder by strengthening the organism's own healing ability. We aim to do this by helping the person to complete stages of development that are not fully stabilized before helping them to release the compensatory stresses. The linkage between Chinese medicine and developmental movement therapy allows us to work with movement and postural patterns through touch on the meridians. Conversely, we can diagnose and work with meridian energy through observing a person's movements and teaching them to move in the ways specific to their problematic stage of development.

This means that this approach is not only helpful for 'normal' chronic postural and health problems but could also help people with learning difficulties caused by organic brain dysfunction. A previous article called Movement Shiatsu and Cerebral Palsy<sup>18</sup> has described some of these applications. Also, several of our postgraduate students have started research in this field in collaboration with centres and homes for people with various learning difficulty and we hope that these projects will establish a creative dialogue between orthodox therapists and practitioners of Oriental Therapies.

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