

Physical Democracy © Bill Palmer 2015

Touch makes a Person

If you close your eyes you still feel yourself, if you block your ears you still exist but can you imagine being without the sense of touch. Maybe the closest we can come to it is in a sensory deprivation tank and the reported effects of this are that people lose the sense of having a body at all.

Touch is the oldest sense, plants have it, even single celled creatures have it. Touch is also the first sense to develop in the womb, at about eight weeks gestation. Most other external senses can be seen as forms of touch: hearing is the inner ear being touched by mechanical vibrations, smell and taste result from being touched by molecules. Touch is essential for infant development, babies who are not touched don't thrive, don't grow, waste away and sometimes even die¹. For adults, touch is still important. Research shows clear links between ill health and lack of tactile contact².

According to current neuroscience, the brain contains at least three representations of the body that contribute to our self-awareness³. Touch is the major sense that informs and maintains the "Sensory Representation" or "**Sensory Homunculus**". This 'map of the body' is created in the sensory cortex of the brain. This is like a map of the features in a landscape - the towns, hills and forests. It gives us a sense of ownership - a part belongs to us because we can sense it internally.

The second map is the **Motor Homunculus**. It develops in the motor cortex and instructs the muscles how to move each part of the body and how to join these local movements into whole body actions. Crucially, it creates the roads and railways in our sense of self. In other words, it is through movement that we learn to join up the different features of our body into a organism with its own identity.

The third major map of the body develops in the **cerebellum and pons**, and is created by the proprioceptors in the muscles and connective tissues. These keep track of our posture and how we are moving and provide feedback to the motor cortex to make sure that the movement we actually make is that which is intended.

Several other internal maps have been identified. One is the **insular cortex** in the depths of our upper brain, which seems to develop our integrated sense of self including our relation to society. Another is **the enteric system** - the body's second brain - a system of 500,000,000 neurons in the gut, which knows about our needs and creates moods and hungers to express them and meet them⁴.

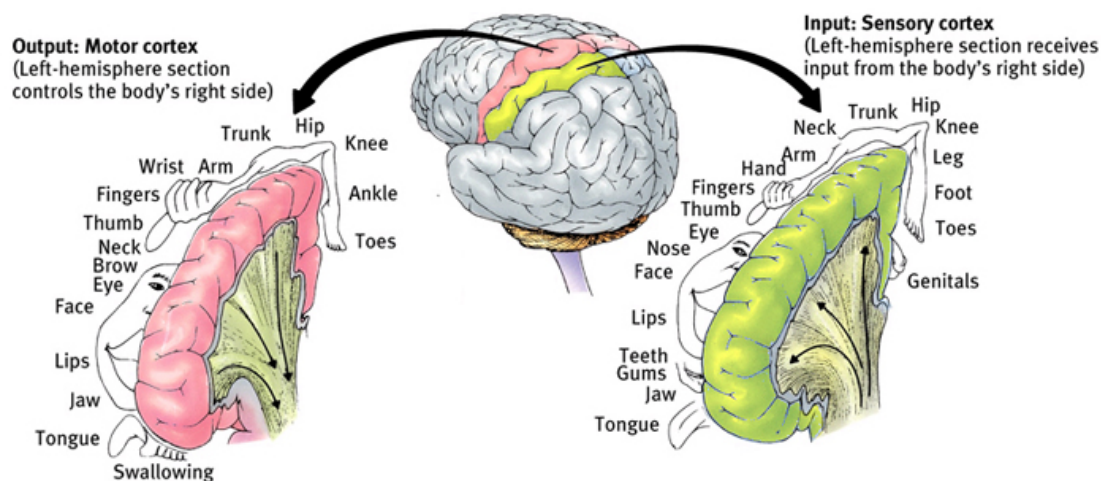
It has been shown that all these maps develop in response to particular qualities of touch⁵. So touch is essential in the development of an accurate sense of self. In

contrast, we often perceive these internal representations as more real than the sensations from the body. For instance, people who lose a limb still feel it after amputation and feel they can still move it. This inaccuracy in the body-maps is very common and often means that parts of the body are ignored and unused, possibly leading to chronic musculo-skeletal problems.

To give a fairly common example: a major function of the rotator cuff muscles in the shoulder is to stabilise the shallow gleno-humeral joint. So, if the motor map of the body does not energise these muscles in the shoulder when moving the arm then the shoulder will feel insecure and, without the contribution of the rotator cuffs, the only way of stabilising the shoulder is to hold it together with the big muscles such as the deltoid and pectoral muscles. This is a major cause of chronic muscular tension in the shoulder and inhibits free movement.

The solution to this muscular tension is not to stretch and massage the tense muscles. Even if they do relax, the brain will switch them back on, because the shoulder still feels unstable. The answer is to activate the rotator cuff muscles. When they switch on, the shoulder feels secure and the big surface muscles can let go and do their proper job of moving the arm.

This process is similar in principle to the Zen Shiatsu paradigm of supporting the Kyo in order to release the Jitsu. The tension of the surface muscles is a compensation for a lack of tone in the rotator cuffs. It's only by activating the 'kyo' muscles that the 'jitsu' ones can let go.



Correcting the Maps

As Deane Juhan pointed out in his ground-breaking book "Job's Body"⁶, the fact that touch is giving a 'reality-check' to the sensory map of the body goes a long way to explaining the effectiveness of all touch therapies, irrespective of their specialist techniques and theories.

But the sensory map is only one of the major representations of the body and touch on its own only activates the **Sensory Map**. To activate or redraw the **Proprioceptive Map** requires a specific type of gentle manipulation which

focuses on stretching fascia, ligaments and muscles to the exact point where the proprioceptive organs in these tissues are activated but not so far as to stimulate the stretch reflexes. The **Motor Map** is influenced by the clarification of the other maps, since awareness can help one to notice conflicts in habitual patterns. But, if the dysfunctional patterns are linked to old trauma or disability, then there is often a resistance to change, and then one needs to work with the Motor Map directly. This can be done by gently and slowly moving a part of the body that is not integrated, not trying to force things when there is resistance, but meeting the resistance and maintaining contact. This brings the pattern to the surface. When the client starts to **allow** the new movement rather than resist it, one can guide them to take over the movement and do it themselves, which starts to re-draw the motor map.

Thus different techniques and qualities of touch directly clarify and correct the internal maps of the body and help the body to include and integrate all its parts in a mutually cooperative way. In contrast, there are other techniques which, although they help a particular problem, do not help the brain to include and use all of the body in a collaborative manner.

The difference one of basic philosophy and one of the points of this article is to emphasise how the WAY in which we deal with internal conflicts in the community of body-parts is REFLECTED in the way we deal with external communities. I will explore this more in the final section.

Body Cartography

How are these maps drawn in the first place? How are mistakes made? This section explores these questions and, along the way, gives a possible explanation of what meridians actually are. In short, my research strongly suggested that meridians are the **pre-drawn** parts of the Motor Map. I am not saying they are not related to the other maps, but the research only dealt with the relationship to movement.

To start this exploration, imagine you are a newborn baby. Most of your movements are reflexes, they just happen to you as a result of some sensation. So what is the difference between your mother's hand as she strokes you and your own hand as it reflexively flexes and touches your skin. Both actions just happen to you, so I imagine that a very young baby has no real distinction between self and other. But there is a difference: when your mother strokes you, you feel the sensation on the skin of your face but when you stroke yourself you also have sensations in the skin of your own hand (you don't feel the sensations your mother has in her hand). In addition, the proprioceptors in the connective tissue and muscles are sensing which muscles are moving your hand. So the brain is learning through your reflexes. The Sensory Map is learning that this hand is part of you, and the Proprioceptive Map and the Motor Map are learning how to move the arm and the hand **at will**.

As I described in previous articles⁷ my research with disabled infants in the 1980's explored the way that the brain learns to join up the different parts of the

body through innate developmental movements like rolling and crawling. Many of these movements are very similar to yoga exercises, which is significant because the word *yoga* means *integration* in Sanskrit and all these baby-exercises develop different ways of integrating body and mind. The key observation was that these movements developed progressively along the exact pathways traditionally described as the whole body channels (The Six Divisions)⁸.

This led to the hypothesis that the meridians are an innate 'sketch map' of how to join up parts of the body to create an **Inclusive Self**⁹. The word *health* is derived from the same root as the word *whole*, so real health means that our image of ourselves includes all parts. So what causes the brain's maps of the body to be incomplete?



The motor maps are developed in infancy by the motor-cortex 'watching' the muscle patterns that are automatically stimulated by reflexes. In babies with brain damage, such as cerebral palsy, it is often the case that some of these reflexes are missing, so the motor cortex does not learn to move a part of the body causing progressive disability as other parts of the body are over-emphasised.

The Inclusive Self

But brain damage is not the only reason the maps of the body become incomplete. Abuse, emotional trauma and physical injury can cause a child to avoid certain movements because they cause pain or because the movement reminds them of being hurt. As a part of the body becomes less used, the maps start to emphasise other parts of the body that compensate for the lack of movement and the motor map becomes progressively distorted. Moreover, if a part of the body habitually does not move, then it becomes desensitised and the sensory maps are also degraded.

This process does not even need trauma or pain. It can come from simple habit. For instance, in 2000 it was shown that cot death was more likely if a baby was put to sleep on her front¹⁰. This resulted in many mothers **never** putting a baby on the front. But important developmental movements such as crawling are learned on the front and, as Bonnie Bainbridge Cohen has observed¹¹, the act of crawling teaches the baby how to channel the push from the legs into the same direction as the baby wants to move. In turn this gives the baby a sense of 'Can Do' and teaches her that activity is pleasurable and satisfying.

It is probable (though hard to prove) that the way we learn to move as babies influences the growth of personality. For instance, the physical ease of moving

learned through crawling might contribute to psychological spectra such as the extent to which a person is proactive rather than following other people's lead. Possibly the fact that a generation of babies did not learn to belly-crawl has contributed to the fact that children spend less of their time in physical activity than previous generations. This has an inevitable effect on our culture. Not only the health issue created by obesity or the addiction to computer screens but, in my view more importantly, that young people are less revolutionary, less willing to protest and this means that society is becoming more fearful and less democratic.

Physical Democracy

In this article I am developing the metaphor that the individual is a community. This does not consist only of our sub-personalities and archetypes - every part of the body is a member. As with any group, the person-community needs coordination in order to function as an integrated entity. The point of complementary therapy is to facilitate this process. This section extends the model by looking at the ways in which groups of people organise themselves and describing how these strategies apply to the practice of therapy.

The problem with groups is that people have different opinions. The core dilemma is whether the group splits into subgroups that are in agreement with each other or whether the group stays whole and finds ways of dealing with the differences. The ways of dealing with this dilemma form the foundation of political philosophy and is too large a subject to describe in this article. However, essentially (and simplistically) the methods of keeping a group together can be described as either **autocratic** or **democratic**.

These systems are distinguished by how much the individuals in the group feel empowered. In autocratic communities decisions are made by a subgroup, usually small, and enforced on the rest of the group. In my view it doesn't matter whether the decision making group is a small minority (which is the usual meaning of autocracy) or a majority. The key feature is that the rest of the group feels disempowered and has no effective voice.

The 'democratic' societies existing today are, in fact, autocratic since individuals do not have a real say in the decisions that are made by government. In addition, legislation has made it increasingly difficult to protest. Even more insidiously, some belief systems numb individual viewpoints and to make protest feel stupid or even shameful. Richard Dawkins calls these belief systems *memes*¹², and successful memes tend to dominate society and numb critical thinking just as parasites turn off the body's ability to reject invaders.

For instance, **Religion** and **Nationalism** have been the prevalent memes in human culture until recently. Both of these systems suppress protest by using guilt and disapproval as well as violence and force. In the last century or so, **Capitalism** and **Utilitarianism** have become dominant along with the great memes **Health and Safety** and **Child Protection**. These systems suppress

protest by pouring scorn on their critics and promoting paranoia, even when the regulations they generate are demonstrably wrong.

The mark of a truly democratic society is that protest is facilitated, welcomed and acted on. As Jared Diamond¹³ points out, tribal cultures consisting of a few hundred people are the largest groupings where this true democracy is found in reality. In democratic societies, differences are welcomed as part of the feeling of respect and care for others and I believe that the only hope of real peace is that we find a way for real democracy to operate in large populations.

But most of us are autocrats within our internal communities and so it is natural that we model our external society on how we organise ourselves. We often act according to what we feel we *should* do even if it goes against our gut instinct. Even at a mechanical level, when we move a part of our bodies, it is often in disregard of how the rest of the body could be included. This is a major cause of self-injury.

The lesson that politics can teach therapy is that harmony is not a useful aim and that we should focus on helping people to embrace and include all parts of themselves. The lesson that therapy can teach politics is that if we treat ourselves autocratically we are less likely to understand or desire true democracy in our outer society.

¹ E.Ardiel & C. Rankin - **The Importance of Touch in Development.** *Paediat Child Health* Mar 2010

² Maggie Turp - **Psychosomatic Health: The Body and the Word** - Palgrave Macmillan 2001

³ C Noback, R. Demarest et al. - **Human Nervous System: Structure and Function** - Springer 2005

⁴ Giulia Enders - **Gut** - Scribe 2015

⁵ D. Linden - **Touch: The Science of Hand, Heart and Mind** - Penguin 2015

⁶ Deane Juhan - **Jobs Body** - Station Hill 1987

⁷ Bill Palmer - **Development & Meridians** - JSOBT Issues 1 & 3 1994-5

⁸ Bill Palmer - **The Body Mind** - www.seed.org/articles/body_mind.html 2009.

⁹ Bill Palmer - **Muscles Have Feelings Too** - Shiatsu Society Journal Autumn 2014

¹⁰ American Academy of Pediatrics, **Task Force on Infant Sleep Position and SIDS.** (2000)

¹¹ Bonnie Bainbridge Cohen - **Sensing Feeling and Action** - Contact Editions, 1993

¹² Richard Dawkins - **The Extended Phenotype** - Oxford University Press 1982

¹³ Jared Diamond - **Guns, Germs and Steel** - Norton 1999