The following article appears in the May/June 2004, Issue # 109, of **Massage** Magazine. For more information and to view the latest issue online, go to http://www.massagemagazine.com

Body Language: M

An Excursion Through the Alphabet in Somatic Terms

by Thomas Myers

M On In our somatic journey through the alphabet, we have reached the halfway point: M. The original expression of the letter M has a simple but profound meaning consistent with its shape: water.

The original Egyptian hieroglyphic could be written horizontally, to express a series of waves on the sea (see top figure), or vertically, where it represented a flowing stream (see second from top figure). The name of this hieroglyph was mem, and the plural mayim means "waters" in Hebrew. When the second verse of the King James Bible says, "And the spirit of God moved upon the face of the waters," the original text for waters - as in all the primal waters of this world - is simply a form of this letter mem, formed by doubling the original sign (see second to bottom figure). This letter is found in various similar forms in other alphabets, but it always retains the same basic shape and that sense of flow, current and dynamism. By the time of the Greek alphabet and on down to us from there, it keeps the familiar form of our M (see bottom figure).

The sense of motion and flow in the water, inherent in the shape and meaning of this letter, brings this river right to our door - in the sense that we as therapists do our best to keep things moving, and encourage areas of stillness to participate in the ceaseless motion necessary to life. The Moslem proverb of desert dwellers comes to mind: "Water in motion: Life! Water that's still: Poison!" Or, as Paracelsus, the great 16th-century natural healer, said, "There is but one disease, and its name is congestion." In keeping things moving, we manual therapists move upon the face of the waters - the literal waters: blood, lymph, cerebrospinal fluid and cytoplasm - to create more life, more connection, and less stagnation and turgidity.

Something is moving

The name of this magazine and the subject of all these articles could easily lead us to the idea that M is for massage. In fact, however, while we salute that word in all its glory, we choose instead to assert that M is for movement. Einstein was once asked if he knew anything for certain. I do not know how long he cogitated on this, but his answer was, "Something is moving." Physics research runs ever closer to the idea that, "Everything is moving."

If range of motion, full participation in motion, coordination of motion, and physiological motion (like circulation, digestion and cranial respiration) are the goals of our hands-on work, let us spend a few moments in contemplation of the sense of movement with one of movement's most articulate (in both senses of the word) advocates, Caryn McHose.

McHose is a bodyworker, movement teacher and workshop leader who came to hands-on work from the world of dance. She developed an experiential-anatomy curriculum for dancers that successfully combines the artistic and visionary - the feeling of a body moving - with the dynamic mechanical details of scientific anatomy. McHose's original ideas are available in a book called Bodystories, A Guide to Experiential Anatomy, which she co-wrote

with Andrea Olsen. McHose lives and works in rural New Hampshire with her husband, Rolfing® practitioner Kevin Frank, where they run Resources in Movement, a center that sponsors innovative programs combining hands-on and movement skills.

Even though McHose is not a household name, she is an appropriate pioneer to choose in the arena of movement in that her resumé reads as a Who's Who in the world of movement training. Although she is indubitably herself, and her work is authentic expression, it partakes of all the influences she has learned in so many places, and it is quite an impressive list.

Like so many of us, McHose landed in this field out of need. Deemed clumsy at age 5, she was sent off to dancing school, and was fortunate to land in the class of an unusual teacher, Betty Jean Dittmar, who found and nurtured her creativity.

"That was a profound kind of liberating experience for me, because first of all I was allowed to self-organize and be very expressive through various themes that we studied, besides learning the technical parts of modern dance technique," she says. "As I got older, the themes would get very interesting. We would study different art styles, Polynesian art, primitive art, different European art styles, and African art. We would use them as sources to study the esthetics of a culture. And I thought, 'Wow, this is what dance is all about' - at least it captured my own imagination."

McHose studied art and dance at the University of Connecticut, and started painting and drawing the human body. "I really had a passion for looking at the human form. I would go to as many dance classes and just watch and draw, and I think that really contributed to my ability to see," she says.

Representing the body on paper helped McHose find the actual feeling for these forms within the human body. She became a teacher of dance at Middlebury College in Vermont, and brought her passion for dance and the human anatomy together, first through a thorough study of a seminal work about the felt sense of human mechanics, The Thinking Body, by Mabel Ellsworth Todd.

"I read the book for three or four years and I got a bunch of anatomy books and I taught myself every single muscle and bone and organ in the body through feeling it on myself," McHose says. "Really taking the time to embody the bones, for instance. It felt like I could take the time to paint them inside so I could really understand all the curves and the forms."

Singing bones

Like so many pioneers, McHose had a period where she went deeply into working alone, a solo journey. "I moved to a farmhouse in Vermont, and there was this room, a really funky place with awful red carpet in it. I covered the room with charts of bones and things like that. And that's when I lay down, I just lay down for a long, long time and would wait until - it sounds funny, I know - all of a sudden a bone would sing to me; it would light up. And I could feel the curve in it, I could feel the life in it, it became a three-dimensional living thing inside me. This time was directly related to my capacity to stay inside and be resonant. I was very, very, very aware in my own body. I lived in that apartment for five years. Winters were long and cold, and I spent a long time in the red room studying the body by means of my body."

In her early 20s McHose backed her way into bodywork. "I was teaching dance and all of a sudden I'd have to stop someone, and I started to put my hands on people. I think that's when I really became a bodyworker. I didn't know what that was, but I started making adjustments because I could see/feel the bones and what wasn't working." This led her to the books of Ida Rolf, Moshe Feldenkrais and F.M. Alexander, which she read over and over.

McHose loved what Ida Rolf wrote and used her concepts in her movement work - but given what she had heard about pain and disruptive intensity, she did not receive structural work until she met her husband in 1994. Instead, in the early '80s, she got a grant to study with somatic explorer Bonnie Bainbridge Cohen, author of Sensing, Feeling, and Action. Cohen's work with evolution and developmental movement fit right in with McHose's explorations with creative dance and anatomy, and she "got down on the floor and started exploring these forms." Although she moved away from Cohen's specific way of working, she still feels she is doing perceptual explorations into how we can experience different forms of our body - the animal forms, the younger forms, all the forms our body can take, or that we can even imagine it can take.

Her classes became laboratories where she could explore these concepts with the young dancers and

athletes at Middlebury. The athletes changed so much - gaining flexibility and awareness and sensitivity without losing strength - that even the coaches started showing up at her classes!

"I was really developing my own protocols. For example, the body was organized from the feet up by Ida (Rolf), and the head down from Alexander. I played with these two orientations. I'd start at the head, I'd start at the feet, or I'd do both simultaneously. My work with Bonnie [Bainbridge Cohen] had me starting to think about biological forms of all kinds - cells, vessels, radial symmetrical creatures, quadrupeds, axial creatures and bipeds. And I just kept shuffling that stuff around and around and using that X-ray vision to look at bodies through my particular lens. And it was fun."

Later, McHose took workshops with Emilie Conrad, founder of Continuum, whose explorations of flow and primitive movement also contributed to her mix, and dancer Eric Hawkins, who used the ideokinetic imagery of Lulu Sweigard in his dance classes. She also worked for many years with Susan Borg on Resonant Kinesiology, an inquiry that combined touch, movement and sound. All of these influences led to a very well-rounded and rich foundation in kinesthetic literacy - how little we teach our children about their body, and what a dynamic source of intelligence and intuition it can be.

McHose is also exploring the feeling side of bodywork, and she is just completing training in Peter Levine's Somatic Experiencing. "I find myself coming back to the root of basically feeling like there is a profound support available through accessing one's relationship to the Earth and to the sky. I feel like I'm coming back to my roots to design experiences and providing context where people can feel change. I realize through working with my evolutionary sequence that it's all there, it's always talking to us. My meditation now is about the relational element between human beings - having them feel so profoundly present in their capacity to feel their body, to feel their ground, and feel their orientation, while one works out the complexity of human relationship."

Really alive

McHose's work with her clients draws upon all these roots. "I'm really interested in helping people to connect that birthright of being," she says. "You have a body and you walk around on the planet in relation to gravity and whatever else it is out there. I have a sense of how I densify and how I expand. Shakespeare said, 'Nothing is either good or bad but thinking makes it so.' And I remember when I thought that being dense was really bad, but now I realize that being dense is a really good thing in certain contexts.

"I'm sure it's because of where I am in my life. I'm older now, I've been through a lot of difficult things, and I feel like I'm getting perspective on that," McHose adds. "You get up and find appreciation in each moment and delight in what we as human beings can bring forth. I guess I have faith. Do I want to say that, when the world is so screwed up right now? But I delight in people that are so dedicated to being alive in the best sense of the word, really alive."

McHose is beacon of light, developing a science and practical application of the body's inherent and coherent intelligence in the world of movement.

The mysterious cerebellum

For our final point in this issue's column, we will look at a key structure that coordinates movement in our body, a part of the brain scientists have been discovering more about: the cerebellum.

While the senses of sight, hearing and smell have been well-studied and are well-understood (well, more or less), not so much is known yet about the sense of movement. How we integrate perception and turn it into coordinated action is still pretty much a mystery, and is turning out to be more complicated than it seemed at first. The motor action of nerves on muscles is pretty well scoped out, and we know that the body is mapped quite precisely in the sensory and motor cortex of the parietal lobe, but the role of the cerebellum is only beginning to be understood in a new way.

The cerebellum (the little brain or lesser brain) is the walnut-looking bilateral lobe of the brain tucked underneath our better-known cerebrum, right at the back of our head, sitting below the tentorium in the occipital bowl. This wrinkled bit of the old brain has remained remarkably consistent in its general organization through its evolutionary history - a shark's cerebellum is organized much like ours, although ours is larger and more complex.

In fact, one measure of the intelligence of any part of the brain is how much surface area it has. Our cerebellum, although it is much smaller than either of the hemispheres of the larger cerebrum, is so folded up that it has just as much surface as each hemisphere. In other words, your cerebellum accounts for one third of the surface of your brain. In terms of number of neurons, the human cerebellum has enlarged considerably over our ancestors', increasing three times in the last 1 million years, according to fossil study. And there are more neurons in the cerebellum than in all the rest of the brain combined.

The central cells of this array are the Purkinje cells, which can have up to 200,000 inputs (synapses) on their extensive dendrites. The most numerous cells, the granule cells, can be packed around these Purkinje cells at the rate of six million per square millimeter, an amazing density that suggests important and complex computational ability.

It has long been surmised that the cerebellum had something to do with movement, initially by field doctors who noticed that soldiers with wounds to the cerebellar portion of the brain had trouble with coordination and balance. But studying the cerebellum by the usual method of tracking neurological activity was made difficult by the fact that the cerebellum seemed eerily silent, even during active movement.

Then muscle spindles were discovered, and the so-called gamma motor system that runs them, and a new model of cerebellar function was born, which goes like this: When you perform a movement, the parietal cortex forms an image of that movement, using the basal ganglia and other brain centers to form an action plan around the desired outcome. The brain then calls up the cerebellum to find out if any motion like this has ever been tried before.

The action plan is projected in a series of contractions of muscles, which is actually coded as a series of signals to the muscle spindles and expected sensory data from the connective-tissue stretch receptors. The cerebellum compares the projected action plan with all the past similar action plans, and refines the movement based on all your past experiences, and adds in the stabilizing muscles necessary to keep you upright and oriented during the change.

The cerebellum then monitors the movement as it happens. As long as the signals to the muscle spindles, and back from the fascial stretch receptors, are following the refined plan, the cerebellum stays silent. It is only if the signals start deviating from the plan that the cerebellum activates to take corrective action to right the movement.

You can feel this for yourself if you listen carefully to your body in the following simple experiment (see Left Figure): Close your eyes and bring your finger to your nose. You will find it easier to feel what we are talking about here if you make the movement a little unusual, by turning your head to the side, for instance, before you start, or bringing your hand around over the top of your head to touch your nose.

While you are doing this, if you mentally watch the process, you will feel that your fingertip actually follows a kind of zig-zag pattern, going a little too much one way or the other, but is very quickly and efficiently put back on track by the cerebellar corrections. Turn your face front again and bring your finger simply to your nose and you may not feel the corrective measures, because your body knows this movement so well by now that no corrective action is needed.

The cerebellum is, in fact, doing this kind of feedback, but it has been recently discovered that it is doing more than that. The brain is often described in terms of the most complicated device available to us. Seventeenth-century philosopher René Descartes described the brain as a pneumatic structure (that was the most complicated system of his day). Later the brain was described as a telegraph system, then as a phone system, then a computer, and more recently as a hologram.

The process described above is a fairly simple cybernetic feedback model of cerebellar function. It was expected that when we understood the network of Purkinje and granular cells that we would see a map of the body in the cerebellum, as we found in the parietal lobe. In fact, however, these maps of the surface of the cerebellum are totally fractured, with odd body parts appearing close together. The connection seems to be patterns of movement, patterns of exploration, and patterns of sensory integration.

More recent research indicates that the cerebellum is doing something more complicated altogether: active simulation of our interactions with things we perceive. Not only does the cerebellum refine known movements, it also processes the incoming sensory information to simulate all the things that can possibly be done with the image that is coming in. For example, if you walk by a baseball bat, the cerebellum calls up all the movements that might pertain to a baseball bat - swinging it, using it like a baton, clamping your hands in succession to see who bats first - whatever you happen to associate with a baseball bat. Even if you never pick it up.

Thus the cerebellum has a far more complex function than outlined above. It has been recently shown to perform all kinds of sensory integration, which gets it involved in speech and emotions, and in impulse control - which links it, for instance, to attention-deficit hyperactivity disorder.

As we understand more about cerebellar function (and research results are coming thick and fast in this area), we will understand more about how to treat some of the sensori-motor integration issues with which we are just coming to grips. And we will understand more about how the movement we promote when we do hands-on bodywork can help heal and organize our little brain.

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