

[IMAGE]

Massage Today

February, 2006, Vol. 06, Issue 02

Interconnecting Science, Massage and Medicine

By Keith Eric Grant, PhD, NCTMB

"We used to think that if we knew one, we knew two, because one and one are two. We are finding that we must learn a great deal more about 'and.' "

- *Arthur Eddington*

Back in my October column ("Searching for Medical Massage," www.massagetoday.com/archives/2005/10/06.html), I provided a summary of applications of massage in the recent medical literature.

In December ("Massage Mechanisms," www.massagetoday.com/archives/2005/12/02.html), I touched on emergent properties, aspects of a complex system that derive from the interaction between its parts. This month, I'm pulling together the thoughts about medicine and science underlying both of those columns.

In discussing medical applications of massage, a lot gets said about whether a technique or method is scientific or unscientific. One must exercise caution in either claim. The scientific method ultimately is about putting a hypothesis about the outcome of an action to the actual test of observing the outcome of doing it. The catches are that the action needs to be repeatable, and the conditions under which the action was done need to be reproducible.

Note that the above does not say you have to understand the mechanism connecting the action taken and the outcome, only that the action has to lead to a repeatable observation. Paradoxically, an off-the-wall map by which a practitioner performs an action can lead to a scientifically reliable effect. The map is not the territory, even when it enables useful actions relative to the territory.

Science says little about singular events or feats of artistic response to unique complex inputs. Great musicians, athletes and massage practitioners are likely to all have idiosyncratic responses to input and context. Lack of reproducibility implies that a method is unscientific, yet says little about whether or not it was effective in the single case of application. Improvisation and scientific categorization are separate

domains. Stephen Nachmanovitch has written some excellent material on the improvisational domain.⁶ One of the most notable examples of a singularly improvisational health practitioner was the late psychiatrist Milton Erickson. Jay Haley wrote a classic review of Erickson's diverse approaches.² A recent article by physician and psychiatrist Karl Hammerschlag provides an interesting juxtaposition of Erickson's methods with his own experiences among Native Americans:³

"Erickson knew that if you look again at everything you know, you might see it from another perspective. If you can move beyond your ordinary consciousness, and suspend your preconceptions, you can create new endings to old stories. All healers find ways to penetrate into the unconscious without direct interpretation. They know that conscious mechanisms of defense can keep patients from understanding the most insightful interpretation. Healers create a symbolic language that speaks uniquely to each patient and illuminates the undefended areas of the mind. Using stories, rituals, ceremonies, even ordeals, healers make a connection with a patient's soul that opens up channels of healing."

While such techniques might be irreproducible in and of themselves, the effects produced can offer clues about the existence of underlying mechanisms. Hammerschlag's statement strongly suggests significant communication between different mind-body systems.

The main method of scientific experimentation, at least until the recent past, has been reduction, paring away what was under consideration to its separate parts. The approach stemmed from the need to create repeatable experiments and observations. Where the effects being observed actually were local, this method has been wildly successful. Where the interesting effects were dependent on active communication between separate parts, the usefulness of reduction was severely limited. It's a commonly made mistake, however, to believe that science inherently is reductionist. Making this mistake has led to the misconception that everything can be modeled as a simple machine (including the human body) or that lack of a known mechanism warrants ignoring observable effects. Mind-body-immune interconnections, for example, were for a long time discounted by medicine in the face of, rather than in accord with, good science. Only in the relatively recent past have we begun to discover and understand the chemical transmitters involved in linking emotions with the neurological and immune systems.

Because living biological systems are, for the most part, inherently complex, medicine has relied a great deal on statistical comparisons between test and control groups to determine effectiveness of a technique or medication. Statistical methods give you an expectation of an average result, but say next to nothing about

the causes of variance or how to predict an individual reaction. The latter area is one only now beginning to be tractable, with simulation tools coupling biological data, understanding of network interactions and computer technology.^{1,4} While modeling of complex interactions in weather prediction started decades ago, only in the last decade have the tools come into place allowing biological and medical understanding to shift from the reductionist to the holistic perception. The results are only starting to come in.

Just because we might have to wait for elucidation of some of the mechanisms via which the application of massage can produce beneficial changes, doesn't imply we have to wait to start collecting, reviewing and discussing the observations of results and the techniques used to obtain them. There is both a substantial coverage of massage applications in the medical literature and substantial expertise within the profession. My sense as a massage educator and scientist is that such a process of discussion and review should involve and be available to all in the professional community that wish to participate. My frustration that this was not occurring has finally led me to start the Massage Medical Applications Project (MMAP) as a means of pushing such a development along.⁵ At the outset, I have placed whatever MMAP produces under a Creative Commons License, which restricts sufficient rights to protect the integrity of the product, but allows free access for private and educational use. My hope is that this will grow to be a community effort extending far beyond myself.

"If you want to accomplish something in the world, idealism is not enough you need to choose a method that works to achieve the goal."

- *Richard Stallman*

References

1. Duncan DE. Call it systems biology. *San Francisco Chronicle*, Apr. 3, 2005.
www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2005/04/03/ING74C1ATI1.DTL.
2. Haley J. *Uncommon Therapy: The Psychiatric Techniques of Milton H. Erickson, MD*. W. W. Norton & Company, reissue edition, 1973. ISBN #0-393-31031-0.
3. Hammerschlag K. *Erickson as Healer*. www.healingdoc.com/articles/2005/11/erickson-as-healer.php.
Published November 2005.
4. Hooper R. All bio systems are go. *Wired*, Oct. 21, 2004.
www.wired.com/news/medtech/0,1286,65411,00.html.
5. Massage Medical Applications Project (MMAP). www.ramblemuse.com/mmap. Published in 2005.

6. Nachmanovitch S. *Free Play The Power of Improvisation in Life and the Arts*. Tarcher, 1990. ISBN #0-8747-7631-7. Also see www.freeplay.com.

Click [here](#) for more information about Keith Eric Grant, PhD, NCTMB.



Page printed from:

http://www.massagetoday.com/archives/2006/02/06.html?no_b=true