

Meridians & Patterns

by Bill Palmer

The Jesuits used to say “*Give us the child for seven years and we will give you the man*”. By this they recognised that our patterns are probably fixed by early training and are difficult to change once we grow up.

Freud’s great contribution was to emphasise the importance of very early stages of development. The way we learn certain basic skills in early childhood predisposes the way in which later traits develop. Erik Erikson evolved these ideas further in his work on the socialisation of children.

Melanie Klein also expanded Freud’s ideas to include the effect of emotional experience in infancy and Frank Lake went one stage further to include the experience of the foetus. Many physical patterns as well as psychological ones are rooted in this early period. However, it seems that many therapies find it difficult to influence patterns originating in infancy.

The difficulty is that the experience of the infant is of such a radically different nature to that of the adult that it is very difficult for an adult to remember and reprocess that early era. In particular, experiences recalled through words will inevitably be only an approximation to direct recall since the infant has no words in her world.

Janov’s primal therapy accessed infantile experience but had no systemised way of dealing with what arose. The early primal therapists such as Janov and Lake relied principally on the belief that by stimulating a physical recall of infancy one could trigger a cathartic release which would allow any traumas suppressed at the time to release and resolve. The basic idea has an ancient lineage stretching back to Shamanic Healing and refined into healing systems throughout the world such as Seitai in Japan and Shaktipat in India.

All of the cathartic systems, however, start from the premise that the neurotic or uncomfortable patterns of adulthood are ways of suppressing energy which needs to be released and brought into the present to be liberated. In the language of Oriental Medicine these systems are focused on releasing the excess. This is valuable but, as Oriental Philosophy would certainly suggest, for real transformation to take place, this process should be combined with complementary work which fills in a deficiency.

In this view the signs of excess energy are apparent because there is a lack of support or containment and, unless you address the lack of support, the imbalance still remains.

Therapies which focus on building up missing faculties as well as stimulating release have an oriental flavour even if they are not from the east. Body Mind Centering is a well known example. They usually are also effective for patterns that are not caused by trauma. Trauma usually makes us miss out a stage of development because it is associated with pain. However, there are other reasons for missing out a stage which we will discuss later.

Most of an infant’s way of integrating her experience is through movement and most of these therapies use movement

to re-introduce people to a missing stage of infant development.

This concept has roots in the work of Dr and Mrs Bobarth with children with brain damage and has been developed much further by Bonnie Bainbridge Cohen and others such as Colwyn Trevarthen.

Bonnie Cohen’s view of the first year of life is:

“This is when the relation of the perceptual process (the way one sees) and the motor process (the way one acts in the world) is established. This is the baseline for how you will be processing activity, either in receiving or expressing, throughout your life.”

In her view, uncomfortable patterns do not only arise through reaction to trauma. They may simply arise as a compensation for movement faculties that the infant does not discover. Since movement is the medium through which infants make sense of the world and their bodies, this can have repercussions for the mental and physical health of the adult.

In this article we discuss how an understanding of the role of meridians in child development can provide methods for helping adults to access the faculties that they missed out on as an infant. Before exploring an example of this in detail, it is necessary to look more closely at how the process of infant movement development is linked to their growth as people.

The basic process by which intention and attention are progressively linked to physical action in the baby is unique to humans. A horse is born knowing how to walk. We have to learn how to move and in the process can make mistakes. On the other hand we can also be more creative and have more choice than a horse!

Throughout the first year of life, certain special movements appear called the primitive reflexes. These are not under the control of the baby’s growing consciousness but provide ready made components to be used in conscious movement. For instance, the **Rooting Reflex** is present in the newborn and is stimulated by a touch on the face. The baby’s mouth automatically moves towards the touch which allows her to find the nipple with her mouth. However, the muscle groups activated by this reflex are the same used to turn the head. Later, when the baby’s interest is attracted to something that moves, her nervous system can use the experience of the rooting reflex to turn the head with the intent to track the object. If the reflex did not appear, the baby would have no body memory of how to turn the head and learning to do this movement would be very difficult.

Bonnie Cohen calls the primitive reflexes the “Alphabet of Movement”. This graphically describes how they are components which combine into more sophisticated movements in the process of learning to inhabit the body. She also shows the reflexes to be the basis for life skills which would normally be seen as unrelated to movement.

For instance, the **Tonic Labyrinthine Reflex** is stimulated by the semi-circular canals in the inner ear and

increases the tone of the muscles on the underside of the body. This causes the body to curl into the ground and in Bonnie Cohen's words "Through this reflex we embrace Mother Earth." It is through this reflex that we learn to relate to the ground, to learn trust, to cuddle and to relate to other people.

The activity of relating is also founded on a more general neo-natal pattern called **Physiological Flexion**. In this pattern the baby learns to actively cuddle into something and to gather-in through total body flexion. Without this, the body is collapsed and cannot relate to the ground or anything else. This in turn means that the baby cannot receive support and either collapses into the ground or extends away from it in a compensatory reaction.

To Oriental Medicine this language sounds very familiar. It recalls the contribution of the Earth Element to our energy. The ability to gather in, to be grounded, to receive support and to trust are all included in the Earth Element. Even the process of physical digestion, another role of the Earth in Oriental Medicine, is linked to Physiological Flexion. To quote Bonnie Cohen again "*Physiological Flexion appears to be an outer manifestation of digestive organ activity*". That is, if one is faulty, so is the other. Babies with low flexion tone tend to have more immature digestive tracts.

This correspondence made me wonder how the meridians are linked to infant development and whether I could discover a way of working with them to access developmental stages that have been missed. My students and I have been engaged in this particular research for the last eight years with the result that we can understand 10 out of the 12 organ meridians in terms of their function in movement development. The Large and Small Intestine meridians have so far eluded our understanding.

One view is that meridians already exist at birth and simply orchestrate and provide a focus for the integration of the reflexes. Another is that they are actually formed by the process of movement development. In this view they trace in the body, maybe within the fascia, the pathways of connection involved in a particular developmental theme. I prefer the second view since it can explain why meridians run where tradition says, but I cannot produce experimental evidence to support my preference.

The rest of this article is devoted to explaining the Stomach Meridian in these terms and presenting some clinical experience of how this research has been used to introduce missing developmental stages in babies and in adults.

Our research suggests that the Stomach meridian is divided into four parts which orchestrate the development of different aspects of movement. Each of these themes influences how the baby relates to the ground, receives nourishment and support and learns the foundations of trust and relaxation.

Grounding & the Push Patterns: St13 - St34

This section of the meridian traces exactly the locus of maximal muscular tone in an infant pushing into the ground in order to progressively lift the head (ST13-ST20), the thorax and upper abdomen (St21 - St30) and the lower abdomen and pelvis (St31 - St34). This process develops in the first three months of life.

One can experimentally confirm this by lying prone and, only using the hands to balance, increase the flexor tone until a clear push into the ground is experienced. Slowly push into the ground with the chest to raise the head, with the abdomen to raise the thorax and with the pelvis and upper legs to raise the abdomen (in this last stage make sure the buttocks are relaxed). The line of strongest sensation of contact with the ground usually follows the Stomach Meridian.

The increased flexor tone originates in the Tonic Labyrinthine Reflex and prepares the skeleto-muscular system for the action of pushing down. If it is missing then the action of raising the head and body has to be accomplished by the extensor muscles alone or else the body collapses. The reach into space is unsupported by a push into the ground. This results in patterns of hyperextension and high back tension or, conversely, patterns of collapse.

I believe this deficiency also contributes towards a way of experiencing the outer world as unresponsive; in which all activity has to be done by the self. No-one else can help.

We would expect that it would be possible to work with this section of the meridian to help a person access their ability to push into the ground and, due to the support received from the ground, be able to let go of the high extensor tone. However, working with the meridian in

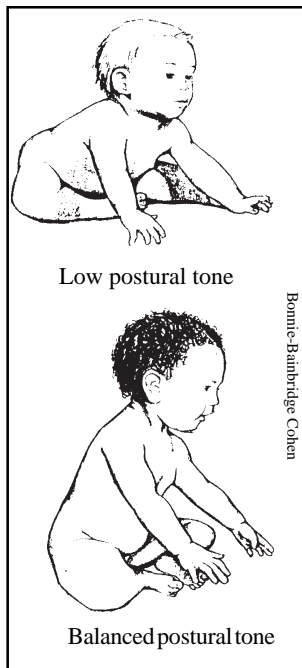
the usual supine position does not seem to specifically effect this pattern. We have found that if one works with the meridian from underneath, while the body is in prone position then this awakens the Tonic Labyrinthine reflex and initiates repatterning of the extensor muscles. I have used this technique with success in both adults and babies.

Standing on the Ground: St35 - St45

In terms of movement, this section of the meridian does not seem to do much for the first five months of life and doesn't reach its full potential until the baby starts to walk.

Essentially, its role in movement is to focus the flow of weight down through the knee, through the tibia, down the curve of the talus and into the ball of the foot. Babies (and adults) who have the hyper extensive patterns tend to stand and walk on their heels, leaning slightly backwards. This locks the muscles in the back and back of legs, making movement stiff and ungainly and putting strain on the sacral joints. This results in excess tone along this section of the Stomach meridian and forward motion is inhibited.

If a person with this posture is taught to bring their weight forward then naturally the knees tend to unlock, the back muscles relax and the body is poised for forward movement. *One can experimentally confirm this by experiencing the*



result of leaning slowly backwards from the ankles and then leaning forwards again.

This backward leaning posture is especially apparent in babies who learn to walk too fast, before they have developed the ability to let go of their weight into the ground discussed in the last section. This may be because parents push the child to develop too fast, or maybe the child has to develop fast because she does not get her needs met. More simply, it can be caused by the baby simply not discovering the push patterns through not spending enough time on her front. I have noticed that in the last two years many babies have been placed on their backs most of the time due to medical advice about avoiding cot death. Anything unknown is often frightening and a newborn who only experiences the supine position will often grow into an infant who dislikes the prone position and so does not easily learn the push and grounding patterns.

The key features of this pattern are stiffness and instability due to the back muscles being tense and the longitudinal arch of the foot not being efficiently involved in weight bearing.

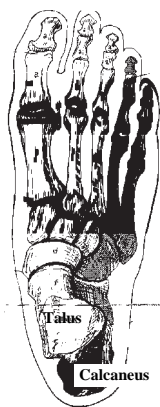
We have found that two techniques originating from Body Mind Centering are helpful in facilitating the flow of weight down the front of the legs and into the ball of the foot. One is to harmonize the movement of the menisci with the femur by flexing and extending the knee holding both "Eyes of the Knee" (St35). This allows the weight to flow efficiently through the knee even when it is slightly flexed. The other technique is to articulate the talus on the calcaneus and to use St41 to help the talus slip under the tibia during dorsiflexion.

As the illustration shows, the foot is divided into two parts. Developmentally, the one connected to the calcaneus (shaded) is mainly involved in initiating rotation. The other, connected to the talus, is mainly involved in weight bearing and pushing into the ground. If the posture is rigid, it is common for both halves of the foot be locked together and for their functions to be confused. Articulating the talus on the calcaneus helps the neuromuscular system to proprioceptively perceive movement choices in which the two parts of the foot can function separately.

In energy terms, the 'talus foot' is connected to the Earth Element, to the Stomach and Spleen meridians and to the front of the body. If weight flows down the Stomach meridian into this part of the foot then the body feels grounded, one can relax. The 'calcaneus foot' on the other hand, is related to the Bladder Meridian, to the back of the body and to transmitting impulses into movements of the whole body. Patterns which confuse these two parts relate to a deeper functional confusion between the front and the back of the body. The third section of the Stomach Meridian gives more insight into the nature of this confusion and a complementary way to work with it.

Organ Support & Muscular Tension: St5 - St12

This section of the Stomach meridian seems to be associated with patterns of jaw movement. As we will see, these effect the movement of the atlanto-occipital joint at the top of the neck. They also relate to the relaxation of the muscles attached to the hyoid bone which, in turn, facilitate the flow of energy into the internal organ system. Before



describing how the jaw patterns influence the hyoid and what this has to do with the stomach meridian, let me first explain the last statement.

Bonnie Cohen, John Upledger and Patricia Bardi all describe how the tone of internal organ system provides an internal support for the body structure. If this tone is low or if the organ system is pulled upwards then the weight cannot flow through the soft tissues. Effectively the body has to act as though it was an empty shell rather than solid. This means that the muscular system has to spend a lot of extra energy in holding the skeleton up and the blood flow is directed to the skeletal muscles rather than to the organs. The physical pattern associated with this state is the flight and fight mobilisation coordinated by the sympathetic nervous system - the muscles are in continual high tone and adrenaline is keeping the heart rate up and the brain in high (beta wave) activity.

If, however, the organ system has good tone and the internal tissues are being allowed to settle earthwards then the body can sense internal support and the muscles can relax. This is associated with activation of the Parasympathetic Nervous System.

Relaxation is not collapsing but resting on internal support. Consciously one feels that one can just BE, one doesn't have to DO all the time.

If you examine the illustration of the musculature attached to the hyoid you will see that if the muscles attaching the hyoid to the skull are tense then the hyoid is pulled up and that this pulls up the pharynx. This has the effect of pulling up on both the whole digestive tract and the lungs, decreasing their effectiveness as internal supports.

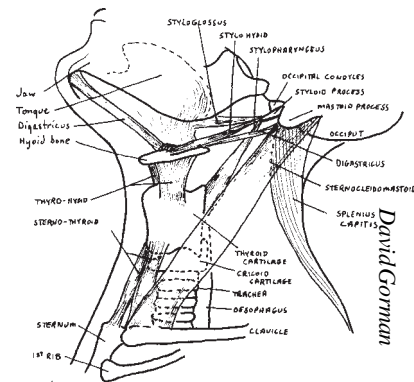
How is the stomach meridian related to these patterns?

The key point to understand is that the masseter and temporalis muscles act as antagonists for two totally different actions and thus provide a bridge between the front and the back of the body across which cooperation or conflict can flow.

One of these is the opening of the jaw; these two muscles have to yield before the jaw can open. The other action is the movement of the head on the atlanto-occipital joint. If the masseter/temporalis pair are tense then backward movement of the skull on the neck pulls up on the hyoid and the throat. The preceding discussion shows that this means that the movement of the neck is pulling up the weight of the organ system. This means that, instead of the small sub-occipital muscles being sufficient to subtly balance the head, the big muscles such as the trapezius need to be engaged throwing the front and back of the neck into conflict.

This pattern is the principal one that the Alexander Technique aims to re-educate by encouraging the neck to lengthen and the head to move forward and up.

According to our analysis, however, this will only be effective if the masseter/temporalis pair can yield easily.



This is where we have found the Stomach meridian to help. **St 8, 7 and 6** are located close to the origins and insertions of this muscle group. One can stimulate the proprioceptive fibres in the muscles (thus helping them to yield) by connecting ST8, 7, 6 and 5. This suggests that the energy flow within the meridian orchestrates the part these muscles have to play in allowing the weight to flow into the organ system. The flow can be helped further through the hyoid and into the organs by connecting through ST9, 10, 11, 12.

The Reach Patterns: St1-St4

This last branch of the stomach meridian seems to be related developmentally to the transition from the orally centred state of the newborn to the visually centred state of the 6 month infant. This transition is co-dependent on the development of consciousness of the outer world and to the development of reach patterns which move outside the baby's kinesphere (*the space around that you can touch without moving the whole body through space*). Oral reach patterns are still contained within the kinesphere.

If this connection is not made then the person is either too internally centred or continually reaching outside themselves. In babies we have facilitated this connection by initially stimulating the rooting reflex and then stroking up the stomach meridian leading the reach into the eyes. Continuing the movement away from the baby with a visually interesting object (preferably shiny and moving) transfers the oral reaching into the visual consciousness and leads the baby to reach outside their kinesphere.

Most babies are only too eager to reach into the outer world and don't need help to do it. However, some people haven't developed this skill. Two extreme examples are autistic people and blind people, but, to a lesser extent, the same pattern can be observed in many others. The same theme of stimulating oral reaching and using the stomach meridian to help that energy transfer into outer reaching can be used even if the eyes are not engaged.

As long as there is an inner experience of REACH, that naturally moves outwards and the energy can then more easily grasp a stimulus from the outer world.

These reach patterns are dependent on the prior development of push patterns and start developing later. The visual reflexes coordinated by the superior colliculi in the mid-brain do not fully appear until the third to sixth month.

When both push and reach patterns have developed the infant enters a new phase of moving about in the world - combining the energy reach towards an outer object with the ability to move the body in the direction of the reach through pushing. This development is coordinated by the Bladder Meridian which will be the subject of a future article.

Conclusion

Although some of the preceding discussion is quite technical the essential points are simple. The energetic function manifested in the Stomach meridian coordinates downward flow, gathering in, digestion and grounding. This is similar to the functioning of the parasympathetic nervous system (PNS), which takes blood away from the skeletal muscles and sends it to the organs, helping digestion and relaxation.

Patterns of hyperextension and rigid posture can be seen as an excess of muscular tone and Sympathetic Nervous

System activity. They can equally be seen as originating in a deficiency of organ tone and low parasympathetic activity.

Whereas cathartic systems aim at releasing the muscles, this approach aims at building up grounding and inner support by re-contacting the stages of development in which these faculties are learnt. Both approaches are valuable.

Our work pulls together the various components of this developmental theme and sees them as orchestrated by the Stomach Meridian.

We have described how working with the this meridian in certain ways can re-stimulate these developmental stages to build up the missing faculties of reaching out, gathering in, grounding and relaxation.

Future Research

There are two groups of people that I feel could particularly benefit from this approach to working with the Earth Element. One group are autistic children and the other group are babies with cerebral palsy.

Autistic children find it difficult to reach out. This doesn't define autism and is only one of the features of their condition but I feel that it is a fundamental body-mind skill that can be introduced through the body when the mind is hard to contact. I have only a little experience of working with autistic people but Linda Hartley has worked with some success using the similar approach of Body Mind Centering.

I have more experience of working with cerebral palsy (CP), often characterised by spastic hyper-extension patterns growing more fixed during childhood. The spastic patterns appear because some of the primitive reflexes are missing, through brain damage, which would otherwise modulate the extension.

One problem is that cerebral palsy is often not diagnosed until the patterns become obvious, by which time they are well established. At this stage I find that the work helps relaxation but the progress towards greater mobility is still difficult.

I feel that parents of children who were anoxic at birth could be taught how to observe their baby's development and how to encourage organ support if they observe that the flexion reflexes and push patterns are not appearing.

Possibly the spastic patterns could be avoided by this education of parents whose child might have CP. My experience suggests that a young enough baby, with the aid of frequent parental patterning, can find other ways of developing flexion and pushing without access to the reflexes which normal induce them.

Abbreviated Bibliographic notes:

Sigmund Freud: Collected Works

Erik Erikson: Childhood and Society

Melanie Klein: Envy & Gratitude + other writings

Arthur Janov: The Primal Scream

Frank Lake: Birth Trauma, Claustrophobia and LSD Therapy

David Boadella: Lifestreams, an introduction to biosynthesis

Bonnie Bainbridge Cohen: Sensing, Feeling and Action

Colwyn Trevarthen: Various writings and demonstrations.

Dr J. Upledger & Others: Visceral Manipulation

Linda Hartley: Dancing with the autistic child. Developmental Movement Therapy with Autistic Children. Human Potential 9/85

David Gorman: The Body Moveable