



Massage Today

November, 2002, Vol. 02, Issue 11

Exploring with Science

By Keith Eric Grant, PhD, NCTMB

"There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

- *Shakespeare (Hamlet)*

As a scientist, I am often bemused by the apparently prevalent assumption in massage therapy that the role of science is as a sort of gatekeeper of proven methods.

It's an outlook that I believe is derived more from a limited view of science as a promoter of mechanical technology than from the spirit of inquiry that beckons most research scientists. I have long recalled an article I read years ago on why people enter the pursuit of science. The title was "Whoa, look at that!" That simple title captures the spirit of curiosity and delight at nosing into the unexpected and unknown, better than anything else that I have since encountered. It's in that spirit that I'm writing today.

We do well to remember the gap that can exist between observation and understanding. Herbs containing salicylic acid had been used for centuries to relieve pain and fever before aspirin was purified in 1897. It wasn't until 1971 that Sir John Vane demonstrated that inhibition of cyclooxygenase (COX) by aspirin was responsible for its effects, sharing the 1982 Nobel Prize in medicine for that discovery. Only recently, a research group led by biochemist Daniel Simmons of Brigham Young University discovered a new variant of the COX enzyme that might explain the previously unknown action of acetaminophen.¹³ For massage and simple touch, I believe that many of the effects will be even slower and more difficult to elucidate, simply because they extend beyond the mechanical into simultaneous emotional, neurological, and neurochemical interactions. As with the complex connections involved with climate, better understanding of the whole picture may wait on our ability to use computers to simulate the entire system at work. Increasingly, such simulations are becoming a third branch of science - bridging experiment and analytical theory - because they make it possible to investigate regimes that are beyond current experimental

capabilities, and to study phenomena that cannot be replicated in laboratories.

Within the last several decades, there have been several medical research developments that create a basis for some intriguing speculations on the effects of touch. In 1975, Dr. Robert Ader coined the term *psychoneuroimmunology* (PNI), beginning a new discipline of research linking the mind to the immune system.^{2,12} A recent small sample study with cellular analysis is consistent with massage having a positive effect on immune function.⁸ I tend to couple the research on PNI with the research and clinical experience of *ideokinesis* pursued by Eric Franklin and his predecessors.⁶ This material connects our mental imagery with creation and activation of our low-level neuromuscular patterns. **In juxtaposition, PNI and ideokinesis substantially motivate respecting simple touch and relaxation massage as profound and deep reaching interventions toward managing stress and promoting health.**

In a comparison of the co-location of acupuncture points and trigger points, Ronald Melzack and his colleagues found a remarkably high degree (71%) of correspondence.⁹ They concluded that "this close correlation suggests that trigger points and acupuncture points for pain, though discovered independently and labeled differently, represent the same phenomenon and can be explained in terms of the same underlying neural mechanisms." Based on further research into phantom limb pain, Melzack's group later proposed that we have an inherent neuromatrix, essentially forming an analog body within us.^{7,10} This neuromatrix acts to integrate our myriad sensory input into a coherent perception of a body. It also has a memory of its current state, helping to explain hypersensitivity towards experiencing benign sensations as painful. **As a bit of blue-sky thought, I speculate that this research provides a basis for a western understanding of the meridians of traditional Chinese medicine.** In this picture, the meridians don't lie within our physical bodies, but are a kind of circuit diagram of sensory relationships in how we form a cohesive sense of body from an overwhelming input of sensory information. There is no inherent conflict with an acupuncture point having non-local effects, because the important proximity is in neurological processing rather than physical space. There are some remarkable analogies to patterns of communication between individual processors in modern massively parallel computers. I find the possibilities intriguing.

When it comes to statements made about "energy work", I am rather an agnostic. Yet, nevertheless, I have experienced profound effects from such work and cannot discount the genre off hand. At this point, I see no basis for proposing fields of energy beyond the electrical and magnetic, so I return to consideration of these fields as recently reviewed by James Oschman.¹¹

While what Oschman covers indicates that we all project fields around us, it doesn't support a conclusion that we are designed to emit beams of energy. Simply speculating on the maximum gain for the least energy required, suggests to me that something must occur in energy work akin to the improvements of tuning a piano.

Those talented in such work may simply possess perceptive skills akin to perfect pitch.¹ Some recent studies with savants indicate that we all have neurological and mental capabilities beyond those to which we normally have conscious access.⁵ Some simply gain access by having the cloaking superficial layers of consciousness peeled back. These extra perceptual abilities include, for example, the ability to find the "sweet spot" in a room at which the sound from multiple speakers arrives simultaneously.⁵ There is every indication from such studies and from experience with biofeedback, that we are well-designed to detect and correct differences in "tuning" and coherence if we can perceive them. There is an additional observation that those with perfect pitch have a higher incidence of synesthesia, a mixing of senses. When hearing a sound, some, also perceive it as a color.¹ This is suggestive that subtle sensations from bioenergetic fields could map for some into the visual, auditory, or tactile senses, giving person to person field interactions a rational basis. I think it likely that much that is taught about the techniques of energy work is simply a metaphorical roadmap to help train perception and focus the mind appropriately to enable subtle manipulations of bioenergetic fields.

While we must be careful not to interpret the perceptions stemming from cross-sensory mapping too literally, we should be equally careful in not dismissing them. Our neurological capabilities are turning out to be a lot more interesting than once thought, as science explores into the windows facing towards our inner selves. Whether we see two faces or a chalice can simply depend on our perceptions of foreground and background.

"It is important that students bring a certain ragamuffin, barefoot irreverence to their studies; they are not here to worship what is known, but to question it."

- *Jacob Bronowski*³

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