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Cover image: Certified Rolfer™ and choreographer Keren'Or Pézard (www.kerenormovement.com) working with professional dancer Riccardo Meneghini. Photo by Les photos apollines; © photos apollines.com, all rights reserved; www.apollines.com.

With this issue, the first of 2015, we see some significant changes at *Structural Integration: The Journal of the Rolf Institute*®. First, we move from a print edition to digital publication, a sea change for our kinesthetic community. You can still print the Journal out at home, however, or order a print copy from Amazon made possible through on-demand printing. With a digital journal we are able to increase our publication frequency (slated at three issues for 2015), as well as add to our page count.

I'm particularly excited in this issue by the plethora of responses to our "Ask the Faculty" column, where we query Rolf Institute instructors about their current obsessions. We each learn through our practices, through cross-pollination with other fields, and through our own ruminations, and we see all of this in the varied responses.

A particular feature of our Rolfig® Structural Integration community is the diversity of backgrounds and talents our members bring to the table and how this informs and enriches our work. We have Rolfer™-artists, Rolfer-engineers, Rolfer-physicians, Rolfer-therapists, and much more. In this issue's Working with Performers theme, we hear from some of the performing artists in our community. They each bring decades of experience as a performer to bear in their work and share with us insights that should prove useful whether we are working with professionals or amateurs in those fields. I want to particularly welcome new contributors Amy Iadarola and David Delaney. Iadarola brings her dance background to an article on joint hypermobility syndrome as well as an interview with Rolf Movement® Instructor Rebecca Carli – herself a highly trained dance veteran. Delaney comes in with New York City credentials in singing and teaching singing – and as he says, if you can make it there you can make it anywhere – and provides us with a lovely article on how the singing voice properly operates and what trips up many singers. Then we have two contributions from Rolfer-actor-somatic psychologist Heather Corwin related to acting: one is an interview with her client Monica Payne, a theatre director, about the role of the body in acting and how Rolfig SI helps her in her work; the other an article where she speaks of the parallel process of 'applied empathy' that makes for good acting and good Rolfig work. And I want to thank Rolfer and choreographer Keren'Or Pézard and her photographer for sharing with us the exquisite and evocative cover image of Pézard working with a dancer client (full credit details are on the Table of Contents page). If dancing inspires you, keep tabs on Pézard's Rolfig Dance Project page on Facebook (www.facebook.com/rolfigdanceproject), where she wants to gather Rolfers and dancers.

Looking at our Perspectives section, we welcome new contributor Deb DeAngeles, writing authentically on her challenges and breakthroughs with Rolf Movement work, and also new contributors from Europe, Mathias Avigdor – going into exceptional detail on the tongue – and Bibiana Badenes Braulio, relating her experience of the Rolfers' Grand Canyon river rafting trip last summer. I want to give Avigdor an award for the best opening sentence ever: "The tongue lives in our mouth, like a strange animal chained to the bones of our cranium and jaw." (That's on page 33 if you find it compels immediate reading.)

Following up on earlier writings, we are publishing Part 2 of Rolfig Instructor Valerie Berg's conceptualization of 'structural aging'; an update on the Uniitalo case-study work coming out of the Brazilian Rolfig community; and a case-study from John deMahy using his lumbar-pelvic algorithm.

We conclude the issue with two very personal pieces. In the first, Robert Toporek shares how he met Dr. Rolf at Esalen, became a Rolfer, and appointed himself Ida Rolf's 'East Coast business manager'. Last but not least, Sherri Cassuto writes to us from the 'belly of the whale', acquainting us with her cancer diagnosis and writing eloquently and courageously on where this journey is taking her in terms of her life and practice.

I hope you find this issue thought-provoking and inspiring of your own Rolfig obsessions.

Anne F. Hoff
Editor-in-Chief

Ask the Faculty

Current Fascinations and Obsessions

Q What Rolfing® Structural Integration (SI)-related theme is obsessing you at the moment? What territory are you exploring, what new insights are coming in? How do you see this in your practice or your teaching?

A As humans, if our body image defines our potential for movement, then, as Rolfers™, how do we effectively ‘touch’ body image? How does the process of Rolfing SI align body image more closely with body schema? How does the Rolfing process influence both – body image and schema? Is this distinction useful for our work to facilitate lasting change? Some of my most powerful movement moments come when I recognize that my body representation has been ‘off’, that my potential for movement is different from my preconceived notions – there is a terrific sensation of disbelief, and then relief, and then expansive wonderment because my worldview has shifted, possibilities have opened, change feels tangible. This is what keeps me in the questions that keep me engaged in this field.

Rebecca Carli
Rolf Movement® Instructor

A In my clinical practice, I’m exploring how the human being is shaped by the interplay between atmospheric pressure from the outside and the tendency toward expansion from the inside. No less than gravity, atmospheric pressure is a constant force acting on the organism. Meanwhile, the organism’s internal tendency is to expand like a star shining in all directions or a balloon expanding; and gravity’s vector directs the expansion along a line. Perhaps the body’s shape is an outcome of the boundary negotiation between the atmosphere’s three-dimensional force and the body’s three-dimensional tendency to expand toward it.

In my teaching, I’m focusing on how we track the therapeutic relationship, how we witness its process and development. This has to do with self-awareness, with being in the here and now and being able to evaluate ourselves without judgment, as well as with bringing our full resources to the process.

Rita Geirola
Rolfing Instructor,
Rolf Movement Instructor

A At the moment I am very intrigued by self-teaching tools and sharing knowledge with colleagues: but there is not much to say or write, and more to do. I find Rolfers™ need safe spaces and also arenas to share, learn, practice – a container for even our doubts and fears. In regards to this, I recently organized a one-day meeting in my office; fifteen Rolfers came, with a table and their everyday experiences of Rolfing SI. We spent the morning discussing issues from our practices – the key themes were relationship and rapport, and seeking advice on what to do in particular cases. Our colleague Giovannella Pattavina then gave a presentation on her experience of the Bates Method (for vision) and how some exercises and the approach she learned can help in treating neck and upper-pole difficulties. She guided us in an embodiment exploration that was very interesting and helpful. We spent the afternoon sharing Rolfing sessions. This cooperative venture was enriching and inspired talk of a workshop with Giovannella as well as future gatherings like this one.

Pierpaola Volpones
Rolfing Instructor,
Rolf Movement Instructor

A What am I obsessing about at the moment? I have been obsessing about structural aging for the past six years. It is endless in my practice, the various patterns I see repeated over and over showing up as supposed ‘aging’ issues. Every structural ‘ailment’ people come in with, almost, is a loss of structural integrity somewhere that starts the feeling of ‘aging’ or the look of ‘aging’. So I have written articles, created workshops, and used my understanding of the various functional necessities of being and staying upright in my practice and the Ten Series and ways we work with those breakdowns.

I am creating fascial-relationship anatomy for my basic classes instead of the usual muscle/massage-oriented approach.

The new territories I am exploring over the past two years are 1) Porges’s polyvagal theory and effect of the vagal nervous system on our expression and structure, and 2) the effect of the eyes on tonic function and basic uprightness.

Valerie Berg
Rolfing Instructor

A My focus is on movement, and its relationship to structure. I think the link is the nervous system, as structure is movement that has slowed down to the point of relative solidity.

I am now in my third year of a four-year training in the Feldenkrais Method® of somatic education. It has opened my eyes further to the possibilities of interventions through these three portals – structure, movement, energy. All of them are intricately intertwined with each other, with the nervous system as bridge.

The training has further refined my process as a Rolfer, and I look forward to adding Feldenkrais as a profession and an offering for people to use in facilitating their own healing and wholeness.

Libby Eason
Rolfing Instructor

A My current interest is in getting Unit 2 students to articulate their overall processes, and then bringing what they say into the class closure. This seems to help them integrate what they have learned through experience.

Raquel Motta
Rolfing Instructor,
Rolf Movement Instructor

A At the moment, the Rolfing-related theme that is, well, not “obsessing” exactly, but *enthraling* me is the present-moment embodied (versus conceptualized) experience of integration. When I began my training in 1985, I grappled with ‘getting it right’ and was obsessed with the notion of getting more of this profound work out into the world. This obsession with ‘not enough practitioners and too many random bodies’ naturally segued over into teaching. When I joined the faculty in 1995 there were far too few instructors (let alone female!) to cover the burgeoning number of applicants for training.

During twenty years on the faculty, I did grapple with how to transmit and convey the theoretical and technical aspects of Rolfing SI within an integrated and practical framework. And now, these twenty years later, a sabbatical from the classroom allows me the opportunity to experience my private practice afresh. I'm more at ease with the paradoxical aspect of Rolfing SI and more intrigued than ever with the experience of the actual work.

While I'm quite intrigued with the research and evolution of our work that's occurred since Ida's passing, I am less impressed by the scientific explanations of how and why Rolfing SI 'works' than by the empirical evidence supported by the experiences of my clients.

**Sally Klemm
Advanced Rolfing Instructor**

A I'm exploring how bridges are built among the various taxonomies – structural, geometric, functional, energetic, and psychobiological – and how while we assess the client and develop strategies through the lens of one taxonomy, we observe the effects in others. For practitioners to facilitate bridges, students must gain clarity on the scope and nature of the individual taxonomies, as well as the techniques effective in each. In my experience, the clearer we are, the greater our awareness and mastery of our processes.

But – as a whole profession we are not yet as clear as we'd like to be on the vast and varied domain of the psychobiological. For some years I've devoted quite a bit of my attention to this; and I'm convinced that to reach the transformational potential of our work, attention to identity, body image, and body schema is essential.

I'm also interested in the case-study method. In the contexts of education, clinical practice, and research, case studies help students and practitioners to reflect on what they are doing and to bring structure and organization to their work. Beyond that, rigorous case studies are evidence of what SI affects and achieves – evidence we can present both to the public and to other professional and scientific communities.

**Pedro Prado
Advanced Rolfing Instructor,
Rolf Movement Instructor**

A In practicing or teaching Rolfing SI, we use terms like 'freeing' or 'opening' – or even more poetic words with similar meaning. The meaning of those terms is defined by every student or client – and possibly quite individual. For me it is related to 'space', or more precisely to an experience of space.

Some examples of how I relate 'space' to the frame of Rolfing SI:

- In terms of physical structure, it goes along with the question of compression and decompression of joints. Or: How can I reduce muscle force induced into joints for stabilizing them and instead use elastic forces of fascia. (Relating support/stability to adaptability or/and even palintonicity.)
- In terms of coordinative structure, the question above, for example, is in my opinion, very much related to the concepts of 'pre movement' and 'core stabilization' – being able to start movements with a relaxation, instead of a contraction, of phasic muscles.
- This leads into the question of perception: How can we support the experience of space within the client or student? Space in which new options can appear instead of 'doing' something.
- How can these experiences lead to sustainability and ownership for the client and/or student?

The other question that strikes me as teacher: How can we integrate new insights and concepts concerning fascia (from Robert Schleip, Peter Schwind, etc.) and movement (Hubert Godard, etc.) without busting the traditional frame of Rolfing SI, particularly in our basic trainings? Or how can we inspire our students to continue their education within our 'family' instead of going elsewhere?

**Jörg Ahnend-Löns
Rolfing Instructor**

A I am currently studying Stephen Porges's polyvagal theory, and exploring how to apply it in movement sessions. What really fascinates me is how we, as humans, organize ourselves to relate to the presence of the other person. The valuable insights of polyvagal theory bear upon this question.

**Marcelo Muniz
Rolfing Instructor**

A I am grateful for this question because I'm looking forward to hearing what my fellow faculty members are doing and thinking about. Our faculty has rare opportunity to assemble to talk together. Our first U.S. Faculty meeting in a few years will be this spring, and our full faculty has not met in over five years.

What obsesses me in my teaching and practice is answering the question "What are you doing?" as honestly as I can. I find it's reactively easy to say where my hands are and the direction of the vector in which I'm working, but the truth is that these are only the output of what I'm doing. What I'm really doing is a complex balance of focused and peripheral attention. To name and put into words or an experience that others can feel, participate with, and replicate is my goal.

In attending to this goal, I then find myself grappling with the overwhelm that student often experience while in the training. Most students come to the realization, conscious or not, that learning the work will take years. This realization and the concomitant emotional and physiological response play a huge role in a student's ability to take in more information and to participate in the class.

I have recently had the opportunity to teach a class in which students attended class in four- and five-day intensives spread out over the course of two years. I found that the intensity of the longer training format was present for those short periods, but that in having three or four weeks between those intensives, the students were often able to come back to class with a freshness that allowed us to stay with the inquiry of "What is Rolfing SI?" and "What am I doing?" more completely.

This recent experience leads me to my next obsession as a teacher and a practitioner, which is to create the best training possible. The training format I piloted (along with others members of the faculty) leads me to believe that offering trainings that are more spread out over time may be of service to our students (and, quite honestly, I found it a more sustainable way to teach). I am eager to share my experience with my fellow faculty members at our upcoming faculty meeting, and also to hear what they experience in the process of teaching.

**Duffy Allen
Rolfing Instructor**

A I am currently fascinated more and more with *space*, our peri-personal space, how we inhabit it, how it influences our form, and the function that emanates from that form. I am spending time with the concepts of body schema, its relationship to body image, and looking into which other neural maps we use for organizing our internal and external environment.

Marius Strydom
Rolfing Instructor

A The body's innate ability to reestablish order has fascinated me for years. Learning how to shift my perception to synchronize with this phenomenon has greatly deepened and expanded my work with fascia and all of its expressions. Effectively interacting with the fluid body has been the key. This has allowed me to more comprehensively understand the role of fascia and fluids in the development of the human body and its role in reorganizing dysfunctional patterns. For me, learning these 'fluid body skills' has been the intermediate and necessary step to sensing the 'energy body'. As a teacher, I have been developing approaches to bring this knowledge, at a beginning level, into the basic training in order for students to develop a broad spectrum of contact. Some of these approaches have definitely been more effective than others! I can see how this is going to be an exploration for many years. Weekly there is still much that I learn about my ability to be present, develop my perception and, as a result, 'see' what my client's body is then able to reveal.

Thomas Walker
Rolfing Instructor

A I'm exploring the extent to which, beyond being a biological phenomenon, the human body is also a cultural process. This exploration raises questions about how cultural embodiments of both the client and the practitioner affect the SI process. For example, if the two come from different cultures, how can a practitioner honor the cultural embodiment of the client, rather than imposing on the client the embodiment ideals of his or her own culture?

I'm also investigating the activity of living in the body not only as a way of being and communicating, but also as a mode of learning and knowing. In that connection,

I want to help my students (and clients) to transform their intellectual curiosity around the material into lived physical experience.

Monica Caspari
Rolfing Instructor,
Rolf Movement Instructor

A My curiosity is in how the practitioner's perception can create transformation of the field. It is interesting to teach about perception since each practitioner has his own perceptual system.

Hiroyoshi Tahata
Rolf Movement Instructor

A I am currently obsessed with scars – particularly how scars affect structure, the concept of active scars, and how current fascia research is making us rethink these marks from our past.

Bethany Ward
Rolfing Instructor

A There are two different lines that have been intriguing me and inspiring further study for the past several years – and I expect for some time to come. One is breathing. A fascinating function as it spans both our autonomic, involuntary and our willed, conscious function. We breathe somewhere around 20,000 times per day. This is the body's most repetitive motion and thus is one of the most formative of both structure and function. In my clinical experience, whenever there is a chronic pain or dis-ease in any one of the taxonomies, it is in some way connected to the coordination of breathing, and is also accessible to positive change through the coordination of breathing. The coordination of breathing comes from many factors, one of the biggest of which is the way that we orient to ground and space and other as we prepare to move. Thus, when we want to change the habitual way that we breathe, we have to change not the breath itself but the perceptive and coordinative patterns that are shaping the breath.

There are a number of less-than-optimal breathing patterns. Some involve the upper breathing space (head, nose, throat, and thoracic inlet), some the middle breathing space (ribcage, thoracic inlet, and diaphragm), and some the lower breathing space (diaphragm, crura, abdomen, and

pelvic floor). Some involve the way that these different spaces connect with each other and the rest of the body including the limbs, spine, viscera, and sense organs.

My growing edge is to find what may need release in the soft tissue and joint structures to free the breathing as well as to discover efficient and easy ways to help clients understand and say yes to working with the coordinative, perceptive, and orienting-related aspects of the breath that will allow them to make long-lasting changes in these patterns.

The other aspect of the work that is piquing my interest is joints, from the biomechanical to the psychobiological. Each joint has its unique structure, from the way the bones are shaped to the soft tissues that surround it. At the same time, joints are meeting points for many levels of function and must always be considered as parts of a functional whole. While we may de-rotate a vertebra and bring temporary relief, we may need to address an asymmetrical pattern of body use before that relief can be lasting. While we may mobilize all the joints in the foot, it may still be necessary to help the client learn to complete the movement of the outbreath so that the weight of the upper body can release down through the foot and allow the foot to be flexible in the way it transmits weight to the ground and impulse from the ground up through the body.

Above and beyond this is the question of the underlying conditions that allow us to truly articulate at a joint. We must have differentiation at both structural and psychobiological levels. One of the things that most locks the fascia around a joint is the incapacity to have the distal aspect of the limb in relationship with the world while the proximal aspect is experienced as being with me. Each joint is a meeting of myself with other, and each time that I am afraid to touch or be touched by the world, I will move through that joint in a way that shortens and tightens, instead of lengthening and differentiating.

Thus, releasing a joint involves many levels of skill. It involves knowing the anatomy and physiology of the joint and being skillful at releasing restrictions at the level of tissue and biomechanical joint structure. It involves an understanding of how that particular joint fits into the bigger picture of the whole moving body, and last, but not least, it involves being able to see and aid

the client in making, at a psychobiological and coordinative level, the differentiation between self and other. Truly an enquiry to last a lifetime!

Lael Keen
Rolfing Instructor,
Rolf Movement Instructor

A Over the past eighteen years, embryology has become a major focus in my personal exploration, study, and teaching. I must confess that initially there was little resonance . . . how could something the size of a lentil (or smaller) have meaning for Rolfing SI?

However, as I embody the flows of formation, the gestures of becoming, and the sublime understanding of the 'embryo' as a metaphor of wholeness, my commitment to this study has evolved into a passion. The understanding of the origin and interrelationship of tissues, bones and organs, vessels etc. opens a doorway to the investigation and possible resolution of the often-confounding elements of an individual's pain. Tracing pathways back to their embryological beginnings often holds the key.

As Brian Freeman PhD wrote, "At any stage of life, it is impossible to define, both anatomically and physiologically, where one 'system' ends and another starts. In the embryo, it is impossible to state when a 'system' first arises. Since the human grows initially by subdivision of one fertilized egg, the organism is always integrated and functioning as a whole at every stage: its behavior cannot be interpreted by reductionist techniques" (from "The Human Embryo's Use of Its Self," *Sydney Congress Papers, 4th International Alexander Congress, Sydney Australia, July 1994, pg. 1*).

Carol A. Agneessens
Rolfing Instructor,
Rolf Movement Instructor

A Presently, I'm allowing space for a deeper understanding of how to build long-term processes in the Rolfing practice through opening experiential space and exploring the art of listening. This brings a new level of communication between client and Rolfer and, therefore, a richer space for interventions. Simultaneously, we have the challenge of connecting the work with the principles of Rolfing intervention and with the referential experience of the 'Line'.

We can then explore the interface between structure, meaning, movement, and energy, and build the process from this dance.

Paula Mattoli
Rolfing Instructor,
Rolf Movement Instructor

A There are currently three areas of inspiration in my practice / teaching. First is a renewed calling to work with the 'Line'. I am rediscovering joy in my body and in my clients' experience of the work. This joy is kindled by moments in sessions where my consciousness embraces finding my Line and allowing that connection to amplify my intention. It is of course the essence of our work.

A second source of enthusiasm is working with the synovial membranes / fluids in the context of the Principles of Rolfing SI. I am enjoying my dialogue with this layer of the body while feeling through the organism. Feeling into this layer of the body seems to positively effect global body responsiveness, enhance support transmitting through the body, and further develop the adaptive capacity of the body. I hope to write more on the topic in an article at a later time.

And the third consuming passion in my practice and teaching is feeling the impact of watching a particular talk on TEDTalks. Perhaps you have seen "My Stroke of Insight" (<http://tinyurl.com/jbtted>) where neuroscientist Jill Bolte Taylor speaks of her stroke experience. As a result of listening to her educational, insightful, and provocative talk, I am beginning to include the intention of balancing the hemispheres of the brain into the other notions of balance we work toward (front/back, right/left, top/bottom, core/sleeve) to elicit the Line. My mind is called to ponder the following questions: How is it that my words, my pacing, my touch promote this balance?

My passionate musings in these three areas engender more questions and curiosities than certainty at this point. However, I find the exercise to be useful and to support my own centering.

Kevin McCoy
Rolfing Instructor

Rolf Movement®

Faculty Perspectives

Seeing the Ground of a Movement: Tonic Function and the Fencing Bear

By Kevin Frank, Certified Advanced Rolfer™, Rolf Movement Instructor

Author's note: The original version of this article was written in 2003 and used as a handout for classes and workshops, but never published, except on the Resources in Movement website. Requests for its usage from colleagues in allied fields suggested publication in Structural Integration: The Journal of the Rolf Institute®.

This article introduces the idea that movement has two parts – a figure and a ground. *Figure* means, in this case, the literal action expressed in terms of shape or biomechanics. *Ground* means the background of the movement that occurs in the tonic system of the mover. In addition, the topic of *seeing* is considered – meaning the process of seeing the background to a person's movement. These ideas are illustrated by a very old story about an unusual bear.

To begin thinking about the *ground* of a movement, consider the observation that we move before we move. The body prepares to do a movement by orienting itself. For example, when I take a breath, before I breathe, my back muscles anticipate the pull down of the diaphragm. If they don't anticipate the movement, my diaphragm will create some forward collapse of my structure. As another example, before I raise my arm, my calf muscles prepare by anticipating the change in loading. In both of these cases, the body stabilizes itself appropriately to not fall over. An example of counterproductive pre-movement would be when someone tightens his/her belly to stand up from a chair. In this case, stabilization is making it harder for the person to stand up.

In the first brief moments in which a movement is conceived and prepared for execution, the essential story of a movement can be predicted. The quality of movement – the flow, the economy, the effectiveness – is determined by how someone consciously or unconsciously sets the tone in the tonic system of his/her body. Thus, to change structure, to change a person's postural habits and coordination, we need to be able to see and help change the pre-movement embedded in each of that person's actions.

It appears we can best see another person's pre-movement in a state of resonant empathic observation. We must know these places of preparation in our own body in order to see it in someone else's body.

This point is relevant to any inquiry into how one might teach a bodywork practitioner to 'see'. Teaching *seeing* means teaching someone to sense his/her own pre-movement, and to find the perception necessary to change it. By learning to work with our pre-movement, we gain access to the gravity response system that governs our quality of movement.

Movement that begins with appropriate pre-movement means movement that starts with dynamic orientation to ground and to space. This is the perceptual state in which observation of movement means primarily sensing the ground of a movement, rather than its shape. Taking this point a little further, we might consider that part of the body practitioner's education is relearning the capacity to perceive the ground of his/her own movement and then perceive it in others.

Thus, here is a purportedly true story about a Russian nobleman, and a bear that has been taught fencing (swordsmanship). The story (Kleist 1810) introduces the reader to gravity response as the largely unconscious ground that precedes and determines the shape and story of our movements.

"In this connection", said my friend warmly, "I must tell you another story. You'll easily see how it fits in here. When I was on my way to Russia, I spent some time on the estate of a Baltic nobleman whose sons had a passion for fencing. The elder, in particular, who had just come down from the university,

thought he was a bit of an expert. One morning, when I was in his room, he offered me a rapier. I accepted his challenge but, as it turned out, I had the better of him. It made him angry, and this increased his confusion. Nearly every thrust I made found its mark. At last his rapier flew into the corner of the room. As he picked it up he said, half in anger and half in jest, that he had met his master but that there is a master for everyone and everything – and now he proposed to lead me to mine. The brothers laughed loudly at this and shouted: 'Come on, down to the shed!' They took me by the hand and led me outside to make the acquaintance of a bear which their father was rearing on the farm.

"I was astounded to see the bear standing upright on his hind legs, his back against the post to which he was chained, his right paw raised ready for battle. He looked me straight in the eye. This was his fighting posture. I wasn't sure if I was dreaming, seeing such an opponent. They urged me to attack. 'See if you can hit him!' they shouted. As I had now recovered somewhat from my astonishment I fell on him with my rapier. The bear made a slight movement with his paw and parried my thrust. I fainted, to deceive him. The bear did not move. I attacked again, this time with all the skill I could muster. I know I would certainly have thrust my way through to a human breast, but the bear made a slight movement with his paw and parried my thrust. By now I was almost in the same state as the elder brother had been: the bear's utter seriousness robbed me of my composure. Thrusts and feints followed thick and fast, the sweat poured off me, but in vain. It wasn't merely that he parried my thrusts like the finest fencer in the world; when I fainted to deceive him he made no move at all. No human fencer could equal his perception in this respect. He stood upright, his paw raised ready for battle, his eye fixed on mine as if he could read my soul there, and when my thrusts were not meant seriously he did not move. Do you believe this story?"

“Absolutely”, I said with joyful approval. “I’d believe it from a stranger, it’s so probable. Why shouldn’t I believe it from you?”

“Now, my excellent friend,” said my companion, “you are in possession of all you need to follow my argument. We see that in the organic world, as thought grows dimmer and weaker, grace emerges more brilliantly and decisively. But just as a section drawn through two lines suddenly reappears on the other side after passing through infinity, or as the image in a concave mirror turns up again right in front of us after dwindling into the distance, so grace itself returns when knowledge has as it were gone through an infinity. Grace appears most purely in that human form which either has no consciousness or an infinite consciousness. That is, in the puppet or in the god.”

“Does that mean,” I said in some bewilderment, “that we must eat again of the tree of knowledge in order to return to the state of innocence?”

“Of course,” he said, “but that’s the final chapter in the history of the world.”

Why isn’t the bear fooled? If we separate the figure and ground of a movement, we could say that the bear is reading the ground of his opponent; the ground is the state of the tonic system, the management of the center of gravity. When the swordsman is not completely committed to his gesture, as in a feint, he holds back a part of his weight – very subtly, but perceptibly. Before any intentional action occurs, there is a pre-movement. Another term for pre-movement is anticipatory postural activity (APA), a regulation of the postural system to prepare and adjust for changes in the center of gravity. The APA, an involuntary and unconscious adjustment, *precedes* voluntary, intentional actions – it is the ground of the gesture. This is why a given gesture can never be given a consistent particular meaning. The meaning of a gesture depends on the tonic activity underlying it. As babies, we are like the bear: we read the state of our parents’ tonic systems. That is how we learn to hold ourselves, in imitation or response to the tonic system to which we are in relationship. Hubert Godard has

organized observations concerning the functioning of the tonic system into a theory that he has termed Tonic Function.

In Kleist’s (1810) story, his character states “Affectation appears, as you know, when the soul, *vis motrix*, inhabits any other point than the center of gravity.” In other words, our body language gives us away if we are pretending. In this article, body language is defined more specifically as the APA of the movement. Learning to see APA is a central skill for a movement therapist, and is useful to many other fields of human endeavor as well. Dr. Rolf called this ‘seeing’. Another important skill is the capacity to infer the perceptual field of the client – to begin to sense the perceptual habits of a client. It is only by evoking changes in perception that the APA will change. By contrast, teaching movement in terms of voluntary postural adaptations, such as effortful standing-up-straight, interferes with tonic function. At times, we all may succumb to this unfortunate strategy.

The fencing bear reminds us that the capacity to see the movement behind a gesture is not a human-invented skill, but rather a part of how all mammals perceive. Our human preoccupations seem to dictate that we must start by noticing our own tonic function in order to perceive it in another.

Bibliography

Kleist, H. 1810. A selection from his essay “On the Marionette Theatre.” Translated by Idris Parry. Available at www.southernreview.org/9/kleist.htm.

For further references about Tonic Function go to www.resourcesinmovement.com and click on “articles archive.”

In Memoriam

Structural Integration: The Journal of the Rolf Institute® notes the passing of the following members of our community:

Richard Demmerle, DC

“Dick,” as Dr. Rolf’s elder son was generally known, was in effect the first person Dr. Rolf trained to do the work. He became a chiropractor, and was later made a member of the Rolf Institute® faculty and taught for years. He is survived by his wife Bridget and his younger brother Alan.

In a short YouTube video at <http://tinyurl.com/dick-demmerle>, you can see him honoring his mother at the First Fascia Research Congress in 2007. He exhorts us all to “Live the ‘Line’ If you live it, it will carry you through thick and thin.”

Dancers and Rolwing[®] SI

An Interview with Rebecca Carli

By Rebecca Carli, Certified Advanced Rolfer, Rolf Movement[®] Instructor and Amy Iadarola, Certified Advanced Rolfer[™]

Amy Iadarola: How did you start working with dancers in your practice, Rebecca?

Rebecca Carli: Well, I have worked with various types of dancers since the beginning of my Rolf Movement Integration and Rolwing Structural Integration (SI) career – twenty-eight years ago now. Likely, dancers are drawn to my practice because I have college degrees in dance, specialize in concerns specific to dancers, and have been connected with various dance communities. This has made a satisfying bridge from my dance life to my Rolwing life. In fact, I originally sought out Rolwing SI because of dance injuries. A month before graduating from my MFA program, a bone scan revealed stress fractures in both tibias. An orthopedist began counting them on the films; when he got to forty, he said, “I am going to stop counting here, and you are going to stop dancing now.” This solution for dance injuries was common before wide acceptance of the field of dance medicine. Luckily, my advisor at the university was familiar with Rolwing SI and sent me in a direction that was beneficial to my tibias, and perhaps more importantly, unfolded a new path for my passion for movement.

AI: I know you work with a lot of modern dancers, Rebecca, but do they make up the majority of the dance population you see, or do you work with other kinds of dancers as well? And do your clients’ issues and concerns vary according to the type of dance they engage in?

RC: All types of dancers – ballet, modern, hip hop, ballroom, contact improvisation, and others – seem to want one thing from their Rolwing experience: to dance better. This means different things to each individual dancer, relevant to [his/her] style of dance. Ballerinas may want to work *en pointe* with more ease, modern dancers may want to have more flow in transitioning to and from the ground, ballroom dancers may want more quickness and directness in foot work, hip hop dancers may be concerned with specificity in their expression of rhythm, contact improvisers may be interested in heightening their somatic listening skills,

and so on. The foundational tenet of Rolwing SI – to increase ease and efficiency in a person’s relationship with gravity – will have a positive impact on a dancer’s ability to dance. When a dancer’s relationship with gravity is brought to consciousness and integrates into [his/her] training, resulting shifts in alignment and awareness will allow more optimal function. Muscles that may be overly involved in posture are now available for movement, aspects of coordination are refined, and clarity in expressivity is increased. A primary concern for a dancer, like any person, is to not fall down (unless he/she chooses to do so), so efficiency and ease in negotiating gravity is foundational.

Having said that, some of the conventions of each dance style may, at first, seem to run counter to most of the ideas inherent in Rolwing philosophy – such as pointe shoes and turnout for the ballerina, four-inch heels for the ballroom dancer, stomping and fixed arms for Irish step dancing, lifting people who outweigh you in contact improvisation, and so on. The goal of the dancer in your office may seem to go against what you know to be healthy and wise for the human body.

It’s important to note that we are talking about stylized forms of dance with specific techniques and principles dictating movement vocabulary, not natural or tribal dance based in cultural and spiritual traditions, such as that performed by the Maasai, Odisha, or Hopi, or even just freedom of expression through dancing that arises within us in response to spirit, rhythm, or community – otherwise known as the ‘boogie’.

AI: So how do you navigate this – realizing the goals of Rolwing SI while at the same



Figure 1: Marie Taglioni in *Zéphire et Flore* by Chalon, circa 1831.

time helping your client excel in his/her stylized dance form?

RC: If you want to work with dancers, you find a way to marry the two. You understand that this person's passion and much of her spirit for life springs from this art and, for better or worse, she will continue to push limits. Dancers love to dance; if not, they would stop – the necessary output of energy, fortitude, and time rarely, if ever, equals the financial gain. They love what they receive from the act of dancing, and most of their identity comes from being a dancer. There are some ways of understanding a dancer's concerns that make the marriage easier and our work together more productive. Most of my understanding and incorporation of these ideas in my practice comes from insights that I have gained through my ongoing studies with Hubert Godard.¹

AI: Can you give us an example of how you marry the goals of Rolwing SI with those of dancers, perhaps by talking about ballerinas and their pointe shoes?

RC: Ever since Marie Taglioni (see Figure 1) performed *La Sylphide* en pointe [1832], classical ballet has been defined by the wearing of pointe shoes. Incidentally, it is said that Taglioni's fans loved her so much that they cooked her pointe shoes and ate them in a sauce! The ergonomic nightmare of the pointe shoe came about because ballet attained widespread popularity during the Romantic era, when ballet choreography focused on the theme of unattainable love: mortal men smitten by supernatural women – sylphs, wili, water nymphs, and fairies. The pointe shoe was the perfect tool to create the illusion of extreme lightness, not bound by this earth. Ballet technique then developed to use the form and function of the pointe shoe, becoming ever more challenging. Ballerinas are now expected to not only dance on top of the pointe but also to perform many complex movements in *demi-pointe* [on the ball of the foot] or flat while wearing pointe shoes. The design and construction of pointe shoes has improved with newer materials, but they fall far short of supporting a Rolfer's ideals of weight evenly distributed across the whole foot, toes free to spread, smooth transition across the transverse arch, and so forth. In fact, when a ballerina is en pointe, she may be supporting ten times her body weight on the tip of the distal phalanx of her first metatarsal.

It is said that 80% of ballerinas experience ankle injury while wearing pointe shoes,

primarily because they either 'sickle' [invert] or 'wing' [overly evert] their forefoot when en pointe, sending uneven forces into the corresponding ankle structures. Even a small degree of sickling can create problems because this means that the ballerina is not effectively finding a strong connection between her gravity center and the balance required for her weight to transition strongly through her first metatarsal. While a small amount of eversion is necessary to stabilize the subtalar joint for balance en pointe, too much means that the dancer is over-pronating her foot and her weight will fall medial to the first metatarsal to balance. Either way, the ankle's soft-tissue structures are in jeopardy.

A benefit that Rolwing SI can contribute is to create clarity and facilitate adequate functioning of the medial line in balance with the lateral line to organize the leg. Beyond working with relevant structures and patterns of coordination, an equally important task is to clarify a dancer's perception in the activation of her medial line. Ballet dancers are perceptually oriented to 'turnout' – externally rotated femurs – as a foundation for the majority of movement. They rarely work in parallel, especially en pointe. This can create imbalance between mobility and strength in the inward and outward rotators of the hip joint and the adductors/abductors of the entire leg. By initiating so much movement in external rotation, the ballet dancer may create too much elasticity in the tonus of the adductors. In isolated exercises, such as use of the Pilates Magic Circle,² these adductor muscles may appear strong; however, this doesn't necessarily mean that this strength will carry over to the more complexly coordinated movements while dancing. Classical ballet coordination is external-rotation-centered; in fact, a typical dancer's perception may be that external rotation is the most important priority. In training dancers, George Balanchine [1904-1983] is said to have focused on a consistent use of 180° turnout in more positions than ever before. The body image of the ballet dancer is built on a strong appearance and use of turnout. This is why many of them are said to "walk like a duck" in their pedestrian life. Certainly, there is muscular imbalance created and coordinative patterns set; however, there is also a self-identity perceptual basis for the walk, often seen in dancers around Lincoln Center in New York City.

Darwinism and ballet dancers meet on the topic of turnout. Ideally, yet a rare occurrence, 90° of turnout is achieved by approximately 60°-70° external rotation at the hip joint, about 5° coming from the natural inclination of the knee, and the remaining amount at the ankle and foot. Factors that determine a dancer's ease in external rotation at the hip are: the angle of femoral neck anteversion (FNA), the shape and orientation of the acetabulum, and the elasticity of the ilio-femoral ligament and soft-tissue structures that cross the hip joint. Dancers who have a poor turnout due to increased FNA, an anteriorly oriented acetabulum, or inelasticity of soft tissues may 'cheat' by attempting to make up the difference in the knee or ankle. These maladaptive strategies lead to abnormal forces, causing injuries such as medial meniscus tears or hallux valgus. Nothing is worse than seeing a young dancer *place his/ her feet* in the ideal 180° turnout and then make the hip, knee, and ankle accommodate (see Figure 2). Eventually, one or more of these structures will suffer – often ending a dream or career. This understanding is critical in training young dancers. Even if a dancer has ideal external rotation at the hip, Hubert makes the point that turnout is an action that must be coached through the whole body, with responsive shifts in gravity centers. Too often, it is coached as an isolated action of the hip socket – such as through endless *ronds de jambe* [circular motion of the leg originating at the hip socket] without whole-body embodiment of the action. Rolfers can do important structural and functional work with turnout; however, the first step is to determine the dancer's natural turnout without decomensatory mechanisms to achieve an idealized turnout.

Idealized 180° turnout is part of a prescribed classical ballet aesthetic called *ligne* [line]. *Ligne* is the visual outline that a dancer presents when executing steps and poses and is seen as either good or bad. Some characteristics of good line are: 180° turnout, extreme-range plantar flexion, and length in body parts, all of which are easier to achieve if one is born with the ideal structure. Ballet is often coached from a visual perspective, based on idealized *ligne*, so there is inherent incentive to use maladaptive strategies and often injury is the result.

AI: You mention Pilates. Many dancers are cross-training in approaches like Pilates and



Figure 2: Forcing 180° turnout often results in medial collapse of the midfoot.

Gyrotonic®. Do you think these practices enhance technical abilities?

RC: The benefit in Pilates training comes when the dancer focuses on strengthening the whole coordination, not just the specific muscles involved. Isolated exercises are limited in use if the coordination is not made relevant to how the dancer executes the movement in real time relational to the environment, including gravity. If the ballerina does not have strong enough medial line activation, she may not have enough coordinative tonus in her adductors to counterbalance the power of her outward hip rotators, so her weight will transmit laterally down her leg, causing her to slightly sickle her foot while en pointe. Over time, this may displace the talus laterally straining the lateral ankle ligaments and putting the knee and hip at risk. It can also displace the first metatarsal, leading to bunions and other injuries. The field of dance medicine often considers each of these injuries as separate events, not as a whole pattern relating to gravity. A ballerina must have clarity and strength in the relationship of the center of gravity in her pelvis to be right over her pointes, because with that much force and velocity, even a small displacement over time can cause movement and structural problems. Rolfers are somewhat unique in considering actual pathways of weight transmission through the body, as related to gravity, on an individual basis. In other words, just because the pointe shoe is designed for weight to be transmitted through the center of the talus to the first metatarsophalangeal joint doesn't necessarily mean that each dancer coordinates her pattern of arriving en pointe that way.

Additionally, in turnout, the functional midline of the leg moves posterior, falling more on the semimembranosus/adductor line. This means that strength in the coordination of the calcaneus-to-ischial tuberosity connection is essential. A dancer has two functional midlines: the dancing one and the pedestrian one. In working with any dancer who uses turnout, I try to cultivate a felt sense of both midlines and, more importantly, an option to return to a more 'natural' stance and gait in pedestrian life. This is important as a restorative activity in counterbalance to the demands of classical ballet. According to Hubert, there is a functional repetitive stress injury of constant turnout because, over time, the external hip rotators will become increasingly more tonic, instead of phasic, causing a loss of potency in their activation and resiliency. When the coordination of dance turnout is constantly used in daily activities, the cumulative strain will eventually go beyond soft-tissue spasm and adhesion to mechanical fatigue, and turnout – the most fundamental action in classical ballet – will become ineffective. To restore phasic action potential in the external rotators, one must not only rehabilitate structural trauma but also restore coordinative integrity.

AI: So you frequently work to balance the medial and lateral lines, both structurally and functionally in terms of body maps, to support ballet dancers in their pointe shoes. Do you ever work with the actual foot in the pointe shoe?

RC: Pointe shoes are primarily designed for dancing en pointe. In working with a ballerina, one must consider the pointe shoe to be an extension of her leg. It is

part of her peri-personal space and allows the action potential for balancing in full plantar flexion (Figure 3). So, in a sense, the Rolfer needs to include the pointe shoe in the Rolfing session. When the practitioner perceives the pointe shoe in this way, without the overlay of the shoes being wrong, harmful, or unnatural, more productive work can be done.

The pointe shoe, importantly, is also the conduit through which the ballerina relates to the ground. In modern ballets, the ballerina is often required to transition from *demi-plié* [turned-out position with knees bent and heels on the ground] through demi-pointe to full pointe many times. Balanchine influenced a shift away from the 'pop up' to full pointe to include the roll up to full pointe through demi-pointe, necessitating more foot strength and changing the factors necessary for efficient coordination. Because the pointe shoe is designed for end-range plantar flexion and the platform [or sole] is a bit rigid and unstable, injuries often happen when the ballerina lands a jump in *demi-plié* and then transitions to full pointe – all performed in turnout. A dancer is especially injury prone if her coordination for turnout includes gaining extra degrees by forcing rotation at the knee or ankle – sickling – resulting in over-pronation of the midfoot.³ This results in poor biomechanics and will leave her without power for the propulsive action required to arrive with stability en pointe.

One might consider that similar mechanics apply whether one is dancing in pointe shoes or walking in sneakers. Attention to the action and timing of the transition from landing to full pointe is essential, just like the importance of the transition from the landing phase to propulsion phase is key in pedestrian walking. Often foot and ankle biomechanics are explained as isolated joint actions, mostly centered on the triplane action of the subtalar joint. While biomechanical actions are essential to understand and restore, they do not provide adequate consideration of the functional coordination of the foot while dancing or walking without inclusion of the mover's relationship to gravity, shifting body weight, and the nature of the ground, including variances in the quality of the terrain and its reaction forces. It is the foot's response to the ground and shifting body weight that creates the joint motion, not the other way around.

AI: I know that there are many, but can you describe three essential foot biomechanical actions to consider when treating a dancer?

RC: Let's see, three key functional relationships that come to mind are:

- motion of subtalar and transverse tarsal joints to provide for adequate eversion and inversion
- motion of the tibiotalar joint to provide for smooth dorsiflexion and plantar flexion
- ability to activate intrinsic foot muscles, especially the abductor hallucis, to stabilize first ray, to oppose hallux valgus, and to provide structural integrity

Of course, all are important, but given the demands of dance training, these three are essential to support and adaptability. They are essential to pedestrians too.

AI: Can you describe how you might work with a ballet dancer's foot to train the transition across the transverse arch?

RC: Yes, transition across the transverse arch and propulsive toe-off was a key point in many of Hubert's workshops, and it is critical for any type of dancer – whether full pointe, demi-pointe, or no pointe. In fact, it is important to any person, dancer or not. I have worked with it by using an artificial floor in my practice. You can create an artificial floor by moving your table to the wall so clients can lie on the table and contact the wall with their feet, or you can use a book or other flat surface to create a floor. Some practitioners are lucky enough to have tables with artificial floors attached. The Pilates Reformer is also useful.⁴ Whatever approach you use to create the ground, the key point is waking up the client's ability to actually sense through the feet – to stimulate the proprioceptors. As humans, we are less inclined to authentically touch with our feet. Instead, we tend to make contact and then plant, brace, or prop instead of maintaining an alive touching and listening relationship with the ground. Aliveness in our felt sensitivity provides food for the nervous system and informs movement centers in our brain about necessary nuances in balance and movement. You can imagine how useful this is for any kind of dancer. By working with tracking and timing across the transverse arch to initiate a push-off or a balance on top of the first metatarsal, you can educate the foot toward more integrity in movement.

With ballerinas, I do this work both while they are barefoot and wearing pointe shoes. With tango dancers, I have them wear their four-inch heels. Any time shoes limit or define one's ability to contact and feel the ground, the ankle is vulnerable, so maximizing the aliveness of the available contact is important. Proprioceptors in our feet and ankles communicate to our brain, and along with our vestibular system and peripheral vision they tell us where we are in space.

AI: What about space? Relationship to space is such an important concept in Rolfing SI and Rolf Movement and is also central in dance training and performance.

RC: Space is another essential topic to address with dancers. Hubert made a tremendous contribution to the field of Rolf Movement by clarifying the importance of an upper gravity center (G') for head, arms, and chest. Located in the thorax and relational to the space around us, G' is relevant to G , the center of gravity of the whole body located in the pelvis and relational to the ground.⁵ Important

to dancers is the understanding that the biomechanics of the hip and pelvis will change, including the rotation of the femurs, depending on the anterior/posterior placement of G' referenced to the horizontal axis of the femurs. G is referenced to its vertical projection on the feet, specifically the transverse tarsal joint (or Chopart's joint). Having fluidity in the functional relationship of G and G' allows for greater range-of-movement expression and efficiency with gravity. Session one of the Rolfing SI series begins this process.

As movers, we may have a natural affinity toward initiating movement from either our sense of space or ground. I never get tired of watching the clip of Gene Kelly and Fred Astaire (see still image in Figure 4, video viewable at <http://tinyurl.com/fred-gene>) dancing the same choreography together. Hubert introduced this clip to us many years ago to show the variation between a dancer who initiates movement by relating to the ground, like Kelly, and one who initiates by relating to the space around him, like Astaire. Of course, they both have an easy connection with both ground and space.



Figure 3: Wilfride Piollet in *Swan Lake* at l'Opéra de Paris, 1977.

However, at the moment of initiation, Kelly pushes into the ground and Astaire reaches into space. I love seeing this because it makes one's innate gravitational relationship to ground and space so clearly visible and real. One might call this the way that Kelly and Astaire find resource at the moment of initiation – or what we call in Rolf Movement the 'pre-movement'. So working with dancers to help them identify their innate preference for ground or space initiation may be helpful, especially because dance choreography often demands adaptability in working with both ground and space movement orientation. Knowing one's preference for initiation can facilitate clarity.

AI: You mentioned earlier that ballet has always favored a light, ethereal quality, which would lend itself to a more spatially oriented approach. How do ballerinas embody space differently than, say, modern or hip hop dancers?

RC: For a ballerina, a developed sense of spatial support is essential because this is what creates that weightless, floating feeling, and most of the classical ballet vocabulary depends on it for refined execution. Also, from a practical sense, this is what allows the ballerina to not experience so much weight bearing down on her toes when en pointe – she is literally supported by the space around her. When a ballerina gestures or even looks at the ground, it appears to be very far away from where she lives. One can look up various professional ballet companies' Odette or Odile solos from *Swan Lake* on YouTube and easily see examples of this upward embodiment of space. Even when she kneels, her knee makes the long journey to the ground from above. On the other hand, when one watches the opening movement in *Le Sacre du Printemps* choreographed by Pina Bausch, also available on YouTube, one has very little sense of the space – it is the dancers' relationship with the ground that is primary and compelling as they stomp to the driving rhythm of Stravinsky.

Modern dance technique and performance often rely on a strong relationship with the ground as the basis for movement, and often the themes of modern dances revolve around earthly emotions and states, as opposed to the more ethereal ballet themes. Hip hop dance certainly uses the ground as the basis for supplying the rhythm – the whole body expresses timing and rhythm because of the dancer's physical exchange with the ground. Often, it feels as if the



Figure 4: Fred Astaire (left) and Gene Kelly (right) in *Ziegfeld Follies*, 1945, MGM. Photo: mptvimages.com.

ground is dancing too. One can view an example of this in any Rennie Harris Puremovement video. In order for Savion Glover, a tap dancer, to tap extraordinarily complex rhythms, he is almost suspended energetically from the sky, so that his ankles and feet have the freedom to relate rhythmically to the ground. This is similar to the style of the Danish choreographer August Bournonville, who choreographed very quick, light, and meticulous footwork. In order to achieve the desired speed and lightness, the dancers must relate to the ground from the top down, not from the ground up. How we initiate movement and how we relate to the world around us manifests in coordinative patterns that shape our structure. For many years, Hubert has articulated the importance of addressing the structural, coordinative, and perceptual aspects of human function with relevance to gravity.

AI: More and more, ballet companies are incorporating modern choreography into their repertory, and modern performance artists like Kyle Abraham draw upon hip hop, modern, and classical ballet, so

the boundaries between dance forms are perhaps becoming more fluid.

RC: Yes, this requires even more adaptability from the dancer. When a dancer comes in with difficulty performing a technical movement or a choreographic one, a valuable place to begin is to clarify what is being asked in terms of ground and space. Often dancers, like any of us when having a physical difficulty, want to blame it on something inside [the] body: "It's because my sacroiliac joint (SI) is unstable," "It's because I have a scoliosis," and so forth. There may be truth in these concerns, but by also considering embodiment relating to ground and space, we are engaging in a more holistic intervention that may actually solve the biomechanical issue. As Rolfers, we certainly know that our relationship with gravity has everything to do with our movement potential, so why not bring that concept to the foreground in our work?

For the dancer who is having trouble with a leap, you might ask, "Are you focused on pushing the ground away or reaching into the space? Can you feel the sky above you

at the apex?" To the dancer who is having difficulty with balance, you could ask, "Can you allow the support from the space to come meet you? Can you sense that the space is holding you up?" For the dancer who is unable to easily transition from standing to rolling, ask, "What happens if the ground comes up to caress you?" It's about perception and the story that we are telling ourselves as we are moving. In a sense, we have to get out of our body images and abstractions so that we can become embodied in a sensory experience relevant to our present environment. After all, the experience of leaping is not the sum of the leap's biomechanical parts. Dancers, like all of us, may have difficulty with a movement because of a structural lesion and/or because of a perceptual inhibition or misunderstanding that leads to faulty coordination. Helping a dancer make the connection between movement and elements of structure, coordination, and perception is very rewarding, especially when the dialogue incorporates gravity as the organizing principle. Once established, you can work with the particulars of the SI joint, scoliosis, or whatever the specifics more productively.

AI: What if a dancer comes to you wanting not to enhance technical performance

but to rehabilitate from an injury? How can working with ground and space relationships help with rehabilitation?

RC: It's absolutely a valuable method of intervention when a dancer is rehabilitating from an injury. Once the acute phase is over, it is essential to rebuild [his/her] sense of ground and spatial relationships. The tendency is to only focus on the injured part: "What is it doing? How does it feel?" "Oh, it feels bad today. Did I re-injure it?" One has to re-establish trust in the ground and felt support from the space so that the injury can truly disappear, instead of staying locked into the coordination of guarding or doubt. This happens through an embodied sense of one's connections, both inside and outside the body. By over-focusing on the injury and not rebuilding the connections to the environment, the dancer's body image remains fixed in 'injury', and as we know, that makes one prone to more injury.

AI: How else do you address body image, Rebecca?

RC: Helping dancers better match their body image to their actual body schema is another course of valuable Rolfing work. For instance, a dancer may not know where her hip socket is actually located.

When you ask her where the hip socket is, she may point to the outer hip – the area of the greater trochanter. This may be because her body image makes outward rotation a priority and the felt action is located where the external rotators insert – at the greater trochanter. However, her body map does not include the actual hip socket, the real site of rotation. Knowing and feeling exactly where one's hip socket is located and how the head of the femur rotates helps reduce wear and tear on the hip. In a felt sense, the hip socket comes home, and movement will engage a more powerful and elastic sequence of muscle chains. Similarly, knowing what it means to have a horizontal ankle hinge, especially in turnout, will improve alignment. Without knowing much about dance, there are opportunities for a Rolfer to help clarify and fine-tune a dancer's body image to more accurately align with the potential of her body schema, resulting in more ease, power, and efficiency in movement.

AI: You've worked with many dancers over the years and you've watched a lot of dance, so I'm curious to know what you think makes a dance performance exceptional. Why do some performances give us goose bumps while others don't?

RC: As audience members, when we watch dance, we are moved when we can connect and feel. Some dancers evoke an intense emotional connection. Others evoke appreciation for their technical skills, but no feeling of connection. For me, one of the things that makes the difference between a moving performance and one that is just technically proficient is whether the dancer manages to capture the basic human movements that lie beneath the technique – such as jumping, leaping, skipping, running, punching, kicking, and throwing – without self-consciousness, like a child. The child is one with the puddle that he is leaping over – there is no technique, just puddle and leaping. I think that this ability is related to something Hubert has worked with called 'foundational movements'. These are movements in our development that underlie more complex ones. For example, can you push someone away – a strong gesture of saying "no" – without pushing yourself? Can you embrace someone with a big gesture of saying "yes" without allowing fear or doubt to creep into your arms? Can you really run toward someone without hesitation about rejection? Can you easily throw something far away without

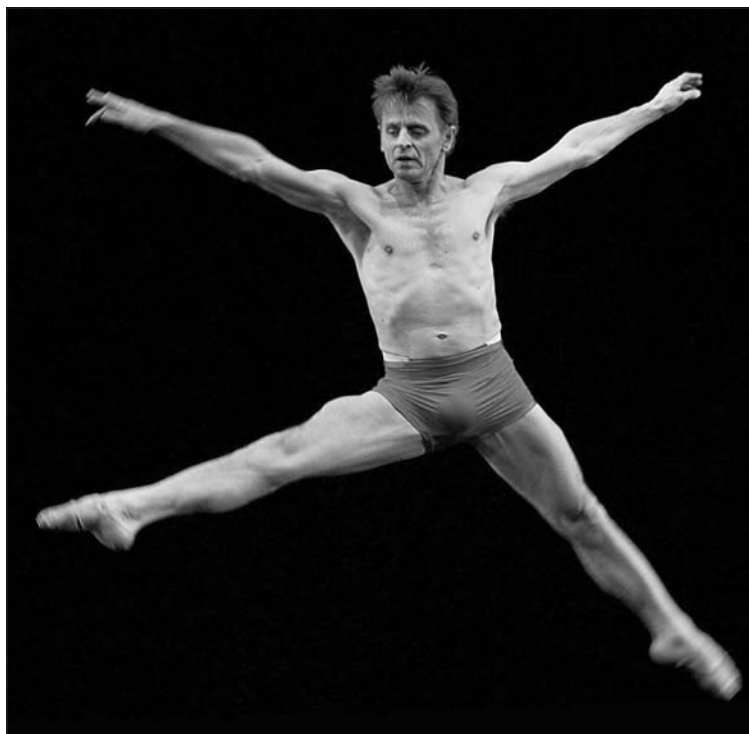


Figure 5: Mikhail Baryshnikov, Barbican Theatre, London, 2004.
Photo: Gareth Gay/Alpha/Globe Photos.

clutching? A leap is exciting when we can feel the slight recklessness beneath it. This quality comes from the ability to truly throw something away from us. I remember Hubert saying, "In order to leap, you first must be able to throw." Humans respond to these qualities of movement in other humans, dancing or not. I think that when a dancer really captures the audience, like Mikhail Baryshnikov (Figure 5) does, it is because he/she has maintained this human connection within all the technical proficiency.

Endnotes

1. Hubert Godard, a Rolfer and Rolf Institute® of Structural Integration (RISI) faculty member, had a long career in classical and contemporary dance. He was the director for the Dance and Movement Analysis Department of L'Université de Paris. Godard now conducts research for the National Institute for Cancer Research in Milan, Italy, and teaches movement workshops.

2. The Pilates Magic Circle is a flexible metal ring that provides resistance in exercises like hip adduction.

3. When the foot is flat on the floor, a sickling out strategy employs gripping and pulling the toes to force eversion of the forefoot, which results in excessive pronation of the midfoot.

4. A Reformer is a piece of exercise equipment that consists of a platform that moves back and forth along a carriage. The client lies on the platform and pushes his/her feet into a stable or spring board at the foot of the platform to glide along the carriage, essentially mimicking a standing knee bend but done supine.

5. The exact location of G and G' is individualized depending on the relative weight of body parts; however, generally G is between L2 and S2 and G' is between T4 and T5.

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Amy Iadarola is a Certified Advanced Rolfer practicing in the Washington, DC area. She is certified in Pilates and has twenty-five years' experience in dance.

When Flexible Is Too Flexible

Benign Joint Hypermobility Syndrome Among Dancers

By Amy Iadarola, Certified Advanced Rolfer™

One would think that being extraordinarily flexible would be advantageous to a dancer. After all, many forms of dance are characterized by extreme ranges of motion, particularly in the spine and lower extremities. But acrobatic flexibility may in fact be a sign of a system-wide disorder affecting the body's connective tissues that can cause a host of symptoms ranging from chronic joint pain and other musculoskeletal complaints to, in more extreme cases, cardiovascular symptoms, digestive distress, and autonomic dysfunction.

In this article, I will discuss *benign joint hypermobility syndrome* (BJHS) – its etiology, symptoms, and diagnosis – and differentiate it from other forms of hypermobility. I will describe how BJHS presents in dancers and present general guidelines for manual and movement interventions appropriate in the context of a Rolwing® Structural Integration (SI) session.

Categories of Joint Hypermobility

Joint hypermobilities exist along a spectrum. People can be mildly affected and have few to no symptoms, or they can be severely affected and require braces or surgery to stabilize their joints. Dancers, particularly professional dancers, tend to fall on the more functional end of the spectrum, because the extraordinary athletic demands of professional dance generally prohibit individuals with pronounced symptoms from being successful onstage in the long term.

At the most functional end of the spectrum of joint hypermobilities is *generalized joint hypermobility* (GJH), which is characterized by an increased range of motion (ROM) relative to the general population in one or more joints. It is present in an estimated 5%-15% of the population and is more common among children, adolescents, and women, and among certain ethnic groups, particularly people of Asian and African descent. Individuals with GJH are frequently asymptomatic or have only mild symptoms. In fact, GJH may even be advantageous in dance, gymnastics, music, and sports. BJHS, the focus of this article,

is distinct from GJH. It is believed to be an inherited connective-tissue disorder, and it is characterized by increased joint ROM accompanied by chronic joint pain and other signs and symptoms related to a defect in the structure, production, or processing of collagen or the proteins that interact with collagen. As Rolfers, we are well aware that collagen, as the main structural protein of connective tissue, provides structure and support to body tissues. In people with BJHS, abnormal collagen renders these tissues more elastic. As a result, these individuals are at increased risk of joint instability due to ligament laxity, and they frequently present with strains, sprains, tears, and dislocations or subluxations. Other connective tissues can be hyperextensible as well, including tissues that support the skin and viscera. This may result in overly thin and stretchy skin, easy bruising, uterine or rectal prolapse, and hernias.

At the far end of the spectrum of joint hypermobilities are complex systemic disorders such as Ehlers-Danlos Syndrome (EDS)¹ and Marfan Syndrome (MFS). This category of hypermobilities is rare and disabling and affects multiple body systems. Ligament laxity can be severe, and some individuals may require bracing and surgery. Like people with BJHS, these individuals may also have skin fragility and organ prolapse. Additional symptoms are related to increased tissue elasticity in the blood vessels and gut: cardiovascular manifestations may include low blood pressure, orthostatic intolerance, and mitral valve prolapse; digestive symptoms may include acid reflux, delayed gastric emptying, and irritable bowel syndrome. Autonomic nervous system dysfunction is common as well, because the body compensates for chronically low blood pressure and the associated fatigue by producing excess adrenalin.

So the spectrum of joint hypermobilities is quite vast and includes, on the one end, enhanced flexibility that may actually be of benefit in dance and athletics and, on the other end, systemic and disabling forms of hypermobility such as EDS (see Figure 1).

Hypermobile dancers generally fall into the first two categories; EDS and other severe forms of hypermobility are so limiting that they would prohibit a career in dance.

BJHS Among Dancers

An estimated 10% of the general population has BJHS, the more moderate form of joint hypermobility represented by the middle tier in Figure 1, but the prevalence among dancers is estimated to be as high as 44%-58%.

In a study of dancers with the Royal Ballet School and Company in London (McCormack et al 2004), common musculoskeletal complaints among those identified as having BJHS included neck and lower back pain, ankle sprain, ligament injuries, fractures, and dislocations. Importantly, this study determined that not only were dancers with BJHS at higher risk of pain and injury than their non-BJHS counterparts, but also they were significantly more likely to take time off from dancing because of injury. One-half of the female dancers in the study who had BJHS reported having one or more tendon injury over a five-year period, and 61% of them stopped dancing for more than six weeks as a result. Among male dancers, 42% of those with BJHS reported tendon injury, while only 8% of those without BJHS suffered the same injury. Of those male dancers with BJHS with a tendon injury, a staggering 83% had to take six or more weeks off of dancing.

In a five-year follow-up to this study, the authors suggested that the tendons of dancers with BJHS may actually be not only weaker structurally due to collagen deficiency but also slower to strengthen in response to training and slower to heal as well. "The dancer with BJHS is both more vulnerable to the effects of injury and . . . healing is likely to be more prolonged and may be incomplete," the authors conclude (McCormack et al 2009, 1613). A 2011 review of the research reached the same conclusion: "The modest amount of research on injury rates in hypermobile dancers confirms that they have substantially more tendon injuries and longer healing times than normal dancers (Day et al 2011, 488)."

Given that soft-tissue injury can cause dancers significant professional disability, it behooves those of us who work with dancers to be able to recognize BJHS and intervene early and appropriately.

Categories of Hypermobility Disorders

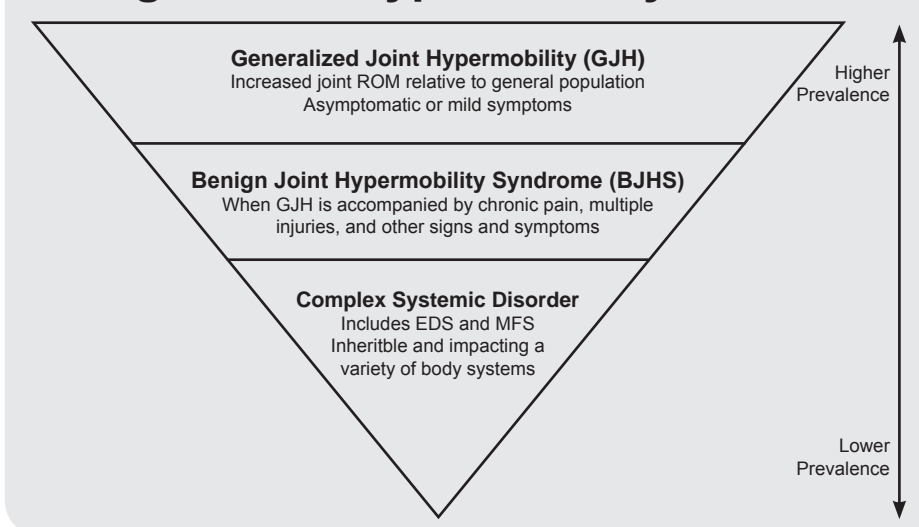


Figure 1: People with joint hypermobility fall along a broad spectrum.

Screening for BJHS

Professional companies screen new company members for joint hypermobility to determine their degree of joint laxity and ensure that they receive appropriate support behind the scenes. While most companies still use the Beighton score as a diagnostic tool, the Brighton criteria are now widely recognized as the most appropriate tool for identifying BJHS. Both of these tests are easy to perform and can be easily integrated into a Roling session.

Beighton Score

The Beighton score is an indicator of the most common form of hypermobility – GJH. A high Beighton score by itself does not mean that an individual has BJHS; other signs and symptoms must also be present.

The Beighton score is calculated as follows:

- One point if client can place palms on the ground in a standing forward bend with legs straight
- One point for each elbow that hyperextends
- One point for each knee that hyperextends
- One point for each thumb that touches the forearm when bent backwards
- One point for each little finger that bends backwards beyond 90°

Brighton Criteria

The Brighton criteria were developed in 1998 and today are considered the

diagnostic criteria for BJHS. Brighton uses the Beighton score along with other signs and symptoms to confirm diagnosis of BJHS.² Major and minor Brighton criteria are as follows:

Major Criteria

- Beighton score of 4 or more
- Joint pain affecting four or more joints and lasting more than three months

Minor Criteria

- Beighton score of 1, 2, or 3
- Back pain or pain in one to three joints lasting more than three months, or spinal spondylosis, spondylolysis, or spondylolisthesis
- Dislocation of more than one joint, or of one joint more than once
- Three or more soft-tissue problems (e.g., tendonitis, bursitis)
- Tall, thin body shape
- Skin hyperextensibility, stretch marks, thin skin, or abnormal scarring
- Drooping eyelids or nearsightedness
- Varicose veins, hernia, or uterine or rectal prolapse

A diagnosis of BJHS, which can only be given by a qualified medical professional, requires the presence of two major criteria, one major and two minor criteria, four minor criteria, or two minor criteria and an affected first-degree relative.

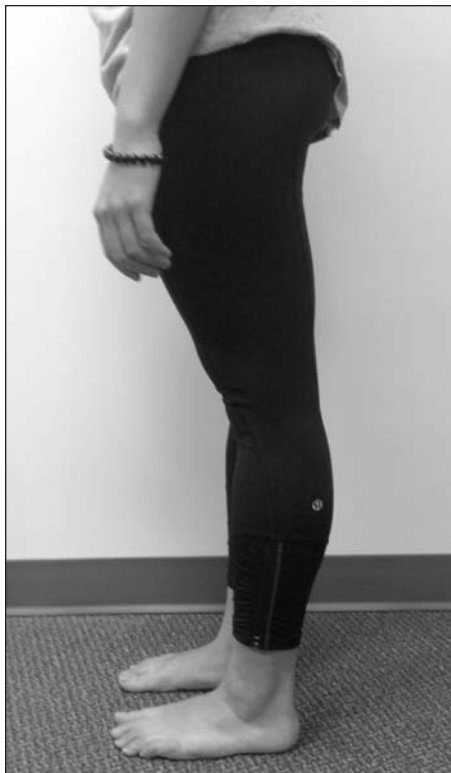


Figure 2: Hyperextended knees indicate GJH, according to the Beighton criteria. In combination with other signs and symptoms, they may indicate BJHS.

Interventions

Broadly speaking, interventions for BJHS should seek to restore dynamic support to the hypermobile structures and, if appropriate, mobilize structures that are hypomobile relative to the hypermobility.

As Rolfers, we are comfortable recognizing joint hypomobilities and associated soft-tissue restrictions. Even in the BJHS dancer, there is likely to be stiffness elsewhere in the system as the body attempts to compensate for the hypermobility. There may be excess ROM in one lumbar segment relative its neighbor, for instance, or pronounced flexibility in the lumbar with corresponding stiffness in the thoracic spine. Where the hyper- and hypomobilities appear will vary from dancer to dancer and according to the style of dance – whether ballet, hip hop, Indian dance, etc. – and the choreographic demand of the pieces in active repertory. In *Swan Lake*, for instance, the principal ballerina performs many dozens of dramatic backbends that can destabilize the lumbar spine, and dancers in the Broadway musical *The Lion King* wear elaborate headpieces that can challenge cervical stabilization.

When there is limited range at one or more joints relative to neighboring joints, the hypermobile structures get exploited. Therefore, employing fascial release techniques to help mobilize the restricted structures is a critical. However, it is equally important to address the excessive mobility in the BJHS dancer. This is done by awakening the local muscles that stabilize the joint, thereby restoring dynamic support.

Movement Interventions

A healthy joint has both static and dynamic support. Static support is provided by appropriate stiffness in the surrounding ligamentous structures and also by the structure of the joint itself. Many dancers are born with joint structures that allow for excessive mobility – for instance, a retroverted femoral head, laterally oriented acetabulum, and long femoral neck allow for exaggerated hip external rotation. When naturally mobile joint structures are combined with ligament laxity, as is the case in BJHS, the job of supporting the joint is left largely to the musculature. Dancers with BJHS, therefore, unlike their non-BJHS counterparts, rely heavily on dynamic support from local muscles (sometimes called ‘local stabilizers’ or ‘postural muscles’) to maintain joint integrity. Given dancers’ grueling schedules, which can include as many as eight hours a day or more in the studio or onstage, it is easy to understand how local stabilizers can fatigue and how pain and injury can result.

Local muscles have a small movement arm and generate less torque and are therefore at a biomechanic advantage, relative to global

muscles, for stabilizing joint structures. Familiar local stabilizers include multifidus, transversus abdominis, diaphragm, pelvic floor, rotator cuff muscles, and deep cervical flexors, to name a few. But technically any muscle is capable of providing stabilization in some capacity, depending on the demand. Ultimately, it is the nervous system working in concert with the muscular and articular systems that controls joint stabilization and movement.

Generally, local stabilization, when inhibited, is best rehabilitated through movement interventions. Such interventions should challenge the stability of the hypermobile structures with exercises that use little or no resistance and a high number of repetitions at a slow speed with a small range of motion (Figure 3). Using too much resistance results in the global muscles overriding the smaller muscles of local support. And since local stabilizers, composed largely of slow-twitch (type II) muscle fibers, are designed to be lightly active over a long period of time, low-intensity exercises that train endurance rather than speed are most effective.

Proprioceptive training is also critical to restoring local stabilization, since hypermobile joints have diminished proprioceptive acuity. Exercises performed on an unstable surface – such as a Bosu®, Tuning Board™, wobbleboard, or foam roller – enrich the client’s sensory experience and thereby help awaken joint proprioception. Closed kinetic chain exercises (in which the distal extremity meets resistance) also facilitate proprioceptors and stimulate co-contraction of the muscles around the joint, enhancing stability. Other benefits

Keys to Awakening Local Stabilizers

- ☑ Low load
- ☑ Small range of motion
- ☑ Slow speed
- ☑ High repetitions
- ☑ Proprioceptive challenge

Figure 3: Movement interventions that seek to restore dynamic support should apply these basic principles.

to closed-chain exercises are that they put less strain on the joints and ligaments than open-chain exercises (in which the distal extremity moves freely), and they better simulate functional demand.

There are an infinite number of ways to train local stabilizers in a Rolfing session, and the intervention will vary considerably from one dancer to the next according to her unique strengths and vulnerabilities.

Manual Interventions

It is often helpful to begin the work of rehabilitating local stabilization by intervening manually while the dancer's extremities are in contact with a solid surface (closed chain). This could take a variety of forms – for instance, hands or feet on the wall, feet resting flat on the treatment table (hook-lying position), or work with the dancer in standing or quadruped (hands and knees) position. Using props similarly enhances feedback to the joints – for instance, having the dancer's hand in contact with a ball when intervening at the shoulder girdle, putting a ball between her knees with legs in hook-lying position to enliven her medial line while working with the arches of the feet, and so on. Rolfers who have pursued Rolf Movement® Integration training will be familiar with many of these techniques and will be comfortable improvising. The underlying concept is to feed information to the dancer's nervous system by enriching her sensory environment.

Exercise Interventions

Rolfing sessions with BJHS dancers should always include an exercise intervention, however brief, at the end of the session to awaken the deep stabilizers and integrate neuromuscular control. A simple intervention for the pelvis and lower extremities is one that most of us were exposed to in our basic Rolfing training: standing on Darrell Sanchez's wonderful tool, the Tuning Board. Invite the dancer to balance in parallel or 'turnout' (hip external rotation), depending on the goal of your treatment session, on the Tuning Board or another unstable surface. Give her time to settle into the new sensation. Add challenge to the exercise, as appropriate, by asking her to slowly shift her balance to one leg or the other, to close her eyes with one or both hands lightly touching the wall for feedback, and so on. Be creative, keep movement slow and small, and draw upon the dancer's movement vocabulary so that the lesson



Figure 4: Dancer Nicole Turchi performs exercises on an unstable surface to activate lumbopelvic stabilizers.

translates to her functional movement environment in the studio and onstage.

For Rolfers trained in Rolf Movement Integration or another movement practice like Pilates, Alexander Technique™, or the Feldenkrais Method® of somatic education, exercises can be more tailored in order to target hypermobile structures more specifically. Figure 4 shows an

exercise intervention for a dancer with poor lumbopelvic control into hip flexion. The dancer lies supine on a foam roller and finds her balance with feet contacting the floor (A). Arms can be resting on the floor for support, resting on the ASISs to provide feedback about pelvic orientation (anterior tilt, posterior tilt, neutral), or moving freely for added challenge. Next, maintaining the natural lumbar curve and keeping

ASISs level, the dancer marches one leg off the floor (B). The beauty of using the foam roller is that feedback is immediate: Without the support and coordination of the deep lumbopelvic stabilizers, the foam roller will roll and sway. The dancer will make micromovements below the level of conscious awareness to adjust in response to the feedback. The movement at the hip joint can vary according to the dancer's ability to maintain neutral hips and spine. If stability is extremely compromised, she can begin by just lifting one heel away from the floor. For added challenge, she can gradually make the movement larger, extend the knee, incorporate hip external rotation, gesture the arms, and so on. Other variations include tying a TheraBand™ around the thighs to cue isometric activity of hip abductors, placing a ball between the knees to recruit adductors, and reaching arms overhead to involve upper abdominals, to name a few. Invite the dancer to perform the exercise right and left, comparing the more affected side with the more stable side, and encourage her to work slowly and with focused attention.

Conclusion

In summary, joint hypermobility is common among dancers and may be a sign of a collagen defect. BJHS is characterized most prominently by pain, injury, and prolonged healing, and therefore can seriously impact a dancer's career. BJHS is diagnosed by a qualified medical practitioner using the Brighton criteria, and Rolfers' manual and movement interventions have the potential to alleviate symptoms by enhancing joint proprioception and training local stabilization.

Special thanks to Jena Calo, DPT, OCS, of Body Dynamics, Inc., who provides physical therapy support to The Washington Ballet, for her input on this article.

Amy Iadarola is a Certified Advanced Rolfer practicing in the Washington, DC, area. She was certified in Pilates in 2003 and has twenty-five years' experience in dance.

Endnotes

1. Some experts consider BJHS to be a mild form of EDS, sometimes called 'EDS type III' or 'EDS hypermobility type'. "[T]here is overlap in the signs and symptoms of different forms of hypermobility syndromes It often boils down to the severity of the signs and the types of signs present when trying to separate [BJ]HS from EDS," according to the Hypermobility Syndrome Association.
2. Since, as Rolfers, it is not within our training or scope of practice to diagnose medical conditions, use these criteria only as a guideline during your Rolfing SI sessions.

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The Physiology of Singing

By David Delaney, MA, LPC, Certified Advanced Rolfer™

Purpose of This Article

This article will provide an overview of a specific aspect of voice physiology and its practical use by singers. I will be speaking to the Rolfer who works with singers (or is a singer herself) or has an interest in further study in this area. I will be utilizing a set of singing principles that were developed by an Italian physician, P. Mario Marafioti, whose specialty was problems of the voice. He worked with Enrico Caruso and other singers. Marafioti's (1981, 123) sixth principle of voice production states there are "no registers in the human singing voice when accurately produced." He states it is "... made up of only one register that constitutes its entire range."

I have been a singer all my life. Since 1972 I have studied with a number of voice teachers and am a graduate of the American Academy of Dramatic Arts in New York City (NYC) where I received high-quality voice and speech training. Even with all this, I was not able to transcend the barrier of the so-called vocal 'break', meaning that moment where the voice makes the transition from so-called *chest register* to *head register* (also called *head* and *chest voice*), the bane of existence for many singers. I had to learn to work around this break to attempt to hide it from the audience. It was never satisfying and always frustrating. My singing voice lacked power and presence, plus the effort of hiding the break wasted both psychological and physiological energy.

Enter Dr. Rolf and Margaret Riddleberger

In 1979 I was simultaneously introduced to the Rolting® Structural Integration (SI) experience and a singing voice teacher named Margaret Laughlin Riddleberger. These two events fomented a big change in my life. Rolting sessions integrated my body into a more adaptable unity, and Riddleberger showed me how to use this unified body to produce a unified voice with a relaxed power to it and no break in my range whatsoever.

Riddleberger had sung at the Metropolitan Opera in NYC, but fortunately for me, she liked teaching actors. Her work was

profoundly different from the other singing voice training I had received. In addition to singing, she had a masters degree from Columbia University in an area of psychology that was then called 'personality stress' and what we would now call trauma or traumatic stress. The ensuing twenty-three year apprenticeship and collaboration with Riddleberger redirected my life in many ways. Riddleberger had studied with a woman known to her students as 'Teach', who trained Metropolitan Opera singers in NYC. Teach adhered to the physiological perspective in the split within the Italian *Bel Canto* Voice Method (*bel canto*: 17th century Italian, 'beautiful singing'). The non-physiological side of this approach focused on beautiful tone; words were secondary. When opera began to demand genuine emotion over just beautiful tone, a split happened in approaches. Riddleberger called this tone-centered way of singing "singing with marbles in your mouth" or a "singing with a paper bag over your head," because meaning and communication were sacrificed to tone alone.

Results of Rolting SI on My Singing Voice

The day that I completed my seventh session with Pat Clough and immediately went over to the Ansonia Hotel to have my voice lesson was the day that I truly *understood* how Rolting SI could deeply affect singing. Fear, in the form of tension, inhibits our body's natural acoustic ability. I discovered that day back in 1979 that relaxation with a degree of structural integrity is a key to producing a natural and resonant voice: a voice that is your own vibratory uniqueness, your unique expressive signature.

That particular Friday, we were assigned to the deadest room acoustically at the Ansonia Hotel Rehearsal Studios. Riddleberger and I were doing the quiet 'line-up' work, where you use the least amount of energy to find your tone, yet the entire room was vibrating (what she called 'shimmering'), something that I had never felt in that acoustically-dead room. I was hardly doing anything (much different than what I usually did, an over-working which produced little benefit).

'Lining-up' meant sitting very quietly at the piano and using the minimum energy to focus sound vibration, through consonants and vowel placement, with *total* body involvement. This I now call 'mindful singing'. Riddleberger would never allow you to use what she called the 'back-up' system (definition to come). Instead, she would hold you to blending speech with tone so that you never gave up natural speech placement while you channeled breath into the system. If you consciously engaged your vocal folds (throat) at all, the amount of air being moved through them could cause damage, given their delicate structure.

On this day, I directly experienced the human vocal system as a supremely efficient and effective vibratory system. I know that few of us have ever had the pleasure of that experience, and most only in peak moments.

Partnering with Riddleberger, I began to do research. I discovered Marafioti's work at the Lincoln Center for the Performing Arts Library. His writing validated what I now was experiencing as a singer with Riddleberger, and this then accelerated my study and collaboration with her. When I became a Rolfer, I could contribute, for I brought to her (at our weekly meetings) physiological and anatomical knowledge that inspired her. With the art of singing that she plied and the science that I brought to my lessons, we were able to take this established approach to another level of helping singers streamline their embodied craft. The goal was always a voice that represents them (their very being or spirit) powerfully and uniquely. I'll say more on this ontological aspect of singing later.

Riddleberger taught me how to bring people 'out' through voice training, moving through acquired defenses that had crystallized as somatic, emotional, intellectual, and spiritual protective mechanisms. She would send her students to me for Rolting SI when they reached a plateau in their work, when they came up against a block. According to what she told me, my track record was 100%. I was always able to help unlock what was preventing that student from moving forward in his 'internal' work with her. We had a synergistic, twenty-three year research lab, as she would say, where we shared our results and experiences, which moved us both along tremendously.

Riddleberger became a big proponent of Rolfing SI in the Washington, DC and NYC acting communities. She said that Teach and Rolf had a lot in common, came from the same era, and Riddleberger herself would have become a Rolfer had she been younger and her circumstances different.

Permission to Take Up the Baton

One day, about a decade into our collaboration, Riddleberger said, "Who ever thought it would be you?" – meaning, I was being given her approval to take this physiological singing approach further. During twenty-three years in NYC, I became known among professional singers as a 'go-to' guy for unlocking voice potential through the body. I am myself an actor and a singer, and with my one man-show *Love, Desire, and Growing Pains* I demonstrated that I practiced what I preached. I had accrued the experience, the authority, and her blessing to dive deeply into my long-held passion.

Stress, Speaking, Singing

Acquired fear in the body, what Rolf called stress and which presents as constraint and inadaptability, plays a significant role in producing the 'break', or split in the singing voice. Having worked with singers for more than thirty years, I will assert that unless you are shown how to transcend this barrier, you are mostly doomed to use the *back-up vocal system*. What is this back-up system, which I term the 'pseudo-singing voice'? Bluntly said: the back-up system is a misuse and/or inefficient use of the vocal apparatus.

The authentic voice is not constrained by fear and uses the full capacity of your instrument to express you, originally, uniquely, and acoustically. The back-up system sidesteps all that hard work and development, instead opting to merely survive, make do. It is a fraction of the capability of the vocal instrument, while usually sounding like someone else on whom you are modeling your voice.

Rolfers recognize from direct experience what happens in a body when unresolved stress, illness, accidents, repressive emotional family patterns, toxicity, effects of poor diet, lack of competent exercise, childhood trauma that we all experience, and so on have been carried around unresolved within our delicate organism. This organism has natural, predetermined limits to what it can accept, assimilate, and

integrate. Beyond those limits, flexion or compression and twisting of joints and declining metabolic activity result. In short, we become locked down. Gravity no longer supports, but works against the body (Figure 1). Without dynamic relaxation and intrinsic body resilience and adaptability, we can only use force or compression to produce sound, which is very limiting. Force precludes full access to your authentic voice.

What have I learned then? This is my thesis, backed by thirty-five years of experience, using Marafioti's (1981, 115) words (with my emphasis): "Speaking and singing are similar functions, produced by the same physiological mechanism: therefore they *are* the same vocal mechanism." The speaking voice, he continues, acts as the substantial factor of the singing voice and constitutes its real support, ergo *singing is merely speaking in musical rhythm*.

What I was discovering was that singing is a dynamically *relaxed-while-expanding-and-lengthening* process, in combination with natural phonetic placement. This system,

once discovered, uses your entire body and its 'acoustic' properties and is able to make your external environment vibrate (which includes the listeners). Nothing is done whatsoever to manipulate the vocal folds unless the singer has a habit of tension in her vocal folds while speaking (a very common idiosyncrasy called *glottal fry*). This is not desirable aesthetically, provides no help and, in fact, causes problems down the road as inflammation develops and ultimately polyps form. In singing, you use much more air than in speaking, so the problems come fast. Ideally, the larynx is meant to be completely relaxed (because neither speech nor singing happen in the throat). Relaxation is the goal.

Many singers and teachers believe that speech and singing involve a conscious manipulation of the vocal folds (mistakenly called 'cords'). This is both completely unscientific and ineffective, if not harmful. Many approaches *train* the singer to consciously manipulate vocal folds in the throat. Some spend obsessive amounts of time observing with specificity how the manipulation functions. But when we speak, we never have to do this, and so it is with singing. An analogy would be, when you gaze at something, are you aware of your retina?

What I have experienced firsthand over all these years is that *anything other than natural speech* placement can be part of a defense mechanism. These protective mechanisms are mostly acquired through intense reactions to parents and family early on in childhood. These defense mechanisms are simultaneously physical, emotional, mental, energetic, and spiritual, and are developed to protect wounds in the child's psyche. Many of us can carry these traumas for an entire lifetime without ever becoming aware of them. Defense mechanisms are psychobiological imperatives and cannot be released easily. It takes time and skill.

As Rolf pointed out, humans basically learn through copying or through reacting to others' behavior. Truly singing from one's heart, the unguarded center of human emotion, can be terrifying or impossible for someone who has not developed enough to be individuated. This was in fact my state when I began my work with Riddleberger; I was not very developed at all.

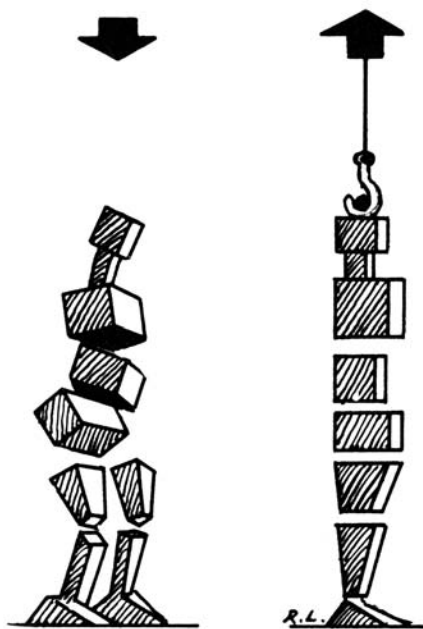


Figure 1: Dr. Rolf's illustration of the sky-hook is apropos of what a singer feels when she is singing. It is a constant upward thrust while expanding once we transition into 'drafting', or sustaining the vowel, which many call 'holding a note'. (From *Rolfing* by Ida P. Rolf, PhD. Published by Healing Arts Press, a division of Inner Traditions International, 1989. All rights reserved. www.Innertraditions.com. Reprinted with permission of publisher.)

The Foundation of Singing Is Speech

When I speak naturally, I do not consciously prepare to speak; I just begin speaking. I do not have to consciously inhale. I simply finish the previous word, relax, and my intrinsic muscles produce a vacuum and this involuntary, instinctive action fills the lungs without me 'consciously' having to do it (nature abhors a vacuum). Singing is a similar physiological process. *Before* you take that common singer's gasp of breath, there is enough air in your lungs to take the next phrase quite far, much farther than imagined. Physical injury or emotional reasons lead to the loss of this capability. When you are performing live for an hour or two, inhaling through your mouth will dry out the throat, and we need wet mucosa to sing well.

Singing and speaking utilize the intrinsic muscles of the core. Few of us have developed these muscles well from the inside out. They have mostly been over-powered by over-involvement of the big, armoring muscles (called the extrinsic musculature) that dominate physical behavior and aesthetics in western culture. At best, the big muscles only extend the movement in space; the small survival-oriented ones initiate all action. When you are in a fearful situation, like performing live, the small ones will go into flexion if you have not trained them to do otherwise.

Let me make my assertion clear: singing is a similar process to speaking. And there is *experience* that is needed in order to make the transition from speak-singing to sustaining a tone, at the moment when the singer 'holds the note'. This is more accurately said 'sustaining a vibration', and this always happens most effectively on a vowel to maximize resonance. Riddleberger's lineage/system calls it 'drafting'. The key is knowing how and where to *place*, as well as *shape* the vowel, because vowels allow continuous and uninterrupted airflow and generate a vibrational force field that moves through matter. This is key. The transition to sustaining the vowel is what most singers do not do well, if at all.

Each singer brings something unique that cannot be taught. It is hers. However, this transition has to be taught to most singers. They have to learn to generate this state change (e.g., gel to sol is a state change). In non-linear physics terminology, this is also known as an ascending phase shift, which is

a higher, more efficient use of energy. It can be learned. It will make all the difference between acceptable singing and being able to penetrate an audience's heart. It is a sonic and energetic transformation. Furthermore, the singer has to learn to generate it over and over again in a completely elastic and relaxed manner, which remains transparent to the audience.

Try This . . .

One school of voice connected to the work of Rudolf Steiner focuses the entire curriculum around producing and sustaining the sound 'ng'. When we produce the sound ng, as in SING, notice what is happening physiologically when you sustain the ng. Notice what is needed in order to sustain that sound, as the moving column of air is being transferred through the nose (precisely, the post-nasal drip holes); feel it for yourself softly and easily.

This exercise alone will help the singer begin to develop the core musculature needed, in a unitary and comprehensive way. There is much more to say about this, but may it suffice that developing the unified intrinsic or survival musculature that supports efficient speech placement is the heart of singing voice development. You really can't teach someone to sing from the heart; that is what comes naturally. You can, though, teach him how to get out of his own way physiologically and allow his expression system and vocal apparatus to do what they do, simply by inherent design.

The dancer spends countless hours developing his body through movement; the martial artist repeats her form to an ever-higher degree of perfection; the singer works with speech placement and acoustics. He has to if he is going to get up in front of others and transmit emotional and psychological meaning via what might best be called *speaking-singing*. Please note that the intrusion of the microphone is another story entirely. This article is about using the natural voice in relation to its physical environment, without any enhancement.

Ephemerization, Using Ever Less

Another principle of Marafioti's (1981, 75) concerning voice production has to do with the ". . . full extension of the range of the voice being produced by using the *minimum* tension of the vocal chords, and the *minimum* breath required for each tone." This establishes an effective process

of voice production and an accurate use of the system's inherent design. The laryngeal sounds ('embryonic vibration') must be transmitted to the mouth, free of any interference, and so he says that *freedom* is the fundamental pillar of voice production. This is true in my experience, and I assert Rolfers would share this value of freedom.

The Rib Cage

If you accept that singing and speaking are the same physiological process, you can observe something interesting that many people do when they begin to sing. It is *not* expanding and lengthening the body while simultaneously lifting and expanding the rib cage via the dorsal hinge, to keep the chest cavity from collapsing. It is virtually the opposite. The singer contracts ensuring that none of the rest is possible.

For a singer, maintaining lift and separation, especially in the first and second ribs (see Figure 2), will allow the most efficient use of the breath as it allows free flow of air through the throat into the mouth.

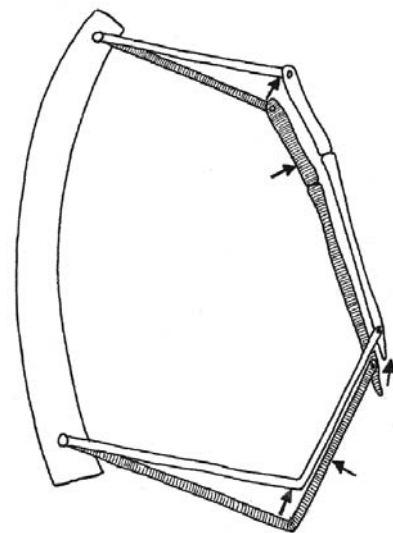


Figure 2: Having a very flexible and adaptable rib cage and working knowledge of the dorsal hinge is key to finding your resonant and natural voice. Without it, you are very limited as a singer who performs live. Studio singers don't necessarily need this ability as the microphone magnifies their voice for them; the microphone can be a crutch, however, and vocal injuries result. Or, without being fed by the full efficiency of this method, the aging singer loses his voice over time. [Image from *The Body Moveable*, 6th edition (www.bodymoveable.com), used with permission.]

This involves knowing how to engage and extend the psoas complex into the respiratory diaphragm region (see Figure 3) in union with the spinal column's extensibility and adaptability (see Figure 4). This must include knowing how to utilize the dorsal hinge, giving the full range of extensibility in the rib cage. Each of these actions also must happen while never giving up your natural speech placement nor using any force whatsoever, nor involving the throat in any way, nor letting the audience see what is happening. It is an athletic event at minimum.

Most people's rib cages have deformed to some degree over their lifespan; some to a greater degree, as Rolfers well know. The chest is the seat of the emotional center, our heart, and the center through which we relate, communicate, and interact with those in our world. Also, the heart is paired with the aspects of the brain that process emotion. From my observation, the chest is also specifically where we carry the sadness and sorrows that we have accumulated in

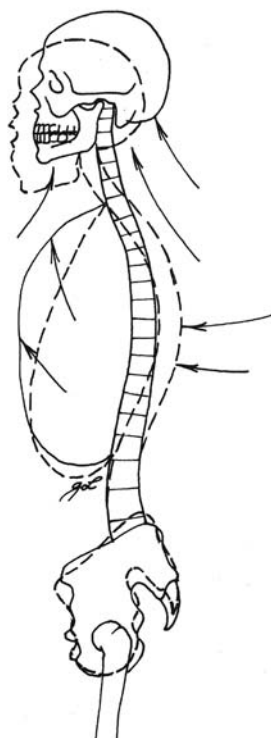


Figure 3: This drawing from Rolf's book demonstrates how the whole body feeds the vocal apparatus and how singers need tremendous adaptability. (From *Rolfing* by Ida P. Rolf, PhD. Published by Healing Arts Press, a division of Inner Traditions International, 1989. All rights reserved. www.Innertraditions.com. Reprinted with permission of publisher.)

our life. This often causes distortion, which comes in the form of tightening and locking in the external and internal intercostals, the respiratory diaphragm, the thoracic inlet, and the rectus abdominis pairing with the psoas and the quadratus lumborum.

In many clients the connective tissue, especially in the upper two or three ribs, is very frequently nearly fibrotic. For the singer, this negative concatenation is deadly. When there is an inability to adapt the rib cage as a whole to a more horizontal orientation, it simply prevents us from

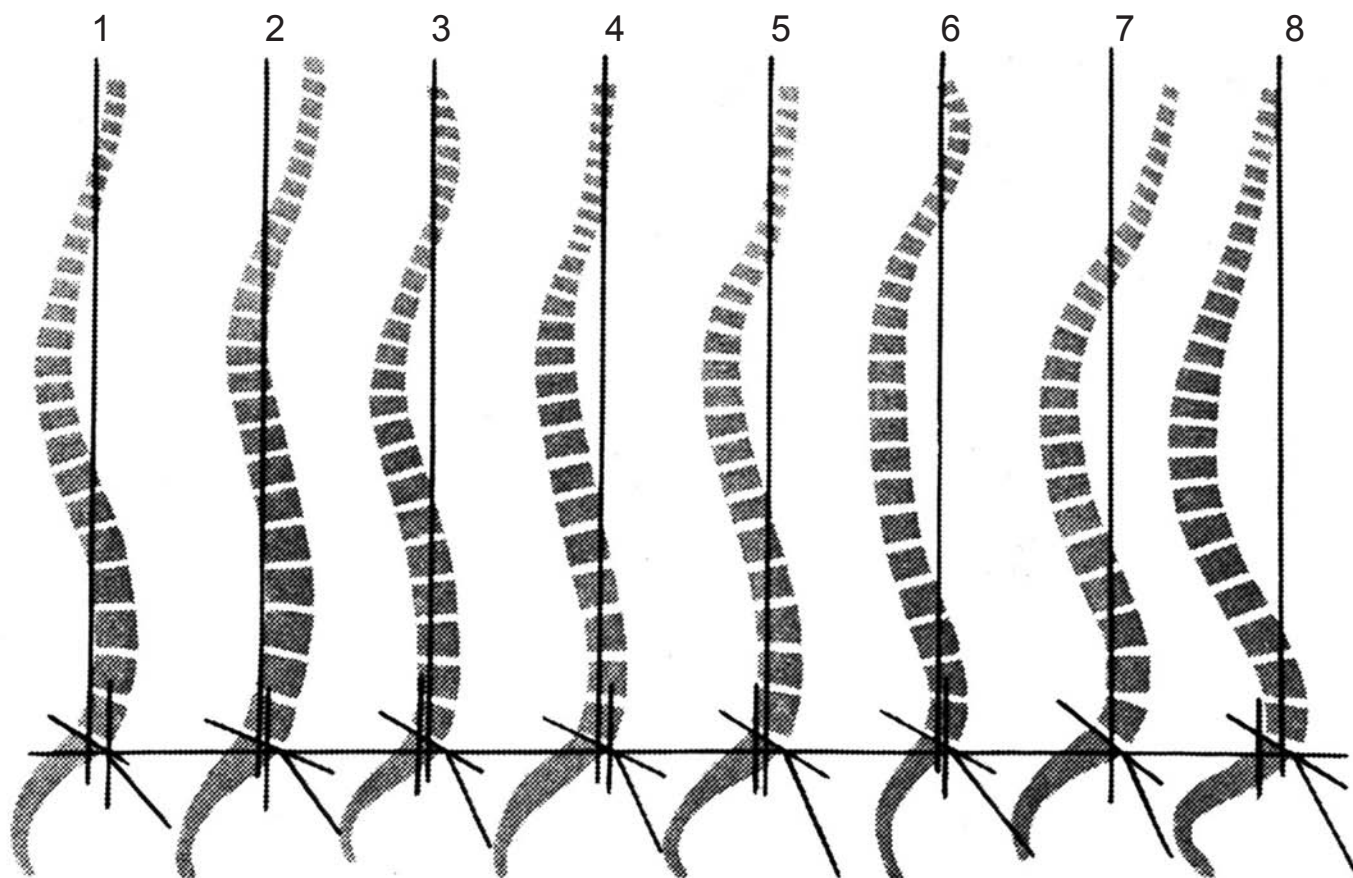


Figure 4: Rolf's underscoring of the adaptability of the spinal column is something demonstrated by successful singers. Each singer needs to find her own range of motion for the spine and rib cage, as this can provide a vocal range that is more than three octaves *without any break in it whatsoever*. Learning to develop resilience and adaptability in this system is key to the process. (From *Rolfing* by Ida P. Rolf, PhD. Published by Healing Arts Press, a division of Inner Traditions International, 1989. All rights reserved. www.Innertraditions.com. Reprinted with permission of publisher.)

accessing our full speaking and singing capability. It diminishes the uninterrupted flow of air like putting your foot on a hose.

Nothing to Do with Vocal Cords

It is generally believed that the vocal folds/cords, which are mistakenly called the voice box, produce speech. In actuality, the vocal folds only produce what Marafioti calls an ‘embryonic vibration’ that is not speech. Speech comes together in many places: the mouth – more the front of the mouth, including the teeth; also the cavities of the cranium; the facemask; and much more (Figure 5). Let me reiterate that both speech and singing are produced in the *mouth* (with the aid of the resonating cavities and mucosa), not the throat.

Marafioti (1981, 69) makes it clear that “Voice is speech, and is produced by the mouth, not by the vocal folds. The vocal folds produce only sounds (embryonic

vibrations) that are *transformed* into vowels and consonants by the phonetic process taking place in the mouth.” Vowels and consonants give rise to the voice in the mouth – not in the throat.

If you manipulate your palate, tongue, or vocal folds, you are most likely not *on your instrument*, and what I call a ‘pseudo-singing system’ becomes your default, without you even knowing it. The voice is not a mechanical process: it is more a physiological and psychospiritual event. When you do not trust that speech and singing are the same event, what happens is that your teeth will not be used for what they do superbly, which is vibration (note: these are the most vibratory bones in the body). The front of the mouth is where speech/singing originates. One has to develop the intrinsic musculature to sustain this caliber of placement. Otherwise, the speech production center drops into the rear of the mouth and into the throat. Thus is lost the direct acoustic benefits of the cranium with its cavities, sinuses, and liquids, which are ideal for producing power, color, and resonance. In other words, you lose that potential for magic.

My Own Discovery: Physiological Center for Singing

In the martial arts, the knowledge of the *tan t’ien* (Chinese: center of gravity or moving center) has been fully established for a few millennia. This area of the abdomen is found three finger widths below the navel, within the abdominal cavity, about one third of the way from the surface moving posteriorly. It is the basis of Oriental medicine, where all vital energy (Chinese: *chi*, Japanese: *ki*) is circulated throughout the organism to maintain health. This center of gravity is central to the voice work that I have developed and now teach. (Riddleberger did not teach this. She was many things, but not a martial artist.)

In T’ai Chi, the non-aggressive martial art (which I’ve studied since 1985), the *tan t’ien* is the *initiator* of all movement and also *unifies* all movement and energy. The basis of yet another article entirely would be the exploration of its relationship to the enteric nervous system, which, while part of the central nervous system, can also function independently in moments of crisis that threaten survival. The *tan t’ien*, too, can be trained to take over in survival moments where thinking about how the past relates

to this moment would only get in the way: like facing a ravening wolf or when you are in front of an audience.

In combination with the *tan t’ien*, I address *the line*. Rolf’s ‘Line’ is similar to the *internal line* of yoga and the *pivot line* of the non-aggressive martial arts. This line is the other key to relaxed and powerful singing. Without the innate awareness of both this center and this line, it is difficult to repeat what is necessary in singing. It is necessary to return to this center and initiate the placement/lift/drafting process again and again, at the beginning of each phrase, after you have sustained a vowel (Figure 6). When you learn what the vocal apparatus is and how tone is actually initiated and sustained, you realize that it is very simple and efficient indeed. But we have mostly overshot it and our panic, self-criticism, and nervousness in communication has prevented us from remaining relaxed and natural in the speech event we call singing (speak-singing). At <http://singingvoicetraining.com/listentodavidsing/> you can hear a selection of my singing using the principles and training I discuss. This recording of Stephen Sondheim’s “No One Is Alone” is from my one-man show, *Love, Desire, and Growing Pains*, recorded in an intimate theatre in NYC. It is best to listen with earbuds or headphones to get the nuance of what is meant by speak-singing.

In Closing

I have spent the better part of forty-five years obsessed by all this. I have focused on principles and descriptions in this article rather than strategies for two reasons. The first is that any competent and experienced Rolfer can be of service to a singer, even when that singer uses a compressional approach, as opposed to an expansive one. In your work with a singer, a few of the key focuses will be:

- Open up the spinal groove, giving him the ability to extend the spinal column, which is the ultimate power in the voice.
- Ensure that she has found the dorsal hinge and can, as my teacher called it, ‘lift and drop’, over and over and over – which we might call ‘extend and relax’.
- Ensure that the upper few ribs are free and that he has the ability to lift and open them, though with relaxation and being able to talk normally while doing so.

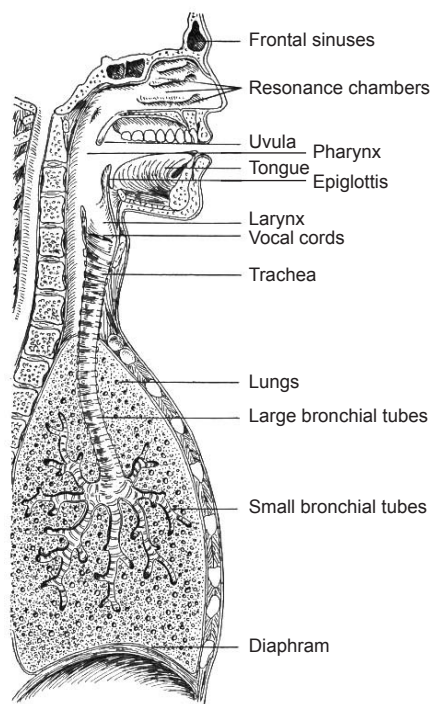


Figure 5: Marafioti’s drawing of the anatomy of the vocal apparatus demonstrating: 1) the *power* aspect – your lungs; 2) the *vibrator* aspect – the vocal folds in throat; and 3) the *resonator* aspect – nose, mouth, and sinuses – comprising our one *unified voice*. From Marafioti’s 1922 edition of *Caruso’s Method of Voice Production: The Scientific Culture of the Voice* [New York: D. Appleton and Company; a reprint of the book is currently available from Dover Publications (New York, 1981)].

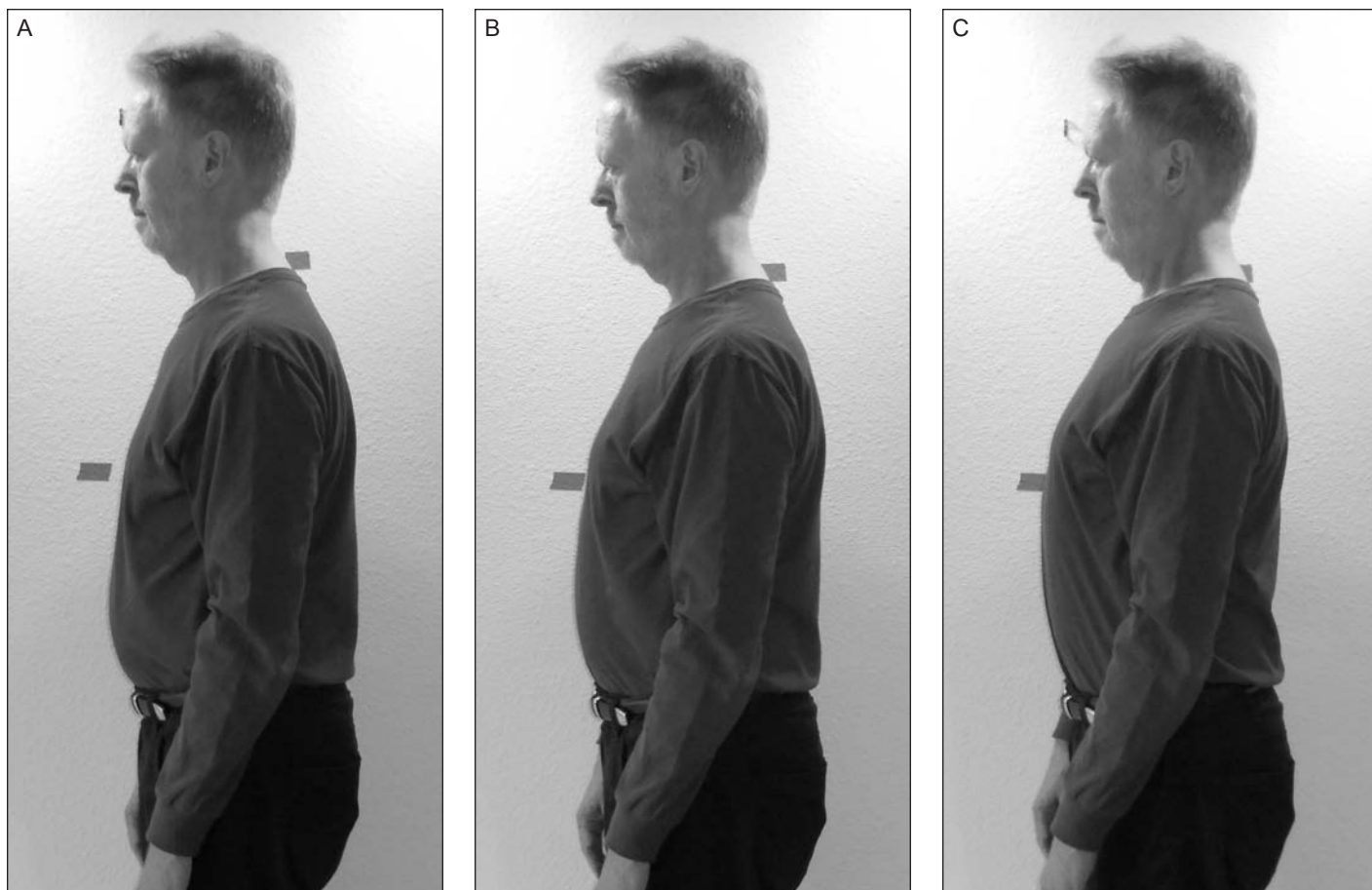


Figure 6: In these photos of me in three stages of uprightness, to the full open cavity, you can see how the larger, lateral fullness of the rib cage would permit better 'drafting'. When we sing, since speaking and singing are similar events, we do so in a relaxed manner. This three-stage posture shows the range where this occurs. (A) Here, I am in the posture of natural speaking. (B) This intermediary posture happens at the moment I transition from speak-singing to sustaining the vowel. (C) This ultimate posture is where I need to be in order to sustain the vowel, where I can put power, resonance, and color into the vibration. Again, some call this phase 'holding the note'. This system calls it 'drafting'.

- Help her really access her psoas extensibility in combination with its partners the rectus abdominis and quadratus lumborum.
- Make sure she knows about relaxed abdominal-diaphragmatic breathing in order to open and relax the intrinsic musculature.
- Do some good cranial work and let him experience an open cranium.

The second reason that I have focused on principles and descriptions rather than strategies is that to go further and really train a singer in the expansive dynamism of authentic speak-singing, hands-on, one-on-one training and workshops are required. This is the only assured way for this knowledge to be shared with singers and bodyworkers. It is profoundly experiential. Words won't suffice.

David G. Delaney has thirty-two years in somatic work; he was certified as a Rolfer in 1985 and as an Advanced Rolfer in 1993. He has a master's degree in counseling and is an LPC (Licensed Professional Counselor) specializing in the nervous system, trauma, and optimal performance. He works with performers and singers both. He'd relish hearing from any Rolfer interested in further exploring this way of working with singers. Contact him at David@DavidDelaney-Rolfing.com.

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Performing, Creativity, and the Body

An Interview with Stage Director Monica Payne

By Heather L. Corwin, PhD, Certified Rolfer™ and Monica Payne

Introduction by Heather Corwin:

I met theatre director Monica Payne when studying Viewpoint work (actor training) with Alexandra Billings; both Monica and Alex teach classes for Steppenwolf Theatre Company in Chicago and in California. Since we all have history in Chicago, Monica and I easily became friends, sharing our experiences of Chicago and our acclimation to living in Los Angeles, where we both reside presently. In a class that Monica dropped in to watch, a fellow student was beginning the spiral of a migraine. I'm not usually one to offer hands-on work outside of my studio, but I felt compelled to ask her if she wanted me to help. She eyed me warily and said "yes." Most of what little I did was craniosacral work to decompress her head. The classroom was small, so there was no way to get away from people, but the class quieted in support without prompting. This group of people had a special connection through the work we created together, so words were not needed often. There was a shift of energy in the room and I could tell more space was active and at ease in my friend's head. She sighed and looked up at me. I slowly took away my hands. She had a look of disbelief on her face. "It's gone. My migraine is . . . GONE," she said. I smiled and said, "I'm glad," because I truly was. Monica then asked, "What is it you do?" I said (without censoring myself – because I rarely describe myself this way), "I'm a healer." She looked at me as if sizing me up. This was, after all, the land of fruit and nuts.

Monica teaches the Meisner acting method, which is what I learned in graduate school at Florida State University/Asolo Conservatory. She was starting up a private acting studio in LA, and at the next class she came to asked if I would be willing to join the group as sort of a leader so that her other students might benefit from my experience. I enthusiastically agreed! That was in 2007, and it was around this time that Monica started to experience discomfort in her avid yoga practice. Recalling the event in the acting class, she sought me out for Rolwing® Structural Integration (SI). After our first session she conceded, "When you told me that you're a healer, I thought you were full of shit. I'm glad I was wrong. You really are a healer."



Monica Payne



Heather Corwin

Since that time, Monica and I have worked together consistently through Rolwing SI when she is in town. Through injuries, chronic pain, directing projects, teaching at UCLA, and as preventative maintenance, Rolwing SI seems to be a great fit to support her wellness. What follows is an interview I did with Monica in October 2014 to investigate her experience with Rolwing SI, the body, and how both impact performance.

Heather Corwin: Monica, can you tell me what the essence of you is as an artist?

Monica Payne: Well, I am a director in practical terms. I think as a [theatre] director, the things I care about the most are creating a production that is both visually beautiful and very emotionally connected. In order to do that, I have to be able to contact what I think is the emotional center of the play. And in order to do that, I have to be emotionally connected to myself or know what is going on inside of me so that I can figure out how to actually get in touch with the play and then transmit that or help get the actors connected to that also. And the designers, in fact, because in order to make something visually beautiful that expresses the heart of the play, the designers have to grapple with the same questions as the actors do.

I just recently heard this funny phrase. Someone said that we are "citizens of the theatre," which I love. So I think I'm a citizen of the theatre. In my essence I'm very political. I want to be political as an artist. The act of being in a process together is part – the work is one thing when it's with the audience, but I also believe when it's just among the artists, it is a catalyst for something right there, before it goes to the next step and goes to the audience. In my essence I am hopefully gritty but also elegant as an artist. Someone said once that I know how to do things that seem "new agey," Grotowski-like ritual. But also I'm not afraid to say to someone, "That does not work. No. We're not doing that." Someone else described me as "no bullshit" but also as a spiritual director at the same time, which I thought was a great compliment.

HC: You mentioned emotions and connecting to them. How do you think your physical life informs doing that?

MP: I guess I believe your emotions are living in your body more than they are living in your head. So if you are too stiff in the body – this goes I think for actors and directors – if you're too stiff in your body or huge sections of your body are cut off, I don't think you can access your emotions. When I'm directing the play, I'm often trying to *feel* what's happening. I feel that literally in physical impulses. I sometimes say to actors, "I don't know, can you do something like this?" – and then I roll around on the floor or I get on my hands and knees. Often, rather than speaking what I want, I am showing them in some kind of physicalization, and then I



From a production of *Eréndira: The Incredible and Sad Tale of Innocent Eréndira and Her Heartless Grandmother* by Gabriel García Márquez, adapted, directed and choreographed by Monica Payne. Produced at the UCLA School of Theatre, Film, and Television (2011).

ask them to pick it up and make it belong to them. So I think that theatre [demands] the body be your instrument, if you're the actor. I think [performance has] got to be highly activated physically. Through that physical activation, emotions will usually just start to pour forth. You don't have to try get them to come up. They just come up. Once the body is fully activated and free, *then* everything else just begins to flow, in my experience.

HC: And what are some of the ways that you tend to get more physically free or lead your actors into becoming more physically free?

MP: At the beginning of every rehearsal, I [have them] do something called 'sacred space'. So I have them lie down on the floor. I walk them through a really basic meditation at the beginning and connection with breath. It's all meant to actually get them to be very quiet and get the body to neutral [free of emotions or distractions from life]. If you're not in neutral first, it seems strange to go in one direction or another. I think you have to start basically at zero. You're not at zero when you walk through the door to rehearsal. I'm not either. They're not and I'm not, right? So I put them on the floor for a while and then I walk them through a slow series of yoga, really gentle yoga stretches like child's pose, cat/cow, and then I start to add some chanting. They do some gentle 'om's and sometimes some

other chants that I teach them while they're moving. So while they do, let's say, cat/cow, they have to release sound at the same time. So kind of slowly do that and work them up to standing. And then I have them do a few non-verbal movement exercises where they're trying to synchronize as a group. That stuff is Viewpoints based, but it's really gentle. We do the exact same two or three



An actor portraying Elektra in *Elektra* by Euripides, directed and Choreographed by Monica Payne. Produced at the UCLA School of Theatre, Film, and Television (2010).

every day for six weeks. So it's all about you have a moment to be neutral with yourself, now this is your moment to be neutral with the collective. We do that every day, rain or shine, even once we're in performance. I work [it] out so that the call has enough time in it for this half hour [of] sacred space with the company. A couple times in tech I've been under pressure to get rid of it, to start. There's a huge difference. They're not ready. I'm not ready either. Those few times have been like the worst evenings of rehearsal ever. Because no one was focused and soft enough to respond to the task at hand.

I certainly can see sometimes – usually when I'm directing I've gotten rid of these people already – but when I'm teaching, I see people in sacred space who cannot move. Like, to ask them to do cat/cow, I see people whose torsos are such a solid block either of muscle or just stiffness that they don't have any spinal flexibility. If I'm in an audition process and I see that, I usually eliminate that actor because I know [s/he is] not going to have much access to the heart or the gut because [s/he] can't move it. Right?

To me, the body is the first place to begin. I'm often working with actors who are between eighteen and twenty-four, their body is at the prime, is at the height of life right then. So beginning there works much better than starting with psychology, because their psychology is still forming but their bodies are so strong and so flexible and so ready to go and so expressive, actually, once you teach them how to do that, that the body, to me, is the first logical point of entry. Then voice, of course, flows. An open body will allow an open voice to come out. Everyone has a deep emotional life. So if the body is open, then the emotional life just starts to pour forward. So yes, I actually work for several days nonverbally, at the very start of the rehearsal process, so we are just communicating through body to teach them also the power of nonverbal communication, to teach them how strong they are in their physical life before we go to anything else. Before we're even really attached to the play, we just run and jump and grab each other and roll on the floor. It's all just purely physical in the beginning.

HC: It sounds really fun.

MP: Yes. It's fun! And they'll usually do things in that section that are quite amazing. Gestures will begin to emerge that will come from different small groups that are creating separately, but the same gesture

will come back over and over again and then I know that gesture has to go into the play. Things just start to rise out of the body. Of course, the prerequisite for all that is that the body be fluid, ready to move, that the person can breathe, you know, that the body is strong but supple and ready to move in any direction it might be asked to move in.

HC: I feel like this is a good segue to talk about Rolwing [SI] and your experience with it and further, how you think Rolwing SI may have impacted you as an artist.

MP: So I, as you know, have [had Rolwing sessions] probably once every two weeks for several years. I think artists are inherently super-sensitive people. I am. I'll speak for myself, I'm an incredibly sensitive person. The Rolwing [work] helps me, I mean it helps me physically, of course. Right? Something hurts, and I get [Rolving SI], and my arm doesn't hurt anymore. So there's that piece of it. But I also think it allows for a kind of slow release of stress, emotional stress that's building up, or things that have sort of started to bother me emotionally that I'm not even aware of. I'm getting ready to work on this play that's about the Holocaust, basically. It's about World War II, there's a lot about Auschwitz in there. There's a modern soldier who's suffering from PTSD [post-traumatic stress disorder] because he was sent to Iraq. I was aware when I was doing a really careful read of the script two days ago to prep for some meetings, and I could feel the stress of the play enter my body. Right? It's tough material. It's about people making horrible choices and then it's a terrible war. I feel like the Rolwing [work] not only helps me maybe release some excess feeling about what I'm taking on in the work [preparation to direct], but it also helps me be more open to receiving the work in the first place. I can read about Auschwitz or I can read about Poland and Germany during the war and I don't have to be afraid that I cannot contain the heaviness of that experience. Right? Because what has to happen is I have to take that experience in, I have to synthesize it, and then I have to give it out to the actors and eventually to the audience. My container has to be strong. I feel like Rolwing [SI] helps me do that; keeps me strong emotionally, physically, spiritually, on some level, and that if there's something that I take on that's too much, the Rolwing [work] gives it a release valve. Not to mention, like I said, I end up rolling on the floor with people. My literal body has to be strong. I don't want to have a lot of aches and pains. I want to be able to spring up out

of my chair and grab an actor and start to do choreography or gesture work without any problem. I just want to be able to do it.

Twyla Tharp wrote a great book about creativity. Twyla's in her sixties, I think. She gets up at 5:15 in the morning and works out every day at the gym and then goes in with the dancers. She talks about how important it is for her – she can't do what she could when she was twenty – [but] she talks about how important it is to be able to keep up with dancers to some degree or to show them she still can demonstrate some things so that she has some credibility. I feel like I'm not Twyla Tharp, but I want that kind of credibility with the actors too. I feel like the Rolwing [SI] keeps my body more awake and alive and fluid than it would otherwise be.

HC: Have you ever suggested to an actor that he might investigate Rolwing [SI]?

MP: I talk to a few actors who have incredible injuries. They have back pain every day, all day, but they are just ignoring it and they are twenty-one years old. I have said, "My own experience with Rolwing [SI] is great. Maybe you could try it because you should not be in chronic pain when you are twenty-one, and it's just going to get worse." So, yes, occasionally I have recommended it either for physical ailments that actors have or sometimes when some emotional stuff seems like it's building to an extreme, then I have talked about it as a way to release emotional baggage straight from the body rather than having to go through the psyche. I certainly would also say to actors that it's a good idea to go to therapy. But the Rolwing [SI] to me is another modality that might accomplish the same thing depending on your body and mind and heart.

HC: Where do you think trust is on the scale when doing physical work (including Rolwing SI) and as an artist?

MP: How is trust connected to [physical work]? Well, you can't do anything as an artist unless you trust your collaborators. Sometimes I spend the first two weeks solid of rehearsal doing nothing but trying to get the actors to trust me. Although I don't say that's what we're doing, right? We may be doing all kinds of physical exercises, running around, they're making different pieces of work, different compositions, but I am very carefully laying the groundwork for us to have a great collaborative interaction. Which involves me being very

careful to be trustworthy: I'm not criticizing people, I'm not making fun of people, I'm trying to role model for the room a kind of open communication that makes room for everybody, and everyone's contributions are valuable. I mean, if that doesn't happen, if something goes wrong in the first week and for some reason even one member of the twenty-six doesn't trust me at the end of the first or second week, I'm in big trouble. I actually can't really go forward without everybody being on board. Right? So, I would say [trust] is vital. I would say trust is taken for granted. People like to say, "Well, just trust me," and I don't think that's what it takes. Because then people might say, "Of course, intellectually I trust you." But in order for it to become deeper, the only way to really trust people is through experience. That's how I trust actors. Right? They say they're going to do something, they say they'll be at rehearsal at 7, and they actually show up at 7. After that happens several days in a row, then I begin to trust that they're going to be there at 7. Right? You begin to trust through experience. It's a foundational piece of the puzzle in terms of making art.

It's certainly foundation in terms of someone working on you – bodywork – as well. Right? You are giving over your body to trust the practitioner and you are – I am – expecting a certain routine that we follow every time. Expecting that I can close my eyes and that nothing bad will happen, right? Trusting the practitioner is vital when you're [receiving Rolwing work]. Certainly, [you can] even go so far as saying the audience trusts the artists when they come into the theatre and they pay \$10 or \$20, it's a gesture of trust that we have made something interesting that you might want to look at. Then people get mad if their trust is broken. I get mad. If I go to the theatre thinking you've made something professional, and then I arrive and it doesn't look professional, then I'm aggravated. I'm less likely to trust you the next time you send me an advertisement for a play. Right? So, yes, I think trust is at the core of interaction among people: artists, non-artists, bodyworkers, clients – trust is at the core. I also think it's at the core of the audience/artist interaction. I know there are some artists who think that it's good if they get the audience in there and they deeply offend them, or they shock them into anger. That's not really my way. I feel like people are my guests and I want to be a good hostess. That doesn't mean I'm not going to do or say something provocative

inside of the piece, but it's my job to sit in the rehearsals and to imagine myself as the first audience member. I am their proxy for many weeks. So I'm conscious of their edge as much as I can imagine it.

HC: Has anyone ever noticed your body change as a result of acting?

MP: That's a good question. I certainly talk about it all the time. I talk about, especially, this bad back pain that I had for so long that you were able to fix in maybe three sessions when I had been to chiropractors, massage therapists, yoga therapists, I'd been to so many places. I don't know if anyone's ever commented on it. Although people often say to me that they can see that I do yoga, that I have good alignment. I think they are seeing the Roling [SI] too, but they just don't know what they're seeing, they don't know what they're looking at. I mean, one time I announced at a big directors' meeting – I announced to maybe thirty directors – they said "Tell us something about you that we don't know." I said, "I do a lot of yoga." They were like, "Yeah, everyone knows that." I guess because they could sort of see it on my frame. But it was awkward. I thought, "Oh, well, okay. That's all I have to say. That's all I'm telling you."

I don't know if anyone's ever commented outright, but I certainly get compliments that I look younger than my years. I often think, "well *that* is a combination of good exercise, probably genetics, eating well, and having bodywork done every few weeks." [Bodywork] helps to increase your circulation, makes you feel better in your body, Roling [SI] is actually woven into that comment to me.

HC: That makes sense. How would you describe Roling [SI] to someone?

MP: You mean the experience or definition or both?

HC: Both.

MP: When someone asks me what [Roling SI] is, I say the Rolfer is working with the connective tissue in your body. So if it gets sticky or kinked or just messed up in a certain area, the Rolfer is trying to smooth it out or open it up a little bit. That's what I say as the definition of what [Roling SI] is.

Sometimes I talk about that sweater analogy that you said to me once, that you've got a sweater that's got bunched up on one shoulder and you're going to, like, pull it out, but you might be pulling from a really opposite side of the body. The experience of

it, I sometimes say, it's like a cross between massage – but deep, deep, deep massage – sort of woven together with being allowed to release anything verbally. Massage they sort of insist that you stay quiet. But one of the things I like about Roling [SI] is that I can speak sometimes if I want to at the same time so that whatever is coming out of the body can actually have a verbal expression if it wants to. I have to say having gone back to massage a few times after being a Roling [client], massage feels like nothing. It really feels like they're not hardly doing anything to the body. So I'm a convert.

I remember when you were trying to convince me to try it. I thought [how] I had heard that it was painful. That's usually what people say to me, "I heard it's really painful." In fact, I just said to my roommate this morning, "It's not painful if the practitioner is really good." If the person who is working on you is sensitive and pay[s] attention to what is going on with your body, [s/he] can tell when it's too much and back out. As opposed to being sort of on autopilot and just working no matter what your body is doing in response.

I would also, in a nutshell, I would say getting [Roling SI] is almost like getting scratched on a really deep level. Like you're scratching an itch that's really deep in your body and that sort of resolves it, you don't have to worry about it anymore. It's magic. Magic for the body.

HC: Do you have anything else you'd like to add?

MP: I do have one thing. I think it's vital – in American actor training we're very focused on psychology. In other countries, this isn't as much of an issue. The French are really physically based, much more than we are. But in America, we really believe that you go through the mind or the psychology in order to release the actor. You then do a close-up where the camera is one inch from that [actor's] nose. [We think] *that* is acting. I think it's time for us to wake up to fact that the entire body is the instrument of the actor. It houses the voice, it houses the emotional life. So if the body can be really opened up and made accessible, then the other two parts of the triumvirate, which are the voice and the heart, are then easier to access. They're more available. But the body, in my opinion, the body is the place to begin. It's the place that you have to really convince young actors that they must work. They don't want to. Particularly if it's hard for them. They really don't want to engage



From a production of *Hecuba* by Euripides, directed by Monica Payne. Translated by Kenneth McLeish, produced by the Pittsburgh Playhouse, Conservatory Company (2013).

[the body]. They think of movement class as something to get through and then be done with it. But that's not the case. I mean, the really versatile, world-class actors have access to all of it and have it all integrated. They have all three elements well-integrated. So, I think it's a particular problem in American actor training, that the body has somehow been sectioned off. It needs to come back into the fold. We need to come home to the idea that the body is incredibly expressive. It can cause the audience to feel deep things and they – the [people in the] audience – they are the ones who really need to be feeling something. It's important sometimes for actors to be emotionally connected, but the [people] who are actually supposed to be having catharsis [are in] the audience. And they will if they are seeing twenty-six actors who are fully physically engaged, they will not be able to resist coming into the world of the play to receive whatever themes or messages the play has to give. That's what I have to say.

Monica Payne is an American stage director. She recently directed the Ted Hughes translation of Phedre, Hecuba, and Huck Finn for the Pittsburgh Playhouse, her own adaptation of Eréndira: The Incredible and Sad Tale of Innocent Eréndira and Her Heartless Grandmother by Gabriel Garcia Marquez,

Elektra by Euripides, William Inge's Natural Affection, and Savage Love by Sam Shepard. She also assisted on La Mirada's award-winning production of Miss Saigon, directed by Brian Kite in 2012, which later toured to China.

Formerly an actress, Payne worked for many years in Chicago with various companies, including Steppenwolf Theatre Company, the Artistic Home, the Hypocrites, the Journeymen, and Famous Door. She holds an MFA in directing from UCLA and is a member of the 2008 Lincoln Center Director's Lab, as well as the 2012 Director's Lab West in Los Angeles.

As a professor, Payne has worked for UCLA and Carnegie Mellon, and recently served as the Director of the MFA Acting program at Point Park University in Pittsburgh, Pennsylvania. She is also a freelance Meisner instructor, and has taught for the School at Steppenwolf, the Artistic Home, and the Audition Studio, (Chicago) as well as owning her own studio in Los Angeles. She has taught in the Steppenwolf West intensives in both Monterey and Long Beach. She is the founder and Artistic Director of Theatre Lumina, a theatre company focused on cross-cultural collaboration. Upcoming projects include Death and the Ploughman by Johannes von Saaz and a Polish play called Trash Story by Magda Fertacz. Images can be found at www.monicapayneditor.com.

Heather Corwin holds a PhD in clinical psychology with a somatic concentration from The Chicago School of Professional Psychology and an MFA in Acting from Florida State University/Asolo Conservatory. She is a Registered Movement Educator with ISMETA. Heather has been practicing bodywork since 1993 and has been a Rolfer since 2005. She was the Movement Coach/Choreographer for A Piece of Tin at the Lyric and Burial at Thebes at the Cleveland Playhouse. She teaches movement/voice/acting at Azusa Pacific University and acting at Pasadena City College and has served as Assistant Professor of Theatre at Ashland University. Regional theater performances include: MainStreet Players, Tennessee Repertory Theater, Cleveland Playhouse, Nashville Shakespeare Festival, Mockingbird Public Theater, Banyan Theatre Company, American Stage, Nashville Children's Theatre, Falcon Theatre, and Asolo Theatre. Her favorite roles as an actress were Antigone, Myra in Hayfever, Phoebe in As You Like It, Sonia in Life x 3, Dr. Purgon in The Imaginary Invalid, Katherine in Love's Labour's Lost, one of the witches in Macbeth, and Dierdre in I Hate Hamlet. She also co-starred on Grey's Anatomy. Her websites are www.HeatherC.com and www.BodybyHeather.com.

Empathy and Applied Empathy through the Lens of Rolfing® SI and Actor Training

By Heather L. Corwin, PhD, Certified Rolfer™

Introduction

What brings people together? What builds lasting relationships? How can we facilitate deeper connections to clients? How do you evaluate the performance of an actor? How can empathy transform lives? How can these questions possibly be related?

In my third phase of Rolfing Structural Integration (SI) training, my teacher Ray McCall included at the top of our study materials his quote, "Rolfing [SI] is a self-taught art." My control freak balked at this originally, though I find this statement to be true and ever-changing with each client. The basis behind this quote and my experiential understanding is the somatic relationship (relationship between mind and body). I find many emotions lie in the body, waiting for the safety to express themselves. Emotion psychologists LeDoux (2003) and Ekman (1999) agree that recalling emotions can promote physiological and biological responses, so that memories from the past can potentially arouse emotions in the present. During these occurrences, a Rolfer can employ empathy in the safe space of the studio. I find this to be the most common use of empathy in the realm of Rolfing SI. However, upon further reflection, I believe there are profound empathetic events that impact Rolfing clients as much as the Rolfing practitioners. In this article, I will explore what those relationships are by looking at actor training, Rolfing SI, and how both can be informed and affected by empathy.

What is Empathy?

Empathy is "the ability to communicate an understanding of a client's world" (Reynolds et al. 1999, 1,177), or having the ability to feel another person's feelings (Eisenberg et al. 2006). Similarly, performing artists practice skills of empathy when inhabiting a role (Verducci 2000) because actors are stepping into a character's life

and embodying that character's choices and ways of being. As Rolfers, we ask questions to discover how life has impacted our clients and also witness our clients' walk of life, literally and figuratively, through an empathetic lens. Plus, the presence of empathy allows for a more fully integrated healing because a witness (the Rolfer) supports the integration of the event. Since integration is one of the principles on which we are able to facilitate change of any form (i.e., release of traumatic holding patterns in the body), empathy would also support the evolution of alignment.

Empathy is necessary in many circumstances, especially when facing trauma. When my mother died suddenly after months of what I thought was recovery from a liver transplant, my life shattered. I was in the process of training as a Rolfer and had relocated to Boulder, a new place with few friends. Thankfully, a dear friend of mine from graduate school (I had graduated the year before) lived a short drive away in Denver. She came over and we sat on the stoop together in silence. I knew she could feel my pain radiating through me like a radioactive volcano. The fact that she could just be there with me, allow me to feel the largeness of my grief, and respect the depth of my pain, describes one of my more profound personal experiences of empathy. My friend understood from losses in her own life how big my pain was and was able to feel into my pain in a supportive and allowing manner.

Empathy exists on many levels, can apply to many experiences, large and small. The point is, through empathy, a person is able to begin integrating the feelings. Empathy does not always have to surround negative events, though we often recognize the presence of it more around trauma, because a larger need for empathy seems to surround devastating events. Later in this article, I will expand on the idea of

empathy and how *applied empathy* can be transformative.

As Rolfers, every day we work with people who have unresolved trauma. We may not know it, and they may not know it. However, you may notice that a few sessions into working with a client, you have a session that seems to be profoundly impactful and organizing. I would argue that the reason for this is that a relationship has been established, and the relationship between client and Rolfer is able to be therapeutic on so many levels because successful Rolfers knowingly or unconsciously are able to practice empathy with their clients continually. Foundationally, the skill of listening without judgment fosters empathy. Even before I earned a doctorate in clinical psychology with a somatic concentration, I knew from decades as a bodywork practitioner that being present and in the moment allows the space for transformational healing. These same elements of listening, being *present*, and being *in the moment* are the cornerstone of actor training, in which I've trained, practiced, and taught for over twenty years.

Understanding the Actor's Task

When I work with actors as a Rolfer, I often find these clients to have more open bodies, which seems to reflect the mind's predilection to be open. I see a correlation between the actor's ability to morph with ease on stage and the ability to integrate Rolfing work. An actor's responsibility to the craft of acting is to be able to adapt and invest in endless choices and circumstances that may include physical adjustments. For example, when I was working at Tennessee Repertory Theatre doing the show *W;t*, the woman who played the old professor/mentor of the main character made a terrific physical choice to hunch over as if she suffered from osteoporosis with a dowager's hump. Maintaining such an exaggerated contraction or anterior shortening of the body for ten minutes a performance, eight performances a week, can take a toll. More to the point, this actor was required to have a deep love for the main character because she was the *only* person who truly loved this woman – and in this scene, she knew the main character was on her deathbed. This is where Rolfing SI can come into the picture: getting sessions can help support artistic choices that are demanding on the performer, notably repetitive stress. Repetitive stress can also

apply to the emotional demands of a role. (Tension is a common result of highly charged emotions in any situation, whether the person is portraying a role or not.)

An actor's physical adjustments, as just discussed, are usually easier to perceive than her ability to remain in the moment or engaged in listening. When in the moment, a person is neither distracted with events that just happened nor concerned with things that have yet to happen. (Many philosophers would say that being in the moment is also a key to enlightenment, but I digress.) One way to clearly know that a person *is not* in the moment is to recognize that his attention is inward rather than outward, which implies a lack of presence in the *now*. As an audience member watching a stage or film performance, you may not be able to put your finger on why you don't believe or like a performance; one possibility is that the performer may not be in the moment, which may make the performance look rehearsed or technical. Another way we realize that a person is in the moment is recognizing that he is working spontaneously with impulses: you see the person *want* to do something – an action – that he does, which makes the person seem more alive, real, and in the moment. When a performance is done well, all the actor's focus and energy are poured into the role to tell the story, which should be spellbinding!

Let's look at applied empathy through the character of Hecuba from the Greek tragedy *Hecuba* by Euripides. Queen Hecuba has to endure learning that her one remaining son is dead (he was entrusted to and then killed by a close friend of the family; the show opens with the ghost of her son addressing the audience), and that her daughter will be sacrificed to appease the gods. This is after losing her beloved husband and seeing her youngest child killed right in front of her. Portraying that kind of grief is exhausting. Not only does the actor have to make us believe she mourns these losses, she has to make us believe she would do anything for justice (the ancient Greeks preferred this word to what might also be called 'revenge'). The actor must empathize with the character to produce a believable portrayal. She might also find it helpful to empathize with some of the other characters being portrayed to make the story more alive and engaging for the audience. In other words, the actor will want to play the role in such a way that the performance

is true to the story while making choices that include very human vulnerabilities; this is where the audience hopes to find an inner human struggle that is relatable. This process can inspire the strongest connection from the actor to the audience (inspired by their empathy).

Applied Empathy in Acting and Rolfing SI

I see many parallels between practicing Rolfing SI and creating a relatable role as an actor through applied empathy. Both actors and Rolfers are required to research the client or character. Both must find a way to relate (to the client or to the character) to be successful. If understanding of the background and given circumstances of a client or character is ignored, that's when either bad performances or a disappointing therapeutic relationship can occur. As Rolfers, we listen to our clients and have intake forms, which can build understanding – the underpinning of empathy. As actors, we read the play many times to learn how other characters talk about our character, examine time period and social norms that do or do not exist in the play, and filter our choices through how we would relate to being put in those circumstances (in other words, we listen to the life of the three-dimensional character who has to become a person on stage). Oftentimes the character has a fatal flaw, which harkens back to Aristotle's requirements of good theatre. What I witness in great performances is an actor's ability to meld the character to her person in such a way that she is able to bring out the characteristics demanded in the role. When roles are breathtakingly alive, the actor has gone a step further: through *applied empathy* there is a magical fusion of who the actor is and who the character becomes – they're the same entity, the actor, but the character has forever changed and informed the life of the actor. Thus, I would define applied empathy as *the ability to reach into another's experience and feel it personally without judgment*. In these conditions, the observer is emotionally touched to the degree of eliciting compassion.

I see a similar process of applied empathy in the magical transformation of the client's pre-Rolfing body into the aligned post-Rolfing body in the most effective and transformative therapeutic relationships. The significant difference is that this exchange exists between the *client's experience of self* and the *Rolfer's perception*

of the aligned client. Another way to say this is that the Rolfer helps bring out the client's potential through applied empathy. I'll give the example of a client I will call "Jane," who when I worked with her was in her late forties and had survived breast cancer, including double mastectomies and reconstruction surgeries that went awry. Jane had been told by medical professionals that she would never be able to fully extend her arms again. Being a health professional herself, she didn't agree with this diagnosis but, nevertheless, had little hope. When she called me with her situation, I said we would have to try at least one session to see how she responds, and my empathy was already engaged. In assessing the situation at our first session, I told Jane that I would need to work directly on the scars, and I wanted to honor her limits and boundaries (along with California laws). She looked at me for a moment, gazing directly into my eyes as if sizing me up, and said, "I'll do whatever it takes to play volleyball again." I understood. Using applied empathy, I could see her playing again – and so our work began. That first session was heavy for me, because I carried the weight of hope on my heart and in my hands. Intention, hope, and desire aligned to free up the First-Hour territory, indicating that we could indeed make headway through our work together. Near the end of the session, after continuous feedback from both parties, I said to Jane, "I really think you can play volleyball again. It may take about twenty sessions, but I think you respond so well to Rolwing SI that it's possible." I meant every word. Jane cried with relief. She told me that no one had given her hope. Through *applied empathy*, Jane was playing volleyball again in less than twenty Rolwing sessions. To sum it up, Jane knew there was a version of herself that would play volleyball again, and my Rolfer's eye, heart, and hands were able to help her craft herself into that form.

Conclusion

Empathy and applied empathy can support tremendous emotional healing in the Rolwing studio and tremendous stage and film portrayals. Whether working as a Rolfer, acting a role, or simply being a human being, empathy allows for lasting and meaningful connections with other people, connections that ease the relentless stressors of life. As a Rolfer, I find applied empathy invaluable when working with clients. As an actor, I find applied empathy necessary to create a believable portrayal

of a character as well as a nuanced and engaging performance. As a person, I find I am less angry and more congenial when I engage empathy – especially in trying conditions.

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A Voyage around the Tongue

By Mathias Avigdor, Certified Advanced Rolfer™, Rolf Movement® Practitioner

The tongue lives in our mouth, like a strange animal chained to the bones of our cranium and jaw. The three sides of the tongue guard the depths of our body, like the three heads of Cerberus keeping watch over the entry to hell in Ovid's classic poem "Metamorphoses." If you were to lose your tongue like Philomela, Pandion's daughter in Greek mythology, what would happen? Would you also be changed into a bird?

Rolfing® SI and the Floor of the Mouth

In classical Rolfing Structural Integration (SI), we relate the floor of the mouth to the floor of the pelvis by working on the mandible and by searching for alignment between the floor of the mouth, the respiratory diaphragm, the floor of the pelvis, and the feet (the Fourth Hour). Of course, by doing that, we also address the vertical axis of the body, which may influence the digestive system, thereby opening a road to the next classical session, the Fifth Hour. The activity of the genioglossus (the main tongue muscle), essentially being synchronized with respiration, suggests that when we work on the functioning of the diaphragm, we will also influence the functioning of the tongue (Onal et al. 1981). In cases of breathing difficulties, I have observed positive results when working with the tongue. Some clients with very tight tongues could only get a release in their breathing after I worked on their tongues. The way in which we use our tongues has a clear impact on our overall muscular tonus. For example, recent research has shown that if you press your tongue upwards while making a physical effort, you might be able to perform movements more strongly (DiVico et al. 2013).

General Physiology of the Tongue and Mouth

Here are only a few of the multiple functions taking place in the mouth:

- The buccal mucosa has a twenty-five-day turnover rate, which provides the body with a fast adaptive capability, even more so than the skin which turns over in fifty to seventy-five days (Auriol and Les Charpentier, 1998).
- Composed of both tonic and phasic muscle fibers, the tongue contracts during inhalation to facilitate the passage of air. It is coupled with the contraction of the diaphragm (Onal et al. 1981).
- 1 to 1.5 liters of saliva are produced each day in the mouth (Humphrey and Williamson 2001).
- The movement of the tongue during swallowing allows the mouth to become moister, the nose to drain, and the pressure on each side of the tympanic membrane to be balanced.
- Responsible for the digestion of carbohydrates, the enzyme amylase is produced by the salivary glands. For amylase to work well, it is necessary to have a good flow of saliva and to masticate long enough to let the food be completely mixed with the saliva. Therefore, when dealing with digestive dysfunction it is important to check that the person has enough saliva in his mouth and that he is patient enough to let the food be completely mixed with saliva and predigested in the mouth before swallowing.
- Immunoglobulin A (IgA) is an important component of the body's immune response. It is secreted in saliva, tears, and the mucous membranes lining the intestines and urogenital tract, and is able to freely penetrate into these mucous membranes (Trochimiak 2012).

There is a bridge between 'abstract physiology' and 'living physiology' that will emerge from our perceptions and also from clinical realities. This bridge offers a possibility for further development of our work, and I invite you to explore some of these possibilities in this article, which aims to add a few specific details and some new concepts to our work as structural integrators.

A Tour of the Mouth

I invite you on a voyage around your own tongue. We will combine a systematic tour to revise or deepen our anatomical view, a theoretical one to stimulate our brains, and a practical one more geared toward our daily practice. Some general treatment principles and techniques will

be discussed as well. I have included a few diagrams of the relevant anatomy, but you may want to consult your favorite anatomy books for more detail while reading along. Techniques performed in the mouth are usually done while wearing either a hand glove or a finger cot. The 'tools' most commonly used are the tip, dorsum, or side of the index finger; the dorsum of the index finger when flexed; the thumb as a pincher; and the other hand working on the outside of the mouth. The client is usually lying supine, but it can be very useful to use the sidelying position when you want to use the client's weight for a particular technique. Sitting is good for coordinative work. Standing is helpful for orientation and expression.

Muscles, Nerves, Taste Buds, and Artery

When working on the musculature of the tongue, fix a point on the place of restriction and use the client's breathing to reestablish a normal movement pattern of the tongue. When the coordination is 'paradoxical', it can take some time. [Editor's note: *European Rolfers use the term 'paradoxical' when referring to functional patterns that are opposite to those we would normally expect*]. It is necessary to let the client take breaks in order to swallow saliva and rest. I suggest you start with the tongue itself and its intrinsic musculature. Press the tongue downward and hold the tongue still while you explore its structure. Since the tongue is slippery, you will need to anchor your finger against a harder part of the oral cavity (muscle or bone), choosing the angle with care.

The tongue is composed of extrinsic and intrinsic musculature. That means that as Rolfers we want to check that their functioning is differentiated, i.e., the functioning of the extrinsic muscles is separate from that of the intrinsic. You want to see if there is a spot where the intrinsic muscles are 'glued' together with the extrinsic musculature. Functionally, you want to make sure that the tongue is mobile and the muscular insertions in the mouth are the fixed points and not the contrary. If an athlete performs better while having his tongue pressed upwards, it seems clear that his tongue cannot have the 'paradoxical' situation of reversed fixed points while at the same time the trigeminal nerve fibers are being activated by the pressure of the tongue against the palate.

In working on the tongue there are five layers of intrinsic musculature you have to feel through. While holding the tongue still, you will work on the place of most stress. It is a little bit like searching for hard spots in a sponge. Start with the superior longitudinal muscle, then the transverse muscle, then the verticalis and septum, and finally the inferior longitudinal muscle (see Figures 1 and 2). The superior longitudinal and verticalis muscles actually interweave, with the former running along the length of the tongue and latter vertically. This intrinsic musculature protrudes and elongates the tongue, while the extrinsic musculature – genioglossus, styloglossus, and hyoglossus – controls the movement of the tip of the tongue (Takemoto 2001).

Now, with your index finger, using either the tip or the side, touch the following extrinsic muscles in succession: styloglossus, genioglossus, hyoglossus (see Figure 3). You can also use a finger on the outside of the mouth to work the geniohyoid and mylohyoid muscles. Move up the styloglossus to find your way back down along the stylohyoid muscle, and then hook the root of the tongue (Figure 2). Continue with the deep palatoglossus muscles and the superior constrictor (Figure 3). The palatoglossus muscles, which can be difficult to palpate, form the palatoglossal arch and are in close relationship with the tonsils. Together with the palatopharyngeal arch they close the oropharyngeal isthmus. Scar tissue can often be found in this area, and it can be useful to work on this, despite the discomfort it may cause the client.

Repeat this sequence on the opposite side of the mouth. Which muscles are the most tense within these areas? You now have a three-dimensional image of the tongue and you can work on the specific restrictions in order to reestablish proper tracking of the tongue.

As an aid in learning the names of these muscles, I suggest memorizing the origins and insertions of the structures – which determine their names: ‘genio-’ comes from the Greek *geneion*, meaning chin; ‘stylo-’ relates to the styloid process of the temporal bone; ‘hyo-’ relates to the hyoid bone; ‘glossa’ comes from the Greek *glossa* and means tongue; ‘mylo-’ comes from the Greek *myle*, meaning grinder (a reference to teeth).

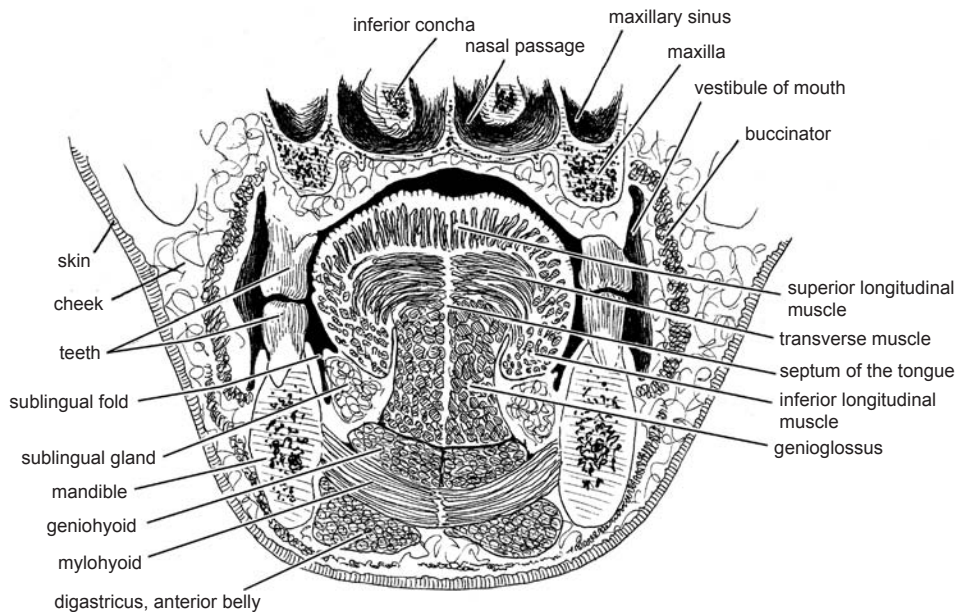


Figure 1: Frontal section of the jaw and tongue. Image from *The Body Moveable* 6th edition (bodymoveable.com), used with permission.

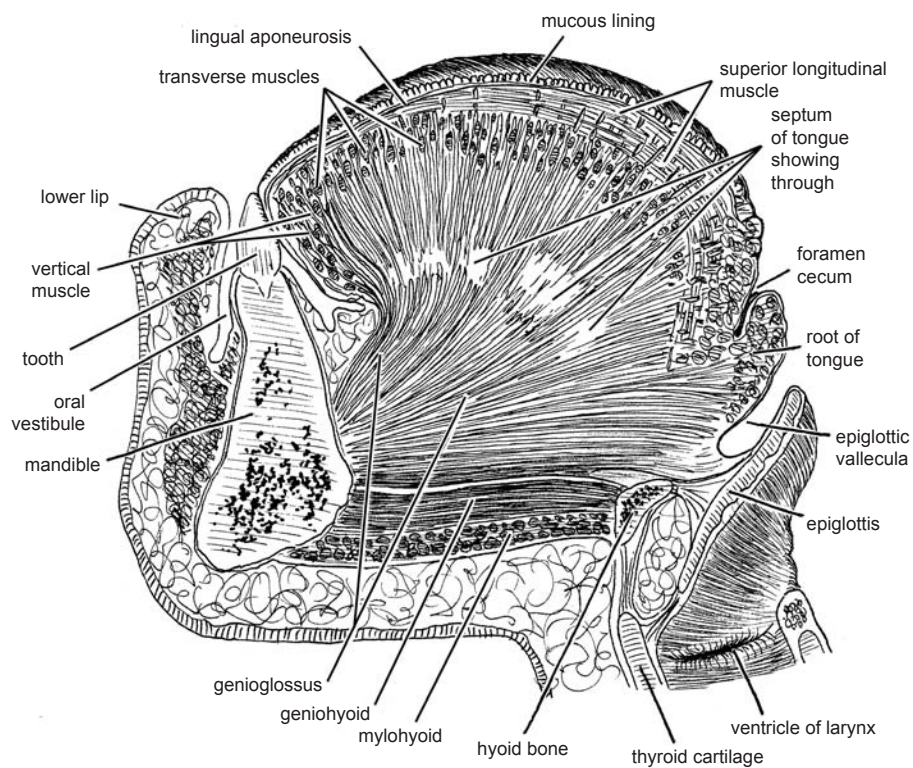


Figure 2: Mid-sagittal section of the tongue. Image from *The Body Moveable* 6th edition (bodymoveable.com), used with permission.

Between the hyoglossus and genioglossus muscles, feel for the lingual artery branching off from the carotid artery, which brings blood to the sublingual glands, the gums, and mucosa of the oral floor. Feel if this artery is unobstructed or if some tension might be inhibiting its proper function. The hypoglossal and lingual nerves enter

the tongue on the external side of the hyoglossus. The first is higher than the lingual artery, the second is lower. Because of this situation, it is most efficient to hook your finger as deep as comfort allows on or along – depending on what restriction you find – the course of the artery and then pull towards the outside the mouth in

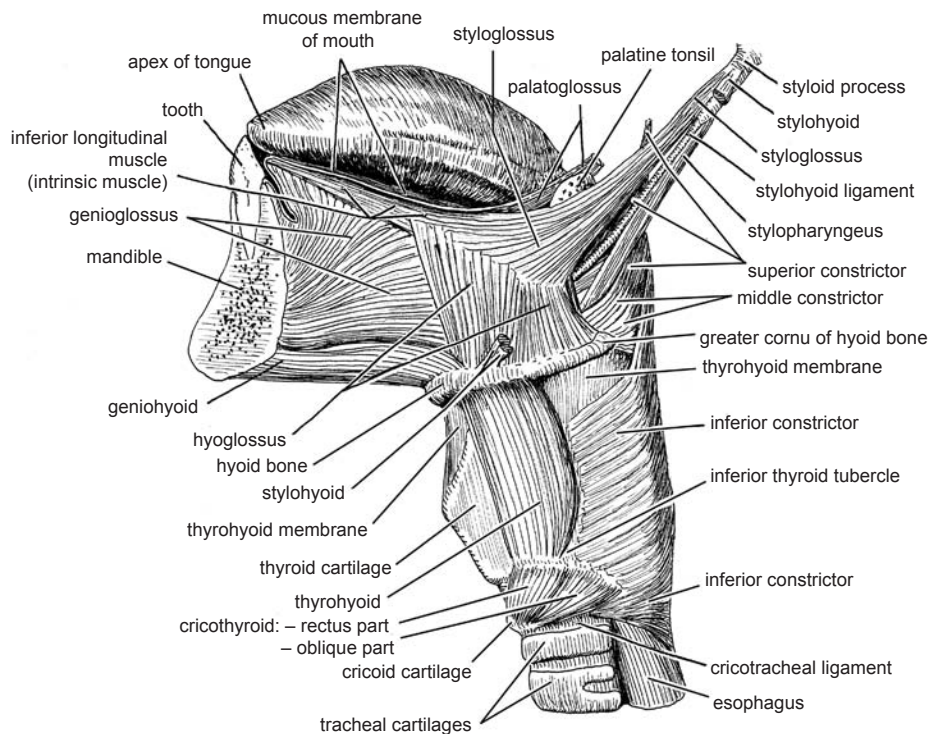


Figure 3: View of the extrinsic muscles of the tongue. Image from *The Body Moveable* 6th edition (bodymoveable.com), used with permission.

order to let the nerves find their maximum length. (Note: apart from specific medical conditions, there is no concern in touching the intra-oral arteries as long as your touch stays light and smooth – no pressing. Take breaks often to let the client breathe and give feedback.) The glossopharyngeal nerve lies in between the two nerves you just worked on. You can find it by localizing the deep root of the lingual artery medial to which the nerve should lie. Is the flow of blood in the lingual artery unimpeded and are the nerves unimpeded?

A clear and precise diagnostic assessment at this time is important if you want to get a good understanding of how the tongue moves. A little deviation to one side or in one plane will often occur during the course of a day and will have a strong influence not only on the temporomandibular joint (TMJ) and posture, but on physiology as well. For testing the muscular structures of the tongue, you can gently grasp the tongue and pull outward. In this way you can feel if the tongue tracks well or if tension is making it deviate. This maneuver will also allow you to stretch the tensest muscular fibers. Actively tracking the tongue in this manner needs a careful touch because of the risk of pressing against the nerves mentioned above.

In practice it is also possible to proceed as follows, with the client lying either on his side or supine. Work with the weight of the tongue as much as possible or use a counterpressure against a nearby muscle or bone. Go from posterior to anterior and from lateral to medial. When the tongue starts to relax you can access its upper side more easily and feel if the taste buds need some work. They respond well to a slow circular touch. The root of the tongue is easy to access first (Figure 2), then the base of the tongue. Scrape the root upwards (i.e., elongate the fibers distally to give length) and medially, separating the extrinsic muscles from the intrinsic in a sweeping movement that stops at the sites of any abnormal tension. In this way, you have quickly tested all of the structures discussed and you can then ascertain the most demanding sites. For clarification, the root of the tongue is the attachment between the front and back of the mouth, while the base of the tongue is the deeper part (Fang et al. 2011).

The Salivary Glands

In the oral cavity, fluid production and exchange are of major importance; for example, the quantity and quality of saliva in the mouth affects taste sensitivity (Matsuo 2000; Mese and Matsuo 2007). Saliva carries information to the taste

buds, it prepares the bolus by predigesting it, it protects the teeth and mucosa from infections, and it allows the salivary glands to produce and transport the right quantity of saliva to the oral cavity. Saliva not only has an antibacterial function, it also supports a selective growth of non-cariogenic microflora (cariogenic refers to tooth decay). In a breakdown, 20% of saliva comes from the parotid glands, 65% from the submandibular glands, and 8% from the sublingual glands. The remaining saliva comes from other minor glands. When you eat, the parotid glands increase their production to 50% of the total flow (Humphrey and Williamson 2001).

Palpate the submandibular glands and their excretory ducts; palpate the sublingual glands and their ducts; then palpate the parotid glands that lie close to the ear. The parotid gland ducts are close to the second lower molar. Palpate the oral cavity entirely, searching for tension in the individual glandular structures embedded in the soft tissue. In working on the sublingual, submandibular, and parotid glands and their associated duct work, try to form an image in your mind of how well they are functioning. Are they tight or smooth feeling? Normally, when they are free and unrestricted you can barely feel them, but any fixation is easy to assess with a gentle touch. When a gland is tight, it feels a little crunchy. The surface of the mucosa should feel smooth and glide easily without encountering any interruption in the movement of your finger. When the gland is free, you should feel the saliva spray against your finger. For this kind of technique, it is necessary to take some time because the glandular structures do not react immediately – it can take a few minutes of work for the parotid gland to work well again. Also be aware that the facial nerve (cranial nerve VII) passes through the parotid gland. If a client has a complaint in this area around this nerve, you will want to check the passage of the nerve through the parotid gland.

The parotid gland is situated inside a division of the fascial layer in the cheek (Drake et al. 2004). Make sure that the two layers on each side of the gland are free from the gland itself and from the surrounding structures. You have to be aware of the presence of glandular stones, so you should never use a hard touch. Also be aware of the presence of the carotid artery and vein embedded with the parotid gland.

Different types of bacteria are present in different areas of the mouth and have specific roles in the balance of oral health. When this balance is disrupted, there is the production of biofilm on the surface of the mucous membrane. A mucous cell will react differently in the presence or absence of biofilm, and the energetic feeding of the mucous cells can be disturbed. Mucous cells use muscular contractions to expel their secretions. We need to be sure then that the cell itself is well-connected to physiological pathways if we want it to function correctly. In the presence of biofilm in the oral cavity, bacteria compete and interact in a protected environment, similar to crowded cities with many people jostling each other (Jakubovics 2010). Our manipulations act not only on mechanical stresses, but also may help to simply clean up some of this oral biofilm, facilitating cellular access. It has been demonstrated that tongue scraping, in addition to brushing the teeth, is efficient in reducing bacterial populations (Bordas et al. 2008). Following a mouth-work session and for a few days afterward, you can suggest to a client to brush all around the inside of his mouth, including the three sides of the tongue and the inside surface of the jaw. (The outside of the tongue is like a triangle: there are three sides to it. One is the upper surface, called the "dorsum," and the two other sides are separated by the lingual septum, forming the right side and the left side of the tongue.) This will help to ensure that the pathways stay as clear as possible from biofilm buildup.

Lamina propria is the name of the loose fascial layer of the mucous membrane, and you will find it throughout the oral cavity. If you pinch the skin from inside and outside the mouth, you can easily evaluate its freedom. Localized strong restrictions can often be found and worked on.

Even though we have been focusing mainly on the oral cavity, we also have been affecting the muscular structures that enwrap it. The masseter, buccinator, and multiple little muscles and fascial sheets around the mouth can be evaluated by using a hand outside of the mouth while the gloved finger is concentrating on the mucous membranes and glandular structures inside the mouth.

The Hypoglossal Nerve

Cranial nerve XII, the hypoglossal nerve, is located beneath the tongue ('hypoglossal' means 'under the tongue'), and this nerve

innervates the tongue. Gently pinch the tongue and carefully stretch it, putting your attention on the slow and precise stretching of the hypoglossal nerve. Have the client breathe deeply to help relax the tongue. Stretch the tongue at different angles and feel for any abnormal tensional patterns. Continue stretching until the tongue can stay relaxed in every position. Be aware that tongues sometimes need tonus: please do not stretch tongues in directions in which the fibers are already hypotonic. A recent study has shown that hypoglossal stimulation could reduce respiratory apnea (Kezirian et al. 2014). It's easy to see how this could stimulate future explorations into our work.

The Lips, Mouth, and Gums

Now that the area close to the tongue has been carefully and systematically checked, let's take a look at the lips and the inside surface of the lips. Your aim is to affect muscular tension in this area in order to stimulate the excretion of fluids, much like a spongy pump that needs to be able to contract and release. If the tissue is hypertoned or hypotoned, the effect will be the same in that serous or mucous fluids will not move freely into and out of these tissues. Use your fingers as you usually would in the classical Roling 'Recipe' to find the places of most restriction. These specific places in the soft tissue can be worked with more precision by being attentive to the fact that there are individual glandular structures located throughout the mucosa of this area and especially close to the lips. This is one reason this area is a good site for biopsies to check for any tissue pathologies.

Evaluate any soft-tissue restrictions that you find and work with them. By applying a subtle 'listening' touch, you can feel for a slight spray of fluids, much like that of the parotid glands, but on a smaller scale. In order to do this we need to do more 'listening' with our hands, allowing more time for a release, because the glands need a little more time to respond.

Besides our usual shearing fascial touch, it is useful to gently pinch the soft tissue and to elongate it in the direction in which you find a restriction. Normally you should be able to move this pinched tissue all around. If one direction is missing, including rotation, you have found a restriction. There are more directions to check than on

other parts of the body, because we are also working on the inside of the mouth.

Next we will evaluate and work on the gums as in the classical Recipe. The gums are an anchorage site for the teeth and are unique because they have no submucousal tissue. The mucous membrane is directly attached to the bone and the teeth by the mucoperiosteum (Auriol and Les Charpentier 1998). To work with the gums you will need to use a slightly different touch. It is not the same as you use for bones, and not the same as you use for soft tissue, but something in between. Slowly palpate the perimeter of the gums, searching for places of microrestrictions. This feels like a lack of springiness, a hard spot, or a dryer spot. Release the localized tension by staying in contact with the bone under the gums and by imagining you are reestablishing a springiness in the gums.

The Teeth

In this part of the skeleton, there is a permanent remodeling taking place in reaction to changes in pressure. In the classical Recipe, the cranium will be addressed before we proceed to inside the mouth. If this cranial work has proceeded well, we should be able to achieve a durable balance with the intraoral work.

Palpate the tip of each individual tooth. You can feel when the density of the alveolar bone under the tooth is too strong or too weak. Feel if a tooth has lost its micromobility or if, on the contrary, it has gained too much mobility. Simply remobilize the tooth and alveolar bed, as well as the structures directly underlying each tooth that transmit pressure at each bite that's taken. Mobilize a lower tooth first, then check the corresponding upper tooth and the transmission into the maxillary bone. Make sure there is no strong repetitive pressure directed to the tooth you want to reinforce. It is useful to pinch the tooth between the thumb and a finger. Pinching the tooth with your other hand at the same time will allow you to have even more leverage on the gums and implantation of the tooth.

Now you can address the structures of the mandible and maxilla by 'listening' to how the bone is being influenced by mastication forces. As you want to create a new balance, you need to check each side of the mandible and each side of the maxillary bone to find if there is a twist or a fixation

that would inhibit the proper functioning of the jaw. Release any adhesions between the bone and the soft tissue, often present around the TMJ, to free the movement of the mandible. Free the attachment of the medial pterygoid on the inside of the mandible. In our work, this is often an important step to freeing the TMJ itself. We will not review all the structures attached to the mandible at this time as the focus of this article is on the inside of the oral cavity as close to the tongue as possible.

Now palpate the mandibular nerve. This nerve divides into two branches: 1) the inferior alveolar nerve, which pierces the bone of the mandible to emerge at the mental foramen; and 2) the lingual nerve, which is close to the tongue. If there is a restriction, it will be sensitive. To release it, gently elongate the nerve distally with minimal pressure and by 'listening' to the attachments of the soft tissue around it that could be pulling or narrowing it.

We can also look at facial expressions and how they might be affected by tension in the oral cavity. It can be meaningful to use this aspect together with the new proprioception that our work brings in order to anchor the functional goals that have been set.

The Oral Cavity and Aging

In older people, there is a natural reduction in olfactory sensitivity altering taste and, to a lesser degree, causing difficulties in chewing and swallowing. On the other hand, salivary output and food enjoyment are normally unaltered. Therefore, other discomforts, such as dry mouth, are related to functional disorders. Nevertheless, this concerns up to 39% of older adults (Ship 1999). Dental, mucosal, and salivary dysfunctions are frequent in older people and often are related to medication, chemotherapy, and radiation therapy. It is very possible that older people could benefit greatly from our work in the mouth.

Saliva and Sports

It has been established that a moderate amount of physical training elevates the level of Immunoglobulin A in saliva. With intensive training, however, the salivary level of IgA is reduced. The conclusion is that too much physical training will decrease the immune response in the oral cavity, while a moderate amount of training will increase it (Trochimiak 2012). This means that when the flow of saliva decreases,

when our oral health worsens, or when we see a reduced immune response, we should engage in a reasonable amount of exercise – not too much, not too little. On the other hand, in the presence of autoimmune diseases like ankylosing spondylitis, we should understand that as the level of IgA in the mucosa and the blood is elevated, moderate physical training could possibly enhance inflammation (Nathan 2002; Montenegro and Monteiro 1999). What I then wonder about is whether either extremely moderate exercise or intensive training (in order to reduce the immune response) could be useful to individuals with autoimmune conditions.

Conclusion

In my opinion, our capacity to build bridges with professionals from other fields – namely doctors, dentists, nutritionists, biologists, psychologists, scientists, etc. – is a keystone in the further development of our work as manual therapists. We need to feed our curiosity and creativity in order to meet our clients with fresh enthusiasm. Whatever new fields we want to discover, whatever new theory we might build, I believe that the quality of our touch will always be our most valuable tool. The most simple empathetic touch by someone who is aware of what he does not know, along with the most simple 'listening' touch of someone truly curious about what is happening under his hands, are the two biggest strengths we want to refine.

I hope you enjoyed this little exploration, and I hope it inspires your practice, enhances the quality of your touch, and motivates your own explorations.

After intensive involvement in rock climbing, and after having done many different jobs including the founding of a rope access company, Mathias Avigdor was certified as a Rolfer in Munich in 2006. Together with Esther Rehacek DO and Mathias Berovalis DO, he leads a multidisciplinary center offering Rolwing SI and osteopathy in Yverdon les Bains, Switzerland. His twenty-six-minute documentary on Rolwing SI from 2012 is available in the original French at <http://tinyurl.com/AvigdorRolfDoc> and with English subtitles at <http://tinyurl.com/Avigdor-doc-English> (where you can also find links to versions subtitled in German, Italian, Japanese, Spanish, Czech, and Slovak under the heading "Vidéos Toutes Versions"). Avigdor invites all of his colleagues to freely use these videos on their websites, in presentations, etc.

Intensive further education in Rolwing SI and osteopathy was a major focus for Avigdor until 2013, when he turned his attention to teaching adults, offering further education for manual therapists in the fields of postural, cranial, visceral, and articular approaches. He is a member of the board of the Swiss Association for Rolwing and Structural integration and a founding member of the Académie Francophone de Rolwing® Intégration Structurale (aka 'afri'; the academy of Rolwing SI for French speakers), in which he is currently active in Geneva as a Rolwing teacher-in-training. He likes to share a passion for precision and delicacy of touch and of relationship. He nourishes a creative drive for whatever feeds his need to bring meaning into his work.

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Joint Restriction in SI

The Lumbar-Pelvic Algorithm – A Case Study

By John deMahy, R.N., Certified Advanced Rolfer™

Introduction

Movement restrictions in the joints of the axial skeleton produce an immediate alteration in the client's structure. These alterations can include such patterns as leg-length discrepancy and changes in pelvic inclination as well as orientation of the spinal curves. They also produce localized inflammation and edema, which is experienced by our clients as pain. Arrays of compensations are then developed in an attempt to reduce that pain. These compensations can develop throughout the body. At this point, the client's structure is dramatically altered (see Figure 1).

Cycle of Restriction & Compensation

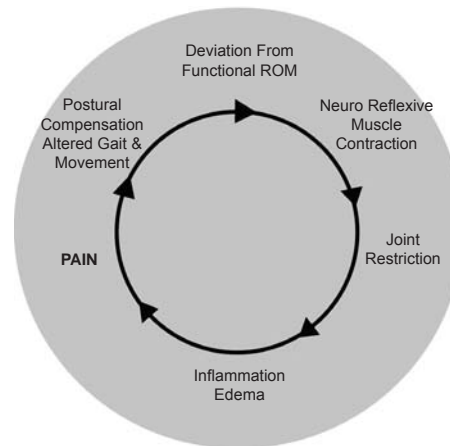


Figure 1: Cycle of joint restriction and compensation.

The assertion of this article is that quickly identifying and mobilizing axial joint restrictions will greatly expedite the goals of structural integration (SI). Although this is a 'post-Ten' case study, these types of compensations can complicate any session of a series. For example, the simplest of sacroiliac restrictions will produce a leg-length discrepancy, which will completely alter foundational support and grounding. A lumbar facet that will not extend locks the vertebra in flexion. This can flatten the lumbar curve and tilt the pelvis posteriorly. It is easy to see how these two compensations would effect a Second, Fifth, or Sixth Hour of the Ten Series. As will be demonstrated in this article, when

these restrictions are mobilized, many of the compensation patterns quickly resolve. Without taking joint restrictions into account, a practitioner can waste valuable time and even an entire session chasing the wild geese of compensations.

Background

During my advanced Rolfing® SI training in 1989, I was introduced to the world of spinal mechanics. I quickly saw that this was going to radically change and deepen my understanding of SI. Spinal mechanics can easily become complicated and confusing. I found myself spending more time trying to figure out what was going on with my client's spine than actually working. I realized that I needed to find or develop a tool to quickly organize specific assessments and procedures that would bring order to the chaos and expedite that phase of a session.

In emergency rooms (ERs), where speed and accuracy are essential, *algorithms* are used in the delivery of care. Health-care algorithms are analytic tools derived from evidence-based criteria. They are used to improve quality of care by increasing the accuracy and specificity of assessment and treatment while also saving valuable time (Iyengar 2009). Inspired by my work in the ER, I combed the literature for information, broke it down into digestible chunks, and applied the principles of SI to what I found.

The Lumbar-Pelvic Algorithm is designed to expedite the specific identification and resolution of joint restrictions in clients with complications in the back and lower extremities. By following the algorithm, a practitioner is able to quickly assess axial joint function without being an expert in spinal mechanics.

Procedure

The algorithm begins with a simple movement test, which has a clear positive or negative result. The result directs the practitioner to a specific palpation test, which identifies the joint restriction. The algorithm then leads to a procedure that will resolve the restriction. Then the movement test is repeated to assure freedom of

movement in the joint (see Figure 2 for an example based on a section of the Lumbar-Pelvic Algorithm). The algorithm assessment process takes only about three to five minutes, and if no positive results are found the practitioner is assured that joint restrictions will not interfere with accomplishing the session goals.

This algorithm is divided into three sections: foundation, mobility, and locomotion. The progression of the algorithm applies the following principles: foundation precedes mobility, and mobility precedes locomotion. The foundational section assesses the pubic symphysis function and up- or down-slip of the innominates. These joints connect the axial skeleton to the lower extremities and the ground. Stability in these joints is essential to the function of the rest of the lumbar and pelvic regions. These assessments are also often confused, so the algorithm guides the practitioner through a differential assessment. Next, in the mobility section, restrictions in the lumbar spine are assessed and addressed. Once the lumbar facets are functional, the algorithm leads into sacral assessment and intervention. Since the rotation of the innominate on the sacrum is essential for proper gait, the locomotive section assesses and treats innominate rotation restrictions.

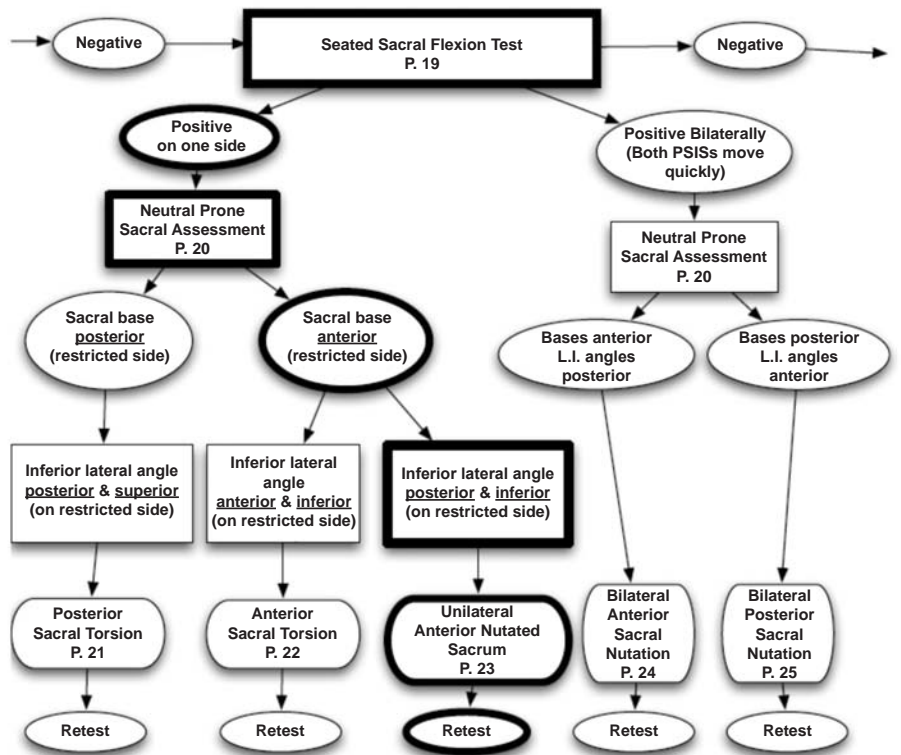
As you proceed through the algorithm, each intervention supports the next, so there is no need to repeat a test or procedure. Muscle energy technique is used as the intervention. This technique was developed by Fred Mitchell Sr. DO in the 1950s. It is an intrinsic technique in that the activating force is an isometric contraction completely controlled by the client. This contraction stimulates reflexes that temporarily override the reflexive muscle contraction restricting the joint. During the seconds in which the restrictive muscles let go (post-contraction reflex), the practitioner gently moves the joint into its functional range of motion. Since the procedure is gentle and uses the intrinsic force of the joint-stabilizing muscles, the client's body does not have to negotiate the forces of high-velocity low-amplitude adjustments.

Case Study

With this background, we can now proceed to the case study.

Client History

Our model is a forty-year-old female yoga instructor who had completed an SI series



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Figure 2: The sacral section of the Lumbar-Pelvic Algorithm, with the outcome from the case-study client highlighted.

two years earlier. In the interview, she complained of right-sided low-back pain. She described her pain as radiating around her right iliac crest to the anterior superior iliac spine (ASIS) as well as the back of the right calf and ball of the right foot.

Pre-Session Standing Assessment

The client stands with knees locked and weight over her heels (see photo A in Figure 3). She has an anterior pelvic tilt, and an exaggerated lumbar lordosis. The rhomboids are in a hypertonic state, decreasing the thoracic curve. Her shoulders are elevated and the head is drawn forward. There is a high level of tension in the jaw.

Pre-Session Gait Analysis

As the client walks, she bears the majority of weight on her left leg while avoiding weight on the right leg. The left leg is externally rotated while the right leg is slightly internal. She lifts her right leg from the waist, over-engaging her right quadratus lumborum. There is no contralateral movement between upper and lower extremities. See video clip at <http://tinyurl.com/nvpgb7l>.

Applying the Algorithm

The algorithm starts with a standing flexion test (see Figure 4; deMahy 2013) to assess for dysfunction in the foundational joints of the pelvis. With a positive finding, the position of the ischial tuberosities on the horizontal plane is used to differentiate between superior innominate (up-slip) and pubic-symphysis dysfunction.

The client had a positive finding on the right side in the standing flexion test. Palpation revealed horizontal ischial tuberosities, ruling out innominate up-slip. Palpation of the pubic symphysis revealed a right superior pubic symphysis. The symphysis was treated and then retested. The negative result of the test showed that the intervention had been effective.

Next we test for axial mobility, comparing the lumbar spine in neutral prone to its position in extension and flexion. The rotation of L5 did not change in extension, indicating functional movement. However, in the flexion test L5 rotated right as compared to neutral. This signifies that the right facet would not open during flexion, i.e., a right L5 flexion restriction. L5 was then treated (see Figure 5; deMahy 2013) and then retested with a negative result.

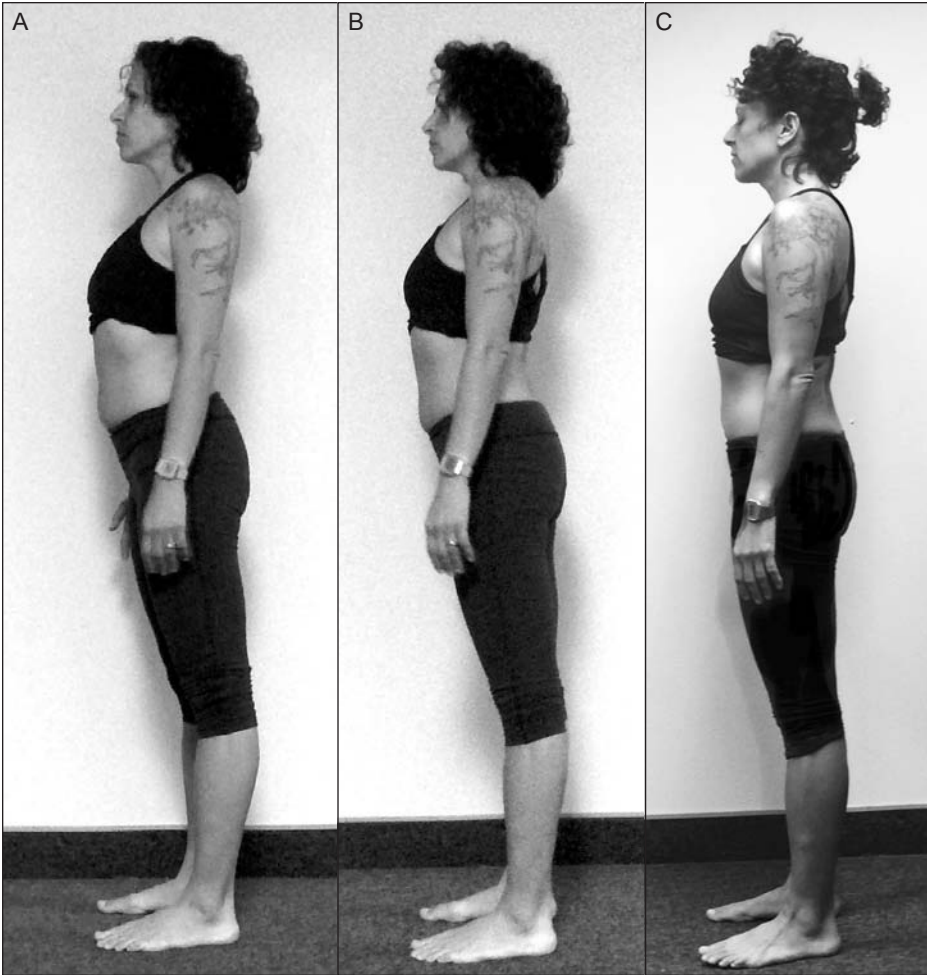


Figure 3: A – pre-session; B – mid-session, post-algorithm; C – post-session.

The algorithm then moves into the sacral section (Figure 2), using the seated flexion test (Figure 6; deMahy 2013) to assess for the presence of sacroiliac (SI) dysfunction. As the client's lumbar flexed, the right posterior superior iliac spine (PSIS) was quickly dragged up by the spine, indicating a right SI dysfunction. With the client prone, palpation revealed the right sacral base was anterior and the right inferior lateral angle of the sacrum was posterior and inferior, which identified a unilateral right anterior nutated sacrum. The sacrum was treated and then retested with a negative result.

Now that we have mobility of the lumbar and sacrum, we assess the movement of the ilia on the sacrum. The Stork or one-legged standing test (see Figure 7; deMahy 2013) is used to assess the presence and side of this dysfunction. With this client, the test indicated a right iliosacral dysfunction. By comparing the levels of the ASISs and PSISs, the client exhibited a right anterior innominate rotation. She was stuck in the

push-off part of the gait. The iliosacral joint was treated (see Figure 8; deMahy 2013) and then retested with a negative result.

At this point, twenty minutes into the session, the algorithm was completed. As displayed in the after algorithm photograph (see Figure 3, photo B), many of the compensations have been resolved, clearing the floor for the rest of the session. The client stands with her knees unlocked and her pelvis near horizontal. There is a decrease in rhomboid tone and her thoracic curve has returned. Her shoulders are resting down, her head is nearly over her shoulders, and there is a marked decrease in jaw tension.

Post-Algorithm Gait Analysis

Contralateral movement has been restored and weight bearing is bilateral. The rotation of the legs is now bilaterally symmetrical. The right quadratus lumborum has released, restoring normal swing in the hip. See video clip at <http://tinyurl.com/l4rfz89>.



Figure 4: Standing Flexion Test: the test is positive if one PSIS moves anterior and superior before the other.



Figure 5: Client positioning for lumbar flexion restriction procedure.



Figure 6: Seated Flexion Test. Like the standing flexion test, this is positive if one PSIS moves anterior and superior before the other. When the legs are taken out of the equation, flexion exhibits the function of the sacrum on the ilium.



Figure 7: The Stork Test is positive if the PSIS moves superior in relation to the sacrum.



Figure 8: Client positioning for anterior innominate rotation procedure.

The Rest of the Session

There is still forty minutes left in our hour-long session. With many of the compensation patterns out of the way, the job of stabilizing and integrating her structure is well on its way. Here I am looking at how to increase support in her feet and legs, equalize movement in the pelvis, decompress the lumbar, and bring those changes up through the head.

These goals were accomplished (see photo C in Figure 3) through the following steps:

1. Establish support in the feet and legs: I assessed the client's ankle movement in a prone position by bringing her ankle into a right angle (mimicking a standing position) and observing the rotation in her leg. This produced an internal rotation in her right leg but not in the left. This means that in standing and walking, a torsion pattern had been moving up the right leg but

not the left. Decompressing the tibial tract between the malleoli resolved this problem.

2. Equalize movement in the pelvis, and decompress the lumbar: With the client sidelying, I lengthened tissues of the lateral line of her waist and pelvis. This was similar to Third-Hour work. The client's Fourth-Hour line of her right leg was short; the left was normal. I equalized the Fourth-Hour line and integrated it with some gentle work on the floor of her mouth.
3. Bring those changes up through the head: With the client supine, we mobilized restricted cervical facets, which always accompany lumbar and sacral restrictions. Work was done on the fascia of the cervical erectors and scalenes.
4. Finish off with bench work and tracking.

Client Education

Knowledge gives a person power over her pain by decreasing anxiety and increasing body awareness. Client education includes explaining each restriction and how it contributed to her pain. In this particular case, we discussed the importance of a stable and mobile pubic symphysis. Although she did not feel pain in the front of her body, dysfunction at the symphysis was most likely the beginning of her problem; it changed the length of one leg and altered the range of motion of the same-side SI joint, causing a domino effect through the rest of the pelvis and low back.

The most common cause of a right superior pubic symphysis is stepping off of a curb and landing on a straight right leg. The jolt up the leg stimulates the neuromuscular reflex to lock the joint. More relevant to this client, this dysfunction can also be caused by aggressive yoga practices. Attempts to stretch the adductors can lead to stretching the ligaments of the symphysis. It is important to strengthen the secondary stabilizers of the symphysis, which are the muscles of the transversus abdominis and the anterior pelvic floor. Considering her yoga background the *mula bandha* and *uddiyana bandha* were recommended.

Conclusion

The use of algorithms is in no way intended to replace the invaluable process of 'seeing'. However, this case study does demonstrate that the use of an algorithm and joint mobilization can greatly enhance and expedite the process of integration. The use of algorithms is useful not only in post-Ten sessions but throughout the Ten Series. In Roling SI, fascia is where we dance, but if there is glass on the dance floor, doesn't it make sense to sweep the floor first?

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Structural Aging Part 2 – The Momentum Upward

By Valerie Berg, Rolwing® Instructor, Rolf Movement® Practitioner

We have all seen the ‘old man/woman shuffle’: the head is down and forward; the eyes are down and focused; the thoracic curve is overly kyphotic; and the rhythmic movement that propels the gait occurs in only one plane, usually the sagittal. This shuffling often accompanies a spine that has lost its curves, its beautiful transitions between lateral bending and rotations that send waves of elegant spiraling movement up and down. [In the first part of this discussion of ‘structural aging’ (Berg 2014), I talked about the feet (the ‘juicy paws’) and the importance of leg abduction and adduction, toe-hinge function, and leg extension in fueling the spine to move in all directions needed.] Perhaps in response to spinal pain, thoracic mobility is reduced, thus preventing the natural twisting that occurs with a healthy gait. This person is not necessarily old in years, yet he is structurally aging.

While my first article focused more on the lower body and particularly the feet and legs, here we will look at how structural aging appears higher up in the body. Key elements we will see include:

1. Reduced use of peripheral vision.
2. A rib cage locked up or locked down.
3. Loss of natural arm swing.
4. Loss of spinal curves.
5. Orientation forward and usually down.
6. A pelvis that has little movement.

The Eyes: Gaze and Extension

To understand some of the key elements that affect structural aging in the spine and upper body, we need to go back to the beginning. Embryologically, the vestibular nerve is the first to myelinate and, ironically, it is the first sense organ to deteriorate with aging (of the hairy cells in the inner ear). This has profound implications. The human being needs to balance and know her position in the gravitational field. Long before our thoracic or cervical curves form, our eyes and inner ear are finding up and

down and ‘out there’. It is the sensorial searching and reaching of an infant that begins cervical-curve formation, and soon the hands begin to respond to the eyes’ curious search. The eyes fixate on a target before the hands are used, indicating that the eyes are providing spatial information for the hands. Eyes, hands, and arms begin the pushing and reaching into our spatial relationships. We move up and out with our sensing and our hands.

Knowing which way is up and which is down and balancing in gravity appear to be priorities for the human being. A newborn’s arms flail. The eyes are foggy. The mouth searches. The eyes may begin to focus and the head may turn toward sound and the hands then begin to reach and search for what the eyes see and the ears hear. The eyes, ears, mouth, and hands send us where we go and tell us where we are. Can you remember when you stopped using your eyes in multiple directions to scan your environment prior to movement of any kind? How coupled are your eyes, neck, and hands? How has computer use changed how we use our eyes to see all around us, to inspect detail, to see the larger field?

In *The Polyvagal Theory*, Stephen Porges (2011, 191) discusses the way in which our sensing influences and filters social stimuli, to assess risk and danger “. . . Upper motor neurons regulate the control of eyelid opening (looking), facial muscles (emotional expression), middle ear muscles (extracting human voices from background noise), muscles of mastication (ingestion), laryngeal and pharyngeal muscles (vocalization and language), and head-turning muscles (social gesture and orientation).”

There is in fact “a neural pathway involved in the regulation of the eyelids that also tenses the stapedius muscle in the middle ear, which facilitates hearing human voice. Thus the neural mechanisms for making eye contact are shared with those needed to listen to human voice” (Porges 2011, 192). This has profound implications for how we as a culture stare at our smart phones, oblivious to voices around us, with

the postural adaptations we make for that staring. How often are we all having eye-to-eye, voice-to-voice contact any more?

Eye Restrictions and Structural Aging

How does this loss of eye to hearing/listening and expression potentially show up as a *feel* or look of aging in these postural sets? In seeing a person who has structurally aged, the most common posture holds the eyes and head down and the arms and hands in front of the body. The arms usually only move in the sagittal plane, and the ‘dowager’s hump’ becomes more and more apparent. This posture of the eyes dropping down and dragging the head down with them is a main contributor to the overall loss of spinal curves and the formation of a series of fascial compensations and rigidities that severely limit movement options. As the eyes drop from the horizon, they lose their peripheral awareness of the world. Facial expression is affected; neck and shoulder pains may develop.

The capacity to orient to up and down is neurologically ‘hardwired’ when vestibular myelination occurs in the womb. Orienting from the chest is deeply connected to the movement of the eyes from those first moments out of the womb. “The superior rectus muscle of the eye, for example, elevates the gaze and its action is always synchronized with the erector spinae muscles. The intra ocular fascia is continuous with the nuchal fascia via the longitudinal fibers of the epicranial fascia” (Stecco 2004, 62). This is clearly something to teach our clients: their eye gaze connects to their spinal postural muscles and fascia!

The eyes run the body. Because the eyes connect directly to our postural extensors, which help maintain a mobile thoracic kyphosis, they require the same freedom as the rest of the body, which we work to free in the Ten Series. Specifically, we need the head to be stable and our eyes on the horizon, even as the rest of the body moves. Walking in the most efficient manner requires torque and contralateral movement to move through the spinal curves and yet not pull the head out of its stability. In those first moments of a baby’s eyes, neck, and head orienting to sound, taste, and smell, she is effectively negotiating her current and future relationship to gravity. Vision is the primary orientating task, stimulating cervical and spinal myofascia. Seeing distance, seeing peripherally,

hearing sounds in all directions, and overall perceptual sensory seeking – all of these impact the alignment, formation, and maintenance of the thorax, head, and neck. To work on thoracic holding patterns without engaging the habits of the eyes and ears could be a discouraging task.

When observing a structurally aged body, it is striking to note the eyes and head moving as one unit. Moreover, the arms become pulled into this same narrow range of organization. The *loss of differentiation in the arms / rib cage / hands / head / eyes* is the key component of structural aging in the upper body. Remember, our eyes see before our hands engage in a movement. (Try looking for something interesting with your eyes and then engage reach and hand movement.) Further, locking up the eyes in a narrow range and focus actually changes our gait. With the eyes locked, we lose the natural arm swing and propulsion that we need from torso rotation.

Rolfing SI for Structural Aging

Now we'll begin to look at some of the things we can do as Rolfers™ to counter structural aging, particularly as it affects the spine and upper pole. The classic fascial work of Rolfing Structural Integration (SI) will play an important part as with structural aging we generally see a fear of falling, a rigidity of the spine, and high tonus / general overall contraction. Much can be done toward regaining fluid, youthful movement through the first through seventh sessions of a Ten Series – these sessions provide differentiation that leads to a lessening of the tonus and more conscious control of the various segments of our body. In a bit I'll discuss specific fascial interventions that are beneficial, but given what we've noted thus far about the eyes and the senses, I want to first discuss how it is critical that our interventions help the client regain dimensionality in his sensing and his kinesphere.

Perception

As eye movements coordinate body movements and are intimately linked to the movements of the spinal muscles that help maintain the extension of the thoracic spine, for our fascial interventions to have lasting impact, we need to address the eyes. One possible intervention is to take a cue from Moshe Feldenkrais, who is well-known for his lessons on freeing up the rotational ability of the torso by using movements

of the eyes. Being able to move the eyes a different direction than the head and torso has the magical outcome of increased mobility in the rib cage.

Then there is the element of how overly focused eyes can relate to a protective fear in the nervous system; this pattern can drag the body back down and into hypertonus, where all myofascial systems tighten and control movement into a narrower range. Thus, the importance of orienting through peripheral vision cannot be overemphasized. Berencsi, Ishihara, and Imanaka (2005) note that “peripheral rather than central vision contributes to maintaining a stable standing posture.” I would contend that it is also a key element in the body's ability for the multi-planar spiraling motion that is the hallmark of ‘youth’, whatever one's age. Luigi Stecco (2004, 108) states “to enable it to organize movement in general the brain requires feedback concerning whatever is taking place in the periphery. This feedback transmits information to the CNS [central nervous system] regarding the exact position of any body segment.” This would also include the hands and ears sensing peripheral space, not just peripheral vision. So in working with our clients, helping them to change from a centrally focused gaze to one that incorporates peripheral vision can have a huge effect on stability, tonic function, and their general sense of ease.

Going further that vision and hearing, we need to exercise our experience of body ‘laterality’ and perception of direction. This is as critical to our bodies as muscles for strength. In “Structural Aging Part One” (Berg 2014), I emphasized the importance of moving in the lateral kinesphere by using the hip abductors and lateral arches of the feet. Now we can also see the importance of free movements/sensing of the hands, eyes, and ears. Awareness at our left and right sides helps us to feel a sense of midline and to orient to our environment. Even finding the lateral edge of the hands, the little-finger side, changes the openness of shoulder movement by taking compression away from the clavicle / thumb side of the hand. We then engage the serratus anterior for stability without loss of mobility.

The reflexive seeking expressed by babies with their eyes, ears, mouths, and hands is orienting movement that communicates and directly activates the spinal musculature to support uprightness, create/maintain natural curves, and to relate to the environment. This three-dimensional

curiosity of the eyes and ears to investigate our surroundings can be invoked at any point in our structural work, and changing habitual patterns of sensing changes and breaks fascial holding. Re-engaging the eyes and hands with sensing space supports spinal extension and rotation and a sense of dimensionality, just as moving in various directions, moving through various levels from the ground up to standing, and walking sideways or backwards support renewed dimensionality and fluidity in the gait.

Fascial Interventions

With this background, we can turn to fascial interventions and areas that are particularly rich when working with structural aging.

The Hyoid Complex to the Suboccipitals

Much of our classical work as Rolfers serves to free the head to orient and balance while the rest of the body finds its spiraling movement in all planes. In the Ten Series we address the suboccipitals frequently. It is crucial to release their hold on the cranium if we want to restore adaptable perception, as they are the compass that allows us to find steadiness while the body rocks and rolls. This function is hindered when they get caught up with larger myofascial units.

As we focus on freeing the head from the neck, it is important not to overlook what is anterior to the suboccipitals: the hyoid complex (see Figure 1). This very delicate myofascial system sits between the suboccipitals and the sternocleidomastoid and splenius. In structural aging, we often see (in conjunction with over-focused eyes) a hyoid complex tied up with the tongue and the floor of the mouth, pulling the jaw and face forward and down, thus also dragging the thoracic curve from the front into chronic locked flexion (with the attendant neck and spinal pains and the endless effort to stand up straight. The hyoid complex lowers the hyoid bone for speaking and stabilizes the laryngeal cartilage, so mobility of the hyoid bone is critical. The hyoid complex can have a hold on the suboccipitals from the front and thus affect the inner ear and eyes in their roles of supporting balance and uprightness.

One interesting connection is straight from the hyoid to the scapula: the omohyoid muscle, nicely illustrated in Figure 2. It is as if the shoulder girdle could be held up in the throat and thus pulled into the

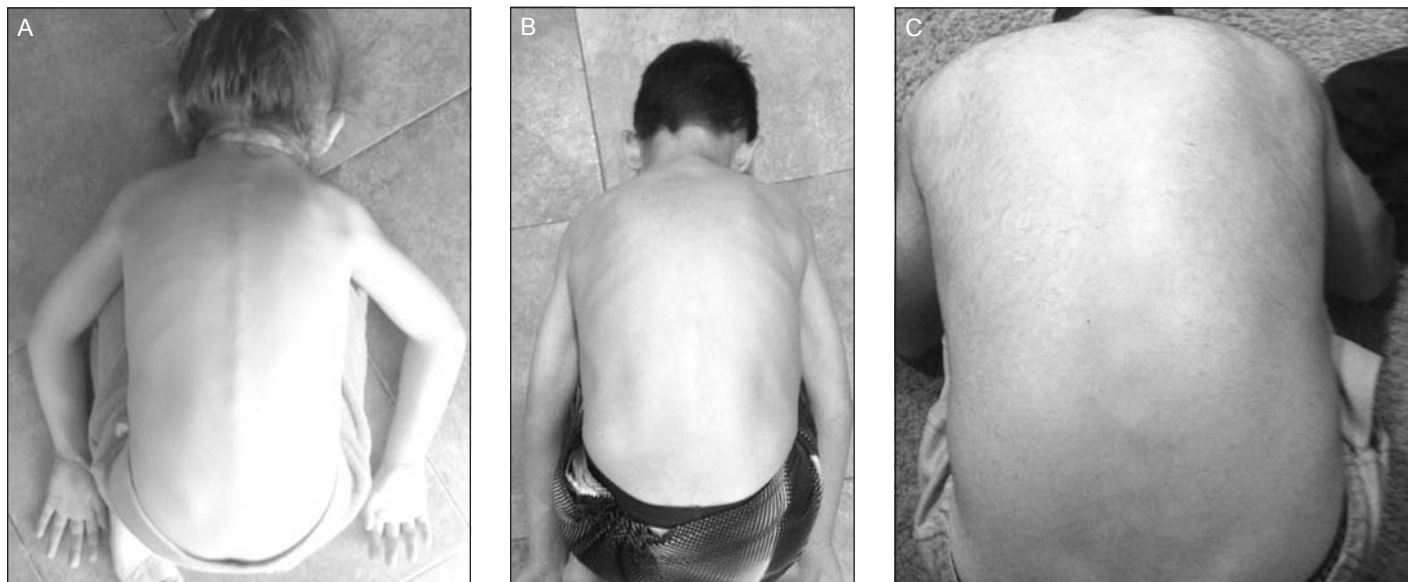


Figure 5: The C curve in A – a four-year-old; B – an eight-year-old; and C – an adult.

function, that is natural and not imposed from the outside? Gradual transitions in the spinal curves from one to the next are the result of vertebral differentiation and an ability to flex and extend – and thus sideband and rotate – with the spiraling youthful gait I discussed in “Structural Aging Part 1” (Berg 2014).

The point of the Roling back work is to create functional lordoses. We re-initiate the C curve from the embryological state, and the primary curve works to re-establish secondary curves that are functional. Various adaptations occur as we develop secondary curves, which can be seen in Figure 5, showing the C curve of the spine in individuals of different ages.

We need segmental mobility, in both the small segments of differentiated vertebrae and the larger spinal segments separated by ‘hinges’. “The intervertebral joint is the smallest functional unit of the spinal engine. It is to convert the lateral bend into an axial torque” (Gracovetsky 1988). Hinges are the transitions where the direction of the facets changes, where lordosis changes to a kyphosis. The lumbosacral, lumbodorsal, mid-dorsal, and cervical-dorsal hinges all need functional mobility. These transitions, segments and hinges, would ideally be gentle – not abrupt or stuck in place, which would prohibit the necessary spiraling. With a fused spine, even partially fused, we get a disturbed gait and loss of contralateral movement. The C-curve position – child’s pose in yoga (Figure 5) or the seated C-curve of Roling back work – shows up

individual segments that have lost their differentiation and full flexion capacity, that do not have smooth transitions.

The oft-seen C7-to-T4 flatness or dowager’s hump is not a smooth transition. Such conditions put extreme pressure on the cervical spine and create forward-head syndrome. The entire scalene fascia takes on pressure, as well as the area from the omohyoid and medial scalene to the dorsal scapular nerve. Either dowager’s hump or flattened lumbar lordosis stops the ‘engine’ of the spine so that multi-planar movement is curtailed. [Flattened lumbar lordosis inhibits the alternating anterior and posterior tilting of the ilia that comes when the legs extend from the toe-hinge push off (Berg 2014).] Sessions one, three, and five of the Ten Series speak directly to the spinal curves and where they have lost their smooth transitions.

The stooped look that signifies aging suggests the spinal curves have lost a resiliency and directional function from up to down and up again – i.e. the Gracovetsky (1988) spinal engine. In some cases, we also see that the yoga culture in the U.S. has created a very straight spine where the thoracic curve does not exist at all – which also creates a hold on the cervical spine. The shuffling person, the person with hips that ache and legs that don’t extend back in the gait, usually presents a flat lordosis.

In Figure 6 we see three people of ages thirty-five to eighty-six, all of whom have received a series of Roling SI. The first person (A) made significant changes with

the Ten Series: he started out bent over, with completely flat lumbar, legs that could not extend, and eyes that could not find the horizon. The second (B) is a younger person with clear, fairly easy curvatures that were eased from more extreme transitions. The third (C) is our colleague Karl Humiston, who has had countless Roling sessions and clearly shows how beautiful the orientation ‘up’ can be with a maintenance of the spinal curvatures. Note the differences also in each man’s hyoid complex and how it influences head position. Also note where their legs can find ‘under’ in relation to the pelvis: this is largely determined by the spinal curvatures.

Gait Considerations

The ilia are like the wings of the femurs. Each has the capacity to tilt anterior and posterior, coordinating with the movement of the femurs in all planes of the gait. This alternate rotation forward and backward transfers the center of gravity of the trunk over the hip joints and is in harmony with normal contralateral arm swing.

Hip abduction and adduction were discussed in “Structural Aging Part 1” (Berg 2014). We are not made to only move in the sagittal plane; the pelvis needs to move in the transverse and frontal planes as well if we are to have the healthy, varied gait that is a ‘youthful’ walk. Sacral biomechanics of bending and rotation become key for the spinal engine that fuels the elegant curves of sidebending and rotation of the entire spine, which allows us to move forward in an upright position. The moment these

curves begin to lock or fixate at various points, the downward spiral takes hold of the movement and we see a look and feel of 'aging'. The spine is no longer only listening to itself. It is held in restraint from many directions.

The Thorax

The key place to address for structural aging in relation to the eyes, ears, and arms is the thoracic kyphosis as it is expressed three-dimensionally through the spine and anterior structure of the sternum. It is precisely the upper thoracic and sternal segments that, when properly functional, can and will support the cervical curve and give the stability our heads needs to keep an upward orientation.

The cervicals are designed for mobility, while the thoracic spine is the least mobile, with the rib attachments to the sternum restricting movement. One reason for the oft-seen C7 to T1-3 conflict of discomfort, loss of differentiation, and dowager's hump can be that the facets in this transitional zone, which change orientation, can lock up, especially if the eyes, ears, and hyoid complex have drawn the head and neck forward. From our earlier discussion, it should be clear what work is beneficial.

Structural aging can also present in the thorax as an immobile sternum, usually held tight by the pectoral fascia and clavico-sternal fascia connecting up into the scalene fascia. The first session of the Ten Series is quite magical in giving the client his first sense of a floating chest and possibility of orienting up, an orientation that typically requires adjustment of his car's rear-view mirror before driving home. Viewing the sternum as the 'anterior spine' and working to mobilize the three segments (manubrium, body of the sternum, xyphoid) begins the opening of the thoracic spine. The upper center of gravity, G', is typically around T4-5 and its function, as stated by Hubert Godard, requires the possibility of moving forward and back in space. To act in our environment, we accelerate towards a vector or object; this area of T4-5 needs freedom to respond. Aging sometimes looks like an inability to respond to our environment, or even a loss of desire to respond.



Figure 6: Variations of spinal curve in different ages.

Conclusion

Aging as a topic is everywhere in marketing, consumerism, and product development. We Rolfers have an understanding of the structural relationships that in health contribute to uprightness and fluidity of movement and in disturbance contribute to a look or feeling of 'aging' regardless of the actual number of years one has lived. Our recognition of the primary and secondary spinal curves and the other structural components that either imprison us or liberate the spiraling nature of our human verticality is what distinguishes our profession from the various 'fix it' modalities being marketed for the human condition of aging. 'Juicy paws', legs that extend, eyes and ears that hear and see in all directions – these fuel the youth and health we all seek in our walk on this earth, both upright and connected to the ground.

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The Case Study Method: The Latest from the ABR/Uniitalo SI Postgraduate Program

Scientific Exploration of Rolwing® SI in the Holistic Paradigm

By Pedro Prado, PhD, Advanced Rolwing and Rolf Movement® Instructor

Perhaps the greatest challenge for the scientific investigation of our work is its essential holism: the multidimensional and holistic attributes that give Rolwing Structural Integration (SI) its conceptual richness also complicate the scientific assessment of its results. Segmentation of reality and isolation of phenomena, often used for controlling multiple variables, in our context poses the risk of losing the whole, of overlooking the essence of the work. What we need is a scientific approach consistent with our paradigm.

To meet this challenge, ABR (Brazilian Rolwing Association), in partnership with Centro Universitário Italo Brasileiro (Uniitalo), São Paulo, Brazil, created a postgraduate program for Rolwing SI, which I have supervised and coordinated since its inception. This program, which began in 2010, is open to students in the last stage of their professional certification training (Unit 3), as well as to practicing professionals. Program participants take university courses in scientific methodology and pedagogy and apply what they learn in the execution of formal *case studies* on the process of a class client or client in a practitioner's clinical practice.

The case studies for our postgraduate program are far more extensive than in the basic certification training at the Rolf Institute®. At Uniitalo, the student researches a specific problem by engaging potentially useful theories, raising questions, developing hypotheses, and seeking methods to investigate them. S/he then presents and discusses the outcomes according to accepted scientific parameters. In both scope and level of effort required, the postgraduate-program case studies are comparable to any other master's thesis; and those who complete it are awarded the equivalent of a master's degree.

Here we present the abstracts of the case studies from the 2014 class.¹ These authors took on the challenge of employing a scientific approach consistent with our holistic paradigm. Each investigated a specific problem and observed correlations among the multiple dimensions of Rolwing SI and its taxonomies of access (structural, functional, psychobiological, geometric, and energetic). Even as they employed impeccable scientific methodology, they displayed an embodied holistic attitude congruent with the philosophical stance and conception of the human being that are fundamental to Rolwing SI. These researchers walked their talk, showing by example that science and holism can coexist, that there can indeed be a science regarding a holistic activity.

The Benefits of Rolwing SI for the Postural Stability of an Elderly Person

Investigated by Sergio Ricardo Bronzato, BS, PT, Certified Rolfer™, Rolf Movement Practitioner

This study investigated whether Rolwing SI, a holistic method of reorganizing the human structure in gravity, could improve postural stability in an elderly person. The hypothesis was that Rolwing SI could improve the person's postural muscle tone and balance, as well as locomotion, which would offer the person a new outlook about moving. Persons with unstable posture are prone to repeated falls. Statistics show that among the elderly, falls have serious consequences, including prolonged incapacitation and even death. Fear of falling diminishes the person's confidence and sense of well-being. The subject of this study was a woman, age sixty. The treatments, which worked to balance muscle tone and span in gravity and restore previously inhibited movements,

consisted of (1) ten sessions of myofascial manipulation combined with movement education, followed by (2) three sessions of only movement education. The treatment goals included improved postural habits, more efficient anticipatory movements, better overall mobility skills, and an overall improvement in her sense of well-being and quality of life. Assessment tools applied before and after treatment included the Star Excursion Balance Test, which supported the hypothesis by showing marked improvement in various tests of balance. Responses to both the standard questionnaires used at São Paulo's Center for Treatment, Research and Education regarding Rolwing SI (NAPER) and the WHOQOL (abbreviated Portuguese version) indicated significant improvement in quality of life after treatment. These findings, if corroborated by additional studies, suggest that Rolwing SI (either alone or as one component of a multidisciplinary approach) can be efficacious for restoring clients' postural stability and avoiding the serious consequences of stability deficit.

The Benefits of Rolwing SI for Regulation of a Child's Ideopathic Hypotonicity

Investigated by Maria Beatriz Whitaker, BS, Certified Advanced Rolfer, Rolf Movement Practitioner

This case study evaluated the effects of the holistic somatic approach of Rolwing SI on a child with abnormally low muscle tonus. The Rolwing treatments sought to promote balance and equilibrium in muscle tonus throughout the child's body, and thereby to improve the fluidity of the child's motor function to support advancement of her psychomotor development to an adequate and healthful level. Rolwing SI seeks to establish physical equilibrium in gravity, which, in turn, gives the client greater resilience and energy. Tonus represents the muscles' readiness to respond to stimuli. The fundament of posture, tonus is a function of both physiological and psychological conditions. Meanwhile, psychomotor development is a maturation process that integrates movement, rhythm, spatial perception, and sense of position into a person's body schema and body image. If Rolwing SI can normalize a child's muscle tonus, might this advance the child's psychomotor development? The subject was a girl, age twenty-one months at the start of treatment. She had been evaluated

shortly after birth and prior to treatment at eighteen months; and was reevaluated after treatment at twenty-five months. Methods of evaluation included the Denver II Screening and Development Test, created at the Federal University of São Paulo, photos, and clinical examinations.

The Effects of a Single Session of Roling SI in Two Clients Suffering from Acute Lumbar Pain

Investigated by Licia Maria Novaes, PT, Certified Rolfer, Rolf Movement Practitioner

This paper presents a new approach to the relief of acute lumbar pain through the holistic methods of Roling SI and Rolf Movement Integration. Acute lumbar pain, which affects the entire body, afflicts 80% of adults at some point in their lives. The Tonic Function Model, developed by French Rolfer Hubert Godard, addresses structure and function by attention to the activity of tonic muscles in the tasks of balance and orientation. Based on this model in particular, and on the principles of Roling SI in general, the author designed a treatment protocol consisting of a single session in which the subject experiments with perceptions of his own body’s weight, direction, volume, and rhythms. The subject’s perceptual experience allows reorganization and improved integration of the body as a whole, which relieves the acute lumbar pain. This case study of two subjects shows significant relief of acute lumbar pain, which relief was maintained for eight to nine months after the session. What’s more, the subjects incorporated into their daily activities the lessons of the single session.

The Effects of Roling SI on a Japanese-Brazilian Woman’s Perception of Self and Environment

Investigated by Cintia Lie Uezono, PT, Certified Rolfer, Rolf Movement Practitioner

Physical changes effected through Roling SI have been shown to influence perception of the body and its relationship to the environment. However, culture has a great influence on human behavior, including not only language, comportment, and emotion, but also body image and perception. This case study examined how a Brazilian woman born and raised through age five in Japan responded to Roling SI. Specifically,

it sought to identify the structural and functional changes Roling SI produced, and to correlate these physical changes with the potential changes in the subject’s self-perception. The subject was evaluated before and after the course of treatment through various means, including a map of body sensation, a chart of symptoms, the subject’s drawings of herself, photographs, interviews, and the subject’s reports. Despite the structural and functional changes these evaluations revealed, the subject herself reported no change in her image of her body. We conclude that the subject had not allowed into her consciousness the physical and related sensory changes. However, as the subject continues to live with the transformed physical experience, her sensations might give her an opening to greater self-awareness.

The Benefits of Roling SI in the Three Stages of Adhesive Capsulitis of the Shoulder

Investigated by Tania Maria Forlani, MPT Certified Rolfer, Rolf Movement Practitioner

This case study sought to verify the effects of Roling SI on clients in three stages of adhesive capsulitis of the shoulder: acute or ‘freezing’, ‘frozen’, and ‘thawing’. Ruggi (2011)* had already shown good results with this form of treatment on one client with this pathology. In the present study, the author conducted a total of fifteen treatment sessions with Roling SI on three clients, each one in a different stage of pathology. The clients’ progress was assessed through the NAPER questionnaires, the Visual Analog Scale, the Simple Shoulder Test, and before-and-after photos showing the clients’ postures. All three clients benefitted from the treatments, although the relief of symptoms varied in each case. In particular, it seems that restoration of motion was facilitated by the postural improvements brought about by the treatments. Though at the conclusion of the treatments each client still had some limitation of movement in the affected shoulder, all clients perceived the benefits of Roling SI for reducing both motion restriction and pain.

* Ruggi, A. 2011. “Contribuições do Método de Integração Estrutural - ROLFING® Com Abordagem Holística, Para a Solução de Casos de Capsulite Adesiva.” Available at http://pedroprado.com.br/cgi-bin/cont_ipr.cgi?cmd=show1artigo&ling=eng&id=1150.

Form and Individual Identity, Explored through Roling SI

Investigated by Johannes Carl Freiberg Neto, BS, Certified Advanced Rolfer, Rolf Movement Practitioner

This study seeks to investigate and articulate, through Roling SI, the relationship between a person’s ever-changing bodily form and his perception of a stable self. Among the principles of Roling SI is adaptability of the human structure: specifically, that the structure can be altered through connective-tissue manipulation and movement, and that forms are related to function. Because an individual’s unique identity as a self-organizing (autopoietic) system continues to exist over time, changes in form, or morphogenesis, may be conceived as adaptations that signify new relationships between the person and his environment. At any given moment, form represents a relationship, an existential dynamic, between the variable external environment and the living being. Because gravity is the single environmental constant, and the one around which the human upright posture is organized, the tasks of learning how to stand and walk in gravity are opportunities for enhancing self-sensing and awareness. Indeed, gravity is perhaps a moving force toward the organism’s continuing autonomy. This study employed the body-map method, which allows the practitioner-cartographer to recognize his role as part of the client’s environment and help the client to find the existential territory. In this sense, Roling SI can facilitate the transformation inherent in the ongoing becoming of the being.

Endnotes

1. All case studies since the 2010 inception of the Uniitalo program are available in pdf format (in Portuguese, with abstracts in English) at the Ida P. Rolf Library of Structural Integration (www.iprlibrary.com or www.pedroprado.com.br). The papers are listed individually by author under the “Academic” classification in the Publications category. They are also available at the library of the ABR, São Paulo, and in a special collection of postgraduate program papers at Uniitalo.

My Love – Hate Relationship with Rolf Movement® Integration

Reflections on Changes in Perception

By Deb DeAngeles, Certified Rolfer™

I experience earth-moving epiphanies and mind-blowing change every time I go to a Rolf Movement workshop. I love Rolf Movement workshops. I experience sense-numbing terror and frightful disorientation every time I go to one of these workshops. I hate Rolf Movement workshops.

The setting was a Rolf Movement workshop on perceptual core stability, taught by Kevin Frank, Certified Advanced Rolfer and Rolf Movement Faculty, with Caryn McHose, Certified Rolfer, assisting. The point of playing with our perception and how we orient was to work with how our bodies organize in preparation for movement. When we have a sense of the ground under our feet and an awareness of our surroundings, then core stability is available to us, even before we are in motion. The stability we were seeking is the stability of ease rather than that of effort. So we, as a class, sought core stability through our perception of the ground and the sky.

Since body experience is the best teacher, Kevin started every morning with a few minutes of activity as a group. Often, in group movement, he would ask us to notice how we oriented to the space and to the other people as we walked around the room. And right off the bat, the seemingly innocent directive to “notice how you orient” would send me into a tailspin.

I couldn't figure out what in the world I was supposed to be noticing. “Notice how you orient” took a distant place in the back of my brain as I navigated my way through a space filled with randomly moving people. I would move through the room, looking for the least crowded spot. I felt anxious and unfocused and somewhat ridiculous. I should be able to walk around a room of people I like and notice how I orient. This should not be a big deal. But at the same time, all I knew was that every cell in my being wanted me to get out of that room.

I felt so tense that afterwards, when we sat down together, I had trouble focusing enough to make out the words that anyone was saying. “Sense-numbing terror and frightful disorientation” is not really an exaggeration. I was pleased, however, that during this workshop, I was able to gather myself and settle myself down in only a few hours. In past workshops, I had needed an entire day or more.

In hindsight, what I came to understand is that I orient to motion. This means a small space with a lot of random motion is literally disorienting. My nervous system tries to track all of the motion in order to cue me toward the least amount of activity, a ‘safe’ place to head for.

I was quite proud of myself for getting through the tissue-throwing exercise where we partnered up and tossed tissues at one another. As we took turns pelting each other with wafting tissues, I played with shifting my gaze from a sharp focus to a more wide, peripheral focus, as directed. I was relieved to notice my anxiety easing considerably. I only realized how anxious I still was when we took a lunch break right after we finished the exercise. Then I noticed I was looking at lunch options as “Do I eat, or do I leave the country?” After a long walk, I was finally able to settle down enough to eat something and go back for class that afternoon.

I had a lot of resources available to help me get through the workshop. When it wasn't raining, I could swim in the lake. I had several mindless novels to turn to and a variety of games on my iPhone. The guesthouse we were all staying in was big enough to get away from people when I needed quiet, and when I was ready to interact, I was there with a remarkable group of individuals. In addition, there was the market down the road with homemade ice cream brownie sandwiches and a fine selection of local beer.

On the fourth day of the workshop, we started playing with Serge Gracovetzky's idea that there are pathways of kinetic energy that are passed from the feet to the spine which help with walking. These have been called Gracovetzky's ‘chains’, and they relate to three dimensions of movement in walking. Our goal was to free the spine by moving independently from the shoulder and pelvic girdles in order to express rotation, elongation, and trunk stability. To accomplish this, we paired up to explore one of Kevin's table-work activities.

My partner, Kathy, had me start out by lying supine on the table with my feet against the wall. She cued me to feel the support of the table against my back and to feel into the wall with my feet. This felt supportive and relaxing to me. Then, according to the instructions of the activity, she asked me to press my toes into the wall while I moved my soft gaze up over my head.

Here, everything fell apart for me. I was not able to coordinate pressing with my feet and shifting my gaze at the same time. I could feel my throat tightening and my breath becoming very, very shallow. My eyes didn't want to soften. I was frustrated because it seemed like this should be so easy.

When Kathy understood that using my gaze wasn't working, she checked in with Kevin for help. He suggested she might try working with a different sense. So, Kathy asked me to press my toes into the wall while sensing with my skin.

Noticing what I was feeling ‘on’ my skin didn't capture my interest. But the idea of being ‘in’ my skin was a notion I liked a lot. I visualized myself filling my skin up from the inside out. This experience was completely different from trying to use my gaze. I felt powerful. I felt confident and clear. I was able to look at my experience with curiosity rather than dread. I was excited to continue with the exercise, instead of feeling the need to search for a way to get through it until it was over. I found the rest of the exercise a joy in which to participate.

The next morning, we started again with a different movement activity. Instead of anticipating it with apprehension, I was curious to see how my response might have changed. Throughout the activity, I was able to refer back to my discovery from the day before and focus on the feeling of filling my skin from the inside out. I was overjoyed to discover that being in a room full of moving people didn't send me reeling.

Later, I met my next challenge. We were playing with the idea of feeling vectors of direction from our knees, heel bones, toes, pelvic rami, and a wooden stick in our hands. The point was to move as a group, bending our knees while feeling supported and maybe finding a sense of expansion. Kevin asked us to reach out beyond ourselves to the perimeter of the room, and then farther, past the room to the edge of the property. The purpose of the exercise was to find out to what extent we could be present in our bodies while expanding our awareness.

Playing with my newfound sense of filling my skin from the inside out, I was able to participate without feeling a need to run away. Later, while talking to people about the class and what we did, I realized I had only a vague memory of that afternoon. Apparently, I can either track movement or retain information, but not both. I would really like to find a new way to orient to the world around me.

As a result of this workshop, I'm starting to think that in addition to being pain-free, relaxed, and open, normal movement is also being able to interact with others while staying connected to the ground and being aware of the larger surroundings. In this open groundedness, my response to circumstances is completely different than the experience of when I'm stuck in reaction to everything around me. Being in my old reactionary pattern, my only option is to struggle through whatever activity is going on until I have a chance to leave.

When I find a way to stay present in my body during an activity, then my old pattern doesn't get to have a say. I don't have to pretend that I'm doing all right or simply be a token participant in a conversation when, in my head, I'm looking for the next flight out of the country. I can look around a room and see people whose company I enjoy, moving and sharing an experience with me.

I don't know yet how my orienting will change. Now that I'm aware of my orientation to movement and how disorienting this can be, I'm curious to see how I might relate to my surroundings in a new way. Awareness is the first step to change.

This is why I love Rolf Movement workshops. They turn my world inside out. Every time, I come out moving more freely and more connected to who I am. This is what Rolfing® Structural Integration does for me. And this is what I want to help my clients discover in themselves.

Even the Ants Are Red in the Grand Canyon

Connecting with Our True Nature through the Great Outdoors

By Bibiana Badenes Braulio, PT, Certified Advanced Rolfer™ and Rolf Movement® Practitioner

Last August I spent one week immersed in Mother Nature on a river trip in the Grand Canyon in Colorado organized by fellow Rolfers. We went rafting, hiking, and climbing, and also learned new approaches to the work we all love. I'd like to share some of the moments that I feel have become defining highlights for the rest of my life.

I knew I had to go on this trip, although I had no idea what was in store for me. The truth is that I had not prepared for it as the organizers had advised some months beforehand. Still, I went for it, and headed for the U.S. with my seven-year-old daughter (the best travel companion one could ever have). She spent that week with my American family, a family who hosted me when I was in high school thirty years ago. We still keep in touch.

I began to get nervous about whether I was really prepared, if the water would be very cold, if I could handle the steep hikes with a heavy backpack. A series of doubts that

slowly lessened as the days passed, so that in the end there were no doubts, only action.

There were twenty-seven people altogether: six guides (two were Rolfers and one a Feldenkrais practitioner); two instructors – Jon Martine and Suzanne Picard – who would lead sessions and mini-seminars throughout the trip; and nineteen other Rolfers. There were five inflatable boats, each with a guide for rowing, and a smaller row boat with six people. Though some names sounded familiar, I didn't know a single person beforehand. Despite that, I felt comfortable.

We began to navigate the river in a state of calm, in total contemplation of our surroundings. No boredom, only active meditation. Thoughts came and left like the clouds we saw in the distance. All our senses were activated. No cell phones, no chairs, no electricity, only the sound of the river, a bird, the wind, bats, butterflies, and ants. With so much history in the air, our perfectly prepared guides told us



Figure 1 : View of the Grand Canyon.

stories and legends about different Native American tribes. Still, what most impressed me was how much our guides loved and respected the surroundings, the river and the canyon.

Culture, the medium in which we live, forms us and transforms us. These days many people live disconnected from their bodies. For me, this trip was a voyage in which I had to be very present in my body. The expression, "in the present moment," could not be more accurate! I had to be ready for many things including drastic changes in temperature: the water could be 8°C (46°F), freezing, while the outside air temperature was more than 40°C (104°F). Every new situation that forces me to get out of my comfort zone is a learning experience, but only if I am completely connected to my body.

In our daily lives we disconnect from ourselves, from others, and from the global abundance of life. One isn't able to contaminate water, destroy forests, or destroy something in general when one is connected to and feels one's body. I believe that this kind of behavior is only possible when we dissociate the body from the mind and we stop feeling. This corporal anesthesia makes us less compassionate, and one can imagine the consequences this leads to.

On the first day: to pee or not to pee in the river? An adventure in itself. We ended up sticking our bums off the rafts and carried on. The men among us had it easier. Any garbage we produced was taken away: everything, including our own feces. We arrived at different spots where we would debark. Precious places, small beaches, and not a trace of anyone who had been there before. Marvelous! Is that savage? Or is it respect?

We made it to the first set of rapids and – amazing! We were really lucky with the weather: almost no rain. That helped us enjoy the moments and landscape even more and, as always, there were interesting conversations among this collection of Rolfers.

At camp, for those who were used to sleeping on the ground, it wasn't a problem. My comfort zone was challenged, also by the various little creatures running around: mice, bats, ants. Looking up, astronomy, the master teacher of humility, showed us the sky as a tapestry of stars. We didn't have to pay an entrance fee to see this show.

Setting up and breaking camp, preparing for the day, all the different bags, making sure we had everything, that everything was in its proper place, reminded us that less was more, or at least that more was not necessarily better. We all shared the workload as a team, loading and unloading the boats, setting up the campsite, the tables, cooking space, our sleeping bags, tents, backpacks. Looking back, I still find it incredible how much those boats could transport.

No one complained. I repeat: No. One. Complained. I found myself breathing hard several times and realized that complaining disconnects us quickly from our bodies, and has an effect opposite to the desired one by not allowing us to move on.

Experiencing one week sitting on the ground, it's incredible how the body starts to break down its barriers, little by little, and adapt. Comfort may feel good, but it can deform us and doesn't give us a better body. Here, my body was letting go. I began to understand my patterns better, including behavioral patterns.

All the colors, the nuances in light, the currents, the grand rapids. I lost a lot of my fear as I went along. I became aware of the amount of fear within my body in each new situation, pre-judging what was going to take place. Fear from the traffic accident I had in May had affected me more than I had thought. My body began to feel the impact of the waves through the raft, and the cold water splashed us. I could lean forward into them: I didn't avoid the waves, I went with them. (Well, when the water is that cold, there is no god who wouldn't shrink, and I cried out so loud I'm sure someone heard it in the distance.) Then it was over, and that was it.

At various stops, we would climb up the canyon to a spectacular view. Each rock was a sculpture, each new canyon within the Grand Canyon is a delight for the senses. There was so much silence, it filled you. The loss of a notion of time once again allowed us to be much more present in our bodies. We went to bed after sunset, got up at sunrise. Our vital rhythms began to synchronize, and the number nine meant as much as ten or five: only mental ideas. The sun regulated our melatonin. Long live the sun! Long live the night!

Precious locations: Tatahatso, Sheer Wall, Georgie's Rapid, Marble Canyon, Tanner, Redwall Cavern, Saddle Canyon, and many

other spots. Justin, our head guide, showed us these as if they were his own home.

Fresh food cooked every day. Laura was a genius at riverside cooking, preparing vegetables, salads, fresh salmon, even three different kinds of pastries, and all made in the blink of an eye. Everything was delicious.

There was no complaining. Nature does not produce complaints, only physical fatigue from the day-to-day exertion, which was washed away by a dip in the river. It took me three days before I could bathe in the river. It wasn't fear, it was inhibition that I had created in my life to not continue, to secure my comfort zone (which I believed I controlled). To stop there is a kind of death. In the end I took the plunge, everything flowed like the river, and I felt more alive than ever before.

Every day Jon and Suzanne would share their knowledge and insight with the rest of us. We started the day with self-care, exchanging bodywork sessions on the back, neck, mediastinum, mesentery, and abdomen. We also did interesting neurodynamic work on the superficial fascia. What you learn through your body is not forgotten. Each day class would be held in a more beautiful spot, it was inspiring. Jon led the teaching in the first part of the trip (which I was on), though Suzanne's input was always present.

Day 1: We did an overview of neural fascial anatomy and an initial palpation of the dermal layer. We exchanged work, and as I said earlier, each location made the moment even more special. Jon was not only showing us the techniques but also showing us the passion of his work in every little detail and explanation – it was impressive. This is one of the things I like so much about this work: people do not get tired of doing it, of learning more about it, of growing as a practitioner and as a person. I liked the work on the dermal layer, liked the explanations. I have been doing this type of work for a long time with rheumatic clients, mostly by intuition, because for the most part, they only respond to this kind of touch.

Day 2: Feet and lower legs. We hiked up a slot canyon and washed our feet in pools before mobilizing the ankles, feet, and lower legs, and then reassessed as we walked back down the canyon. It was a nice feeling after the exchange, how the body reacts, and to feel this response on uneven

surfaces. Personally I could have used more time for the exchange but Mother Nature and the river called us to go on.

Day 3: Redwall Cavern and an introduction to spinal stretches and ELDOA fascial stretches to decompress the spine, colon, and mesenteric root. [Editor's note: ELDOA is a French acronym and translates into English as "Longitudinal Osteoarticular Decoaptation Stretches" – a system of fascial stretching developed by French osteopath Guy Voyer.] What a beautiful location! I was so tired, it was just after lunch, and I did not feel like working. I wanted to stay with the moment, but on the other hand, the work felt so good and helpful. Jon and Suzanne so present, taking care of our individual needs.

Day 4: No work today, just spinal stretches, great for my back. What a nice group, everybody participating and getting ready for a new day.

Day 5: We did some ELDOA arm stretches and spinal twist yoga and then exchanged seated back work, concentrating on dermal layers and spinal nerves, working from anterior to posterior. Very interesting to start the day with stretching with views of the sunrise. Taking care of yourself on this kind of trip is very important, especially for those who are not used to sleeping on the ground and not having chairs to sit in. Preparing the body for physical action, once again, makes you more connected to your body. Jon practices these exercises regularly and it seems that he enjoys the movement and, of course, the results.

Day 6 : Explanations and work on pericardium, sternum, intercostal cutaneous nerves, transversis thoracis, neck, and seated integration. Jon did a demo on a colleague who had had a heart surgery and was the perfect person to receive the work. Everything seemed to be so smooth, integrated within the rhythm of the journey. It was difficult to work on each other on the ground, but great to receive it. I felt so nourished.

We arrived where the Little Colorado River joins the Colorado River, a sacred place for the Navajo Indians. The mud there is full of minerals and trace elements, transported and deposited all along the riverbed. We got naked and covered ourselves in mud. We spread the mud all over and the feeling was amazing: a deep cleansing for our skin.

We were told that the Navajos had argued about this spot. They were divided: some



Figure 2 : Morning stretches.

were in favor of selling their land, while others were not. In this place the 'white man' wanted to put up a hotel complex with a gondola and a pier. This would allow easy access to the Grand Canyon and the river; otherwise it was a long hike through tough terrain. I can imagine the motto. "Everyone to the Canyon!" Right. That's the white man. *Olé!*

Gibney told us that this has become a political topic, which means the politicians are representing the interests of businessmen. Their arguments suggest that the Navajos would have more wealth and a fixed income. I understand the stance, but those businessmen are disconnected from their own nature, and therefore do not understand the nature of this place. This



Figure 3 : The group.

place is not just beautiful as a geographic point on the map, or for the landscape in itself, it is beautiful to navigate, to enjoy the simplicity and at the same time the abundance of just being here. I see no reason for the destruction of the delicate ecosystem Justin told us of. This is a special place, where one can see different geological layers of Earth's evolution. Aren't there other places the white man can go build another amusement park? It's already enough with the sight and noise of helicopters over the canyon. Tourists look down on us from above. How quiet it is when they disappear and you feel like you're back in sync with the river's melody.

For many, life's daily routine is lived with stress, whereas the routines of the river are lived feeling satisfaction and joy, smiles and laughter. We walked on trails with our always attentive guides, Jayne, Pauly, and Kelly.

Finally we arrived at the place where we met up with the people who had signed up for the second half of the trip. For those of us who signed up for just the first half, the time came to say goodbye and get ready for the 12-kilometer (7.2-mile) hike up and out of the canyon. When I put my backpack on I felt good, despite knowing I was not exactly in shape. Farewells for those of us leaving here; the rest would go on for another week in the rapids, laughing, sharing their knowledge and experience.

As I hiked upward, each thought disconnected me from my body and I felt weaker. It was then I would tune in to my breath and feel my feet, one going in front of the other. I told myself to keep on going and my body seemed to work like new. I didn't feel pain and that was a blessing, especially since I started this hike with the fear of a bit of back pain. Then tourists were coming down, which was the sign that the end was in sight. I admit that the final 2 kilometers (1.2 miles) took a lot out of me, and my companions went ahead. I couldn't continue: with all my heart I wanted to cry. "I'm out of shape," I cried. "I knew it." But then I felt my feet rooting down into the ground and I said to myself, "one foot after the other, Bibi, don't pant." Then I looked back at the where I had come from. It was over and I had arrived! My companions were waiting for me with a vanilla ice cream, not bad at all. The circus of life went on.

The search for security in our lives does not really make us more secure. It just disconnects us from our present reality, and then we lose our faculties. Of this I am sure. Oh yes, even the ants are red in Colorado's Grand Canyon. And they bite a lot. *Ow.*

Thank you, Michel Polen, for organizing this trip, and to our wonderful teachers, Jon Martine and Suzanne Picard. Thanks to my fellow companions in adventure for sharing this trip from the soul. Thank you Justin, Gibney, Pauly, Laura, Kelly, and Jayne of Colorado Canyon Guides, thank you especially for your love of the river. What you transmit is worth more than any salary could pay.

One begins to understand Dr. Rolf's prescription in the context of nature, speaking about connections and relationships, and how, when you disconnect, you cannot function. Rolf made it possible for a group of Rolfers, such as ourselves, to unite. This inspired talk of another meeting – possibly an adventure in Spain in June 2016, to walk the final portion of the Way of St. James, with congresses, seminars, good food – but most of all good company. Watch for more information as this idea develops at www.bodywisdomspain.com.

Erratum

In the article "Athletic Legends and the Power of Rolfing® SI" (December 2014 issue of *Structural Integration: The Journal of the Rolf Institute®*; page 22), we misidentified the hockey team in the caption to Figure 1 as the Philadelphia Flyers. The caption should have read "Mark Howe playing for the Detroit Red Wings."

An Unlikely Pairing

My Time with Ida Rolf

By Robert Toporek, Certified Advanced Rolfer™

Prelude

It was December of 1964. I was seventeen years old and failing eleventh grade for the second time. My mother gave me three choices:

1. Get a job.
2. Go to a trade school.
3. Join the armed service.

The first two options weren't particularly enticing, and since my friend John Lockwood had led the way when he joined the Army, I found myself at Ft. Jackson, South Carolina in basic training. After that I went to advanced infantry training, and just to prove how tough I really was, it was off to jump school at Ft. Benning, Georgia. I was a member of the 173rd Airborne Brigade, which was being sent to Vietnam for ninety days 'temporary duty'. Well, we all know how that turned out.

I stayed for another tour of duty, not for any patriotic reasons, but because I felt that staying in Vietnam was better than doing infantry drills in the snow at Ft. Carson, Colorado. Nonetheless, it worked for me. I was appointed the noncommissioned officer in charge of our battalion's civil affairs program. I was responsible for a team of wounded soldiers that built a number of schools, a Boy Scout lodge, a playground, and a health center. I took about fifty to seventy-five kids to the dentist every Saturday. I was nineteen years old and reported to the battalion commander once a month. My relationship to the refugees and the children in this village helped me unwind from the year before, where I spent most of my time in the jungle hunting or being hunted.

After returning home I went to college for a while, but sitting in a chair learning about things that I had no interest in was not exactly my cup of tea. I managed to get a part-time job that turned into a full-time job, working with illiterate adults teaching them reading, math, and job skills to help them become gainfully employed. My first claim to fame came when *Glamour* magazine wrote an article on this project and mentioned my name. My high school

history teacher read it and told my high school civics teacher, Bob Williamson, and that led to us getting reconnected. Bob was then working for Representative Jim Clyburn of South Carolina (who now is the most senior Democrat in the U.S. House of Representatives after Nancy Pelosi). Bob hired me to create a similar program for them working with rural farm workers. While it was fun for a while, the project came to an end and Jim Clyburn let me go. However, before that I was introduced to Will Schutz who led the encounter-group movement at Esalen Institute. Simultaneously, I discovered a program the Ford Foundation sponsored where they gave fellowships to future educational leaders like me. I applied, was accepted, and was paid \$15,000 a year to study methods of personal growth and their relationship to public education. So I was off to Esalen Institute in Big Sur, California. It was there that I first met Dr. Ida Rolf, the developer of Roling® Structural Integration (SI).

Esalen and Dr. Rolf

So here I was, a decorated Vietnam veteran from a nice Jewish home in Charleston, South Carolina, in the middle of Esalen in its heyday. Massage, yoga, people meditating, long hair and robes, women without bras, getting into the hot tubs naked, and acting like it was all just a part of normal living. I went to Esalen thinking that I wanted to be trained as a group leader. There was a yearlong program that had started two weeks before I got there and Ken Price, the manager of Esalen, told me that I was too late. Ken suggested I develop my own program and see how it went. So my first class was a massage workshop with Debbie Meadows, one of the most wonderful women ever to hit the planet. I remember getting my first massage: she was holding my arm and kept saying, "let go." "I am letting go," I said. Then she gently shook my arm and, well, I entered the other side of life. I spent that first month going from one workshop to another. Seeing that I would run out of money really quickly going on this way, Ken and I created what is now called an 'open residence program'. I would work in the kitchen, in the gardens,

and on the facilities in exchange for room, board, and workshops. During this time I met a woman named BJ who had joined the residence program. I then met BJ's friend, Sandy, who was getting Roling sessions and swore by them. Sandy kept begging, pleading, and cajoling me to try Roling SI. One day she got right up in my face and said, "Bob, just try it!"

After my first three sessions I had this amazing experience of letting go of tension and for the first time began to experience something called 'feelings'. You see, I grew up learning to hold my emotions in, being tough. In Vietnam I perfected this. Seeing friends killed or badly wounded, I learned to suck it up. When I left Vietnam there was no debriefing, nothing to help us return to ordinary life. Roling SI certainly didn't feel like the massage I was used to, but it was opening me up to a different way of being.

During this time I became aware of the fact that Ida Rolf was one of the leaders at Esalen. There were Will Schutz, Charlotte Selver, and Charles Brooks doing Sensory Awareness. Fritz Perls had died but Dick Price, one of the founders of Esalen, was carrying the banner of Gestalt Therapy. And then there was this Ida Rolf person.

My first encounter with Dr. Rolf was when I was going to 'babysit' a former group leader whose wife wanted to go to town. This man had had a mental breakdown, and they were experimenting with not treating him with drugs or hospitalization. As I was walking up to the room, Dr. Rolf came walking out. She had been doing some Roling sessions with this guy and she seemed quite content on leaving his room. I was struck by something that, in looking back on, I can only call 'presence'. I gave it no more thought, though, and went on with my adventure.

A month or two later I remember Dr. Rolf, then in her early seventies, walking spryly around the grounds with that ever-present twinkle in her eye. Sometimes I would see her from my porch overlooking the Pacific Ocean, walking along the trail through the Esalen garden with a pack of the Institute's heavy hitters in tow. A few weeks later, I was leading a two-week open resident program on Gestalt-Encounter Experience of Esalen. At one of the sessions there was a woman who was sitting on the carpet all hunched over and looking very uncomfortable. The realization hit me that I could probably be more helpful to her with my hands than

with what I was saying. In that moment, I decided that I wanted to learn Roling SI.

I'd been told that the person to talk to was Rosemary Feitis, and I soon found her in the Esalen lodge, talking to Ken Price. I sat beside them and introduced myself, "I'm Robert Toporek and I want to be a Rolfer." Actually I had decided that I wanted to apprentice with Dr. Rolf. I firmly believe that being a master's apprentice is the way to mastery, and by then I had realized that Ida was one of our planet's masters. I mean, I'm a Vietnam veteran, I had received a fellowship from the Ford Foundation, and, at twenty-five years of age, was anointed by the people who ran the residence program to be a group leader. Needless to say, I was confident about my decision.

Rosemary glanced up at me. "You are disturbing my lunch," she said. I thought she was joking, so I laughed and said, "No you don't understand, I'm Robert Toporek and I want to study with Ida." Surely she would recognize my greatness. She met my eyes and said, "No, you don't understand, you are disturbing my lunch. Now don't ever have the thought of becoming a Rolfer again, either in this lifetime or the next." I slunk off with my tail between my legs. So much for being a Rolfer, or so I thought at the time.

Thankfully for me, Rosemary didn't have the final say on the matter. A few years after she had so emphatically dismissed me, I was taking the Arica® training and living in what was called the Arica House in San Francisco. We all were doing lots of massage work and many of the people in the house had received some Roling sessions. They all told me I had "great hands" and should become a Rolfer. At the time, what would become the Rolf Institute® was just getting organized. With my friends' encouragement, I applied and was accepted into one of the first programs.

My first class was with Ida Rolf's son, Dick Demmerle, who would eventually become a close friend. As the end of the course drew near, I told Dick how eager I was to study Roling SI with his mother. I wanted to learn the method from its original master. She was preparing to teach her final beginner's class in Santa Monica, and although Dick would have preferred that I take his class the following summer, he acquiesced. I was going to learn Roling SI from Ida Rolf herself.

In Santa Monica, Ida was also teaching an advanced course, so many of the more experienced Rolfers were often buzzing around. There were supposed to be six practitioners in our class, but there were only four. My student partner, who was a lawyer, decided after two weeks that he had had enough and quit. One of the two other students was Dave Robbie, a physician. Dave knew all the answers to all of Dr. Rolf's questions. As a matter of fact, she later asked him to write a paper on how structural tension and Buckminster Fuller's understanding of the tensional patterns in a geodesic dome related to Roling SI. The other student was a guy named Noel (I cannot for the life of me remember his last name) who, after failing a previous practitioner course with Ida, had spent a year in Big Sur studying with other Rolfers, and could now also answer Dr. Rolf's amazing questions. I, on the other hand, was still not exactly sure what Roling SI was. At the end of the class, the advanced Rolfers who formed the selection committee told me that I had the makings of a good Rolfer, but something intangible was missing. That something, it turned out, was Erhard Seminars Training®, or est, an intensive two-weekend seminar intended to help one unlock one's full human potential. I wasn't interested in attending, and angrily told the selection committee so. They were unmoved. The choice before me was to attend the est seminar or go home to South Carolina and spend the rest of my life explaining why I decided against becoming a Rolfer.

With the financial and moral support of my friend Harvey Ruderian, I attended the sessions with the purpose of demonstrating how I was right, how I would get nothing out of it, how it did not make a difference, and how they were all wrong in making me go. That lasted about half of the first day. The est trainer, Landon Carter, was talking to this woman who kept getting up and arguing with him. After a while he said, "Why not just be here to see what is possible." So I uncrossed my arms and legs, looked around the room, and realized that I did not know anyone there. I did not have to stand up and talk, and nobody but me would know if I got anything out of it. You could say I started taking Dr. Rolf's coaching right there.

Dr. Rolf's 'East Coast Business Manager'

Right after I completed the training, Dick Demmerle arrived in Los Angeles for a teachers' meeting. We met to catch up and he extended a very generous offer to me: come back to New Jersey with him and assist him in working on three of his Roling clients. Then I could take his class and get certified, as he'd originally proposed before I insisted on training with his mother. I eagerly accepted and Dr. Rolf and the powers that were agreed to this.

While living with Dick, I discovered that Dr. Rolf was constantly asking him or his wife, Bridget, for administrative assistance. She wanted them to find her secretaries, take her shopping, set up classes, and handle various other errands. I told Dick that I could take all that off his plate. When Dr. Rolf returned to the East Coast late that summer, I picked her up at the airport and proudly announced that I'd appointed myself her East Coast business manager. She gave me an appraising look. "Okay," she said, "Do you have five dollars for the porter?" I did. That was my job interview, and I passed. I loaded Ida's bags into my pickup truck and we began a rewarding four-year professional and personal relationship that taught me all the values that guide my Roling practice today.

Dick introduced me to some people in Philadelphia who had taken the est training. Dub Leigh, as the rumor went, had introduced Dr. Rolf and est founder Werner Erhard to each other. Werner loved the Roling sessions and became a big fan and supporter of Ida and her work. He highly recommended it to all of the people he was training as seminar leaders. Dr. Rolf, on the other hand, was recommending the est training to everyone she trained. With Dr. Rolf's blessing I joined a small group of people, including Werner's mother and father, and started doing Roling sessions on all of them. This became a big source of support for my practice and my relationship with Ida. I took the Est Guest Seminar Leader Training and began to master registering people in just about everything I could. I also moved into a big brownstone with a bunch of people that I met through the Arica training. Soon they all moved out and I was left with a small group of women that I had done some Roling work with, and together we created a sort of Roling SI / est headquarters in Philadelphia.

My first job for Dr. Rolf was to find her a secretary. Adrienne Carlee, who was a friend of my housemate Marilyn Hall, had gone through the Roling series and had taken many est seminars, and became one of Dr. Rolf's best assistants. She also moved into our house, so I got daily briefings on how it was going, what Dr. Rolf was working on, and what support she needed. One of my first big breakthroughs came when Dr. Rolf decided to have an advanced class on the East Coast. Adrienne, Dick, and I helped put it together. In the advanced classes back then we spent a few weeks receiving the basic ten sessions and then spent the last four weeks on the advanced sessions. I knew I was too new to be in the advanced part of the class, but begged Dr. Rolf to let me review the basic Ten Series. "Absolutely no" was the answer Adrienne brought home. Then towards the end of the first part of that class, she said I was invited to sit in. In class that first week I had a revelation that shaped the rest of my relationship with Dr. Rolf: I noticed that people in the class were working really hard on proving how smart and great they were. Dr. Rolf, on the other hand, was only interested in teaching them as much as she could. Since I had no investment in the class, I learned to just surrender to Dr. Rolf and learn and absorb as much as possible from her about both Roling SI and life.

I learned another lesson one day when Dr. Rolf asked me to go to the market in Philly and get her a chicken. She explicitly explained to me what kind of chicken she wanted. Once I got to the market I was a little confused about exactly what she had asked for and picked out a chicken that I thought was best. I went back to her apartment thinking that she would joyfully welcome me for doing this errand for her. Well, I'm sure you can guess what happened next. She resoundingly rejected my chicken and told me to go back to the market and get her exactly what she wanted. Another lesson in listening.

Then there was the "do you know what you are doing or where you are going" lesson. I had become the president of the Northeast Rolfers Association, and one of the Rolfers in Washington, DC had set up an initial meeting between Dr. Rolf and this important physician, Francis (Frank) Wenger. Now I was still driving around in my old pickup truck with a homemade camper on the back, not exactly the limousine ride you would think Dr. Rolf

should be in, but she never batted an eye. So we started on our way down to DC, and having been there before I was certain I knew the way. We were joking and talking and having a grand old time when, after what seemed to Dr. Rolf to be more time than it should have taken to get to DC, she asked me this simple question: "Do you know where you are going?" Indignantly I said, "Of course," while on the inside I immediately began to doubt if I did. "Oh yeah, Ida, we should be there real soon." About half an hour later she asked that I get off at the next exit for a rest stop and she insisted that I get my bearings. This was fortunate, for if we had kept going the way we were going we would have ended up in Ohio. She never let me forget that one. We finally got to DC and, yes, she let me drive her back home.

We were all having a rollicking time during that period. My house was great, my friends loved Dr. Rolf, and she loved them. She met Werner's parents, whom I had worked on, and from time to time she would come visit and talk about Roling SI to my clients. As her eightieth birthday approached, my housemates and I decided to throw a party for her. The details escape me, but I do remember the beam on her face with so many of our friends and other Rolfers from up and down the East Coast in attendance. Dr. Rolf loved being loved just for herself.

The next big event was the Explorers of Humankind Conference put on by Thomas Hannah, assembling some of the greatest names in the human potential movement for a two-day conference in Los Angeles. Each person was asked to give about a forty-five minute talk about his/her work and then, in a somewhat casual format, Hannah would interview him/her. At first Dr. Rolf was reluctant, but we all encouraged her and I promised to go with her. The other people presenting were Moshe Feldenkrais, Alexander Lowen, Charlotte Selver and Charles Brooks, Hans Seyle, Barbra B. Brown, Ashley Montague, Karl Pribram, Carl Rodgers, and Margaret Mead. I believe that Dr. Rolf was both honored and a bit intimidated being included with these extraordinary pioneers, yet her presentation was both stunning and brilliant. While there, she was invited to dinner by Feldenkrais and Lowen, but that afternoon she was tired and asked me to take her place. Well, it was an amazing dinner, listening to two giants each passionately argue why his method was superior.

Another opportunity appeared when I somehow became involved in setting up an interview with Dr. Rolf by *Psychology Today*. Once again, initially she was reluctant, but after some heavy coaxing she agreed. The interview was by phone and Dr. Rolf was once again brilliant.

Then one day we went together to Florida for a board meeting. Dick and I had had an uncomfortable encounter, and there was a lot of tension among the Rolfers of the Northeast region. It was a sticky situation. As Dr. Rolf and I were sitting next to each other on the plane you could have cut the tension between us with a knife. This was one of the few times, if not the only one, that we had a conflict. I broached the subject with her and she listened to what I had to say. Then she said something profound: "None of the people that I have trained as teachers are perfect. You have to do the best you can with what you've got." It was in that moment that I got the depth of this amazing woman.

The Children's Project

From the very beginning of my career I had worked with children, especially kids with developmental challenges. Somehow I saw this as the real power of our work. Dick had asked me to work on his children since he felt he did not have the emotional clarity he thought was necessary. (I felt quite honored that he would trust me with Dr. Rolf's grandchildren.) Then I asked Adrienne if Dr. Rolf would let me come over and watch her work with a baby. "No, absolutely no!" was the response, but one day I was at her apartment in Blackwood, New Jersey and this baby was in her office standing by the desk. I could see that the baby had developmental challenges, but since she had had a number of Roling sessions, she was better able to deal with them. From that moment, I was committed to having Dr. Rolf teach me how to work with babies and children.

Dr. Rolf wanted to do a special project working on babies and children, but not with me. The singer John Denver was supposed to sponsor it in Denver. That did not happen. Joe Heller was supposed to put it together in California. That did not happen. So one day in late 1977 Adrienne came to me and said Dr. Rolf wanted to do the project in Philadelphia and wanted me to manage it. My housemates and I went to work on making it work. Dr. Rolf picked the Rolfers, I helped shape the plan, people



Figure 1: Ida Rolf and Robert Toporek begin The Children's Project (now www.teamchildren.org) with an introduction to Rolfing SI for babies and children led by Dr. Rolf in Philadelphia in 1978.

contributed money, and my housemates accommodated the out-of-towners. I lined up the babies and children, Dr. Rolf did a demonstration for my clients and their children in our living room, and somehow it all came together.

The Children's Project was a frolicking success. We turned our whole house into a laboratory. Dr. Rolf was there every day. What I did not fully realize was exactly how sick she was; there was no sign except for the fact that she needed a nap every afternoon. The Rolfers associated with the project were amazing. The fact that so many strong, powerful people could work so well together was incredible. I felt that each person got the best that Dr. Rolf had to offer us.

It was during this time that I went over to Dr. Rolf's apartment on a quest to find the truth about how she started Rolfing SI. When I posed this question she took her umbrella out of the stand and started swatting me with it. "Now get out of here with that question. That is the problem with you. People like their stories so leave them alone." So if any of you are wondering if I know the secret to how Dr. Rolf started Rolfing SI, the answer is "No."

The Final Chapter

A few months later Dr. Rolf decided to do another advanced training in my house, and once again she was there every day. Adrienne was burned out by this time and Dr. Rolf's health was declining, so it was time to find another person to assist her. Joy Beluzzi lived around the corner with Mary Thorp, another person with whom I had worked and attended various est trainings. I thought Joy would be the perfect person: she was amazingly competent, and one of the most pleasant people I have ever met. The next day I went to Dr. Rolf's apartment with the big announcement: "Ida, I've found a replacement for Adrienne and her name is Joy." "I hope not," she said.

Joy was the perfect person for Dr. Rolf's final chapter. She took care of her joyously, competently, and lovingly. She gave her everything she had to give. During this time, to my surprise, Joy and Dr. Rolf's other son, Alan Demmerle, became chummy. Shortly after the funeral, Alan, Joy, and I went to dinner to celebrate Ida's life.

Joy and Alan have been married now for what seems like most of my life. Alan had two children from a previous marriage; one became an osteopath doing amazing bodywork in her own right. All of the Demmerle children, now adults, are pursuing their dreams. Dick and Bridget

moved to Switzerland, where Bridget is from. We are all of us living a different type of life because of a little old woman with a twinkle in her eye, a flower in her hair, and an amazing gift to humanity. [Editor's note: Dick Demmerle passed away shortly before this issue was published.]

Epilogue

I kept waiting for Dr. Rolf to finish the Children's Project and write up the results, but it became clear that it was not to be before she passed away. I knew how much she saw working with babies and children as the future for Rolfing SI, so I promised her I would both complete the initial project and continue on with it. She gave me a look similar to that when I told her I was going to be her East Coast business manager, "We'll see." Although it was not exactly the prettiest of monographs, *The Promise of Rolfing Children* was completed and 10,000 copies distributed. I went on to produce an award-winning documentary with the same title. Both can be found on my website www.newbabymassage.com.

Since 1975 I have worked with over 300 families and documented the results, often going as deep as four generations. Many of the children I worked with, after growing up and having their own families, have had me work on their children. I will start working with infants as early as the first day, as I did with my son, Bryan. And on his wedding day when just the two of us were together, I asked him if he would like me to work on him. When I asked him if I could share the story about how I worked on him the day he was born and then this latest time on the day he was to be married, he said ok, as long as this was not going to be the last time I worked on him.

I have taken Rolfing SI to many different places and worked with many different people and am now working on funding a major project to train Rolfers to work with children and to create the Children's Rolfing Center in the Philadelphia area. I want my great grandchildren to have someone who can convey the wonders of this work to them. Who's in?

Well . . . There's No Stage Five

An Open Letter to the Rolfig® SI Community

By Sherri Cassuto, Certified Advanced Rolfer™

"I have to admit, I don't know much about staging," my neighbor said when I told her I had stage 4 colon cancer. "What does stage 4 mean?"

"Well," I replied, "There's no stage 5."

I decided to try to write something about the predicament I find myself in, since over the years I've had too many people I cared deeply about die when I hadn't even known they were sick! I didn't want to follow suit.

I don't find myself afraid of facing death. I'm just (as I've always been) a glutton at heart and am not at all done with experiencing the amazing beauty around us always. I've appreciated it with a kind of ferocity over the whole of my life and I'm still not done. As they say, life is a terminal condition and death is one of the most significant experiences we will have in our lifetimes. It comes at different times for all of us, and we may not always know when those times are, but we certainly know that we will all die. Nothing to be afraid of. We all do it.

During the first week of January 2014, I was diagnosed with stage 4 colon cancer. In fact, I've come to understand that it was/is stage 4+ colon cancer, and that my chances of living very long at all are quite small. I believe it is important to speak of things like this. Perhaps my writing will help one of you recognize this process sooner than I did, either in yourselves or in your clients, and have better chances of longer survival than I do. At this point, whatever I can do to be of service, I wish to do.

The type of cancer I have, an adenocarcinoma, takes a long time to develop and grow, but it does so exponentially. At first, a few cells double, then as years go by, masses of tissue double. When I was diagnosed, I had a nearly complete obstruction in my sigmoid colon as well as three small (<1 centimeter) tumors in my lungs and a liver perfectly stuffed with adenocarcinoma. By perfectly stuffed, I mean that it appeared that no more could fit. My CEA, cancer marker values, were astronomically high.

I had been growing increasingly tired for a long time. Many of you know that I was a world-class athlete and enjoyed long



Photo by Susan Cassuto

forays into the wilderness. To accomplish these things when I wanted, I spent my life training, both during my heyday and afterward. When my cancer must have really taken off, I was living in Seattle in a lakefront uninsulated cottage and paddled my sea kayak (raced myself, of course) back and forth to my office – ten miles round trip. I did this in all kinds of weather, all year long. I was so well trained from all these miles that I began racing kayaks and surfskis. Although I was 'old' and a woman, I did very well in races. When I began to get really tired, I thought that perhaps I was finally starting to feel the age that everyone thought I'd have begun to feel long ago. Also, going really fast hurts, so part of our race training was to learn not to be distracted by pain. Sometimes, this doesn't work for us. Other athletes I've known who also had cancer reported these same rationalizations. I started to lose races.

Soon enough, my human-powered commuting style began to get more challenging and then even my workday took its toll. By late 2013, all I could manage to do was work, make myself dinner, then sleep. I knew something was very wrong. All I could eat were soups, and I was having heartburn and esophageal spasms. I thought I had an ulcer. I tested positive for H. pylori and did the heavy

antibiotic regimen. No change and even more time went by. Pretty severe back pain followed, which I tried to solve with Rolfig® Structural Integration (SI) and chiropractic care. My Rolfer noticed that my ascending colon was packed, and we both wondered about this. I was hardly able to stay upright for a CE class I was taking. Finally, in early January, I had an endoscopy and two attempts at a colonoscopy before a CT scan revealed the true nature of the situation. Surprise! By the way, the back pain was due to the huge bulk of my liver acting on my spine, both compressing and twisting it. I no longer experience this, but suspect I will again in the future.

Now, twenty-two infusions, two chemo ports, and a year later, I know a lot more. I know that cancer is defined as a failure of the immune system. At first I resisted this, since every single blood draw I've had (and believe me, there have been many) shows perfect results in all but my liver enzymes and cancer marker (CEA). My immune system appears to be perfect – even after all this chemo! In fact, it can't be perfect. Cancer is a pathology associated with a failure somewhere in the immune system, which is itself unfathomably complex. We generally get only the most basic look at it and don't really grasp how it works, so finding the breach in the wall is a nearly impossible task. Someday, I hope that we'll be able to measure all of these components and thus treat people with cancer more humanely and in a more targeted fashion, but now, that's not the case. I'm very fortunate in that I experience less of the horrors of chemo than most people – or perhaps, like my symptoms, I am more able to ignore them. Still, my life is very different: I can only work a session at a time here and there, and, finally, I am too weak to climb back onto my beloved little boats if I flip over, so my sources of joy are having to change. Those of you who know me also know that it is not in my personality to sit back and wait to succumb, so I am learning and trying what I can, even though I'm told it is nearly futile.

I have recently come to understand (and this has been confirmed by my doctors) that up to 99% of the mass of tumors is simply tissue, unable to metastasize. The bad stuff, the cancer stem cells, which are metastasis central, make up about 1%, so are invisible. They call these cancer stem cells micrometastases. Chemo targets tumor tissue, but has no effect on cancer stem cells, so as I've mentioned to my oncologist,

no matter how much of the bulk of my tumors vanishes, it may look good, but it doesn't really change my situation. The only effective weapon against cancer stem cells is our own immune system. Again, my oncologist confirmed this. What chemo does by reducing tumor size is diminish the overall metabolic stress on my whole system, which I hope makes it easier for my immune system to fight back. Chemo is also known to damage the immune system, and even though mine still looks fine by normal parameters, we already know that it has some yet undefined problems and maybe chemo is hurting that bit more. This is the rub. We have to make choices we don't know the consequences of, and the stakes are as high as they get. When I was first diagnosed, I was so close to death that chemo was a no-brainer. There wasn't any time. Now, my tumor load is very much diminished and I have some choices.

I've chosen to continue chemo for now, but that may change. I have recently added a protocol of supplements that are chosen to increase my overall health, target cancer cells, reduce inflammation, and stimulate my immune system. We'll see how it goes. We are all experiments. Recently the cancer seems to have begun to be more successful in resisting the chemo. In other words, there must have been successful mutations over the many infusions over the past year, and the drugs are less effective at stemming the tide. I hadn't realized that my doctors had been throwing almost everything they have at me at once, so there isn't much worth taking left to try. There are a few clinical trials, but they're also not often worth the poisons involved. I'll be learning about what's left very soon and will have to make some hard choices. Just so you know, when faced with these for real, they are simpler and clearer than I'd have imagined. Hard choices are just that: hard, but they aren't at all impossible. We are stronger than we think.

This has been and will likely continue to be my most significant life journey. I have processed more in the past few months than could be believed. It's a great gift. Had I simply been hit by a truck, I wouldn't ever know how much I am loved or grasp the world in the way I can now. Cancer has been a gift more than a burden. I know that many people articulate this, and that if you're not 'in it', it's difficult to believe – but honestly, it's the truth.

Even though I've been through over a year of chemo, I somehow still don't look like I have stage 4 colon cancer. This allows me and others I'm around to forget it sometimes and just live unburdened. I am very lucky.

I've been asked how having colon cancer has affected my practice. The answer is: a lot. I simply haven't the energy to work like I did. When I began my practice in 1991, I experimented with different workloads. I figured out what schedule left me plenty of recovery time and the ability to be my most present and whole self when my clients walked through my door. I imagine this is different for all of us. I've always scheduled with longevity in mind, so I worked three full days a week. Many Rolfers work much longer weeks, but I didn't choose to. At this point in my illness, working three full days a week is a pipe dream. I am unable to work on any kind of regular schedule, but choose to keep my office and shoulder the expense involved in order to have the privilege of working as I can. I earn far less than it costs me to keep my door open. I treasure the time I can spend where I can focus completely on someone else. This past year has been entirely too much about me. In my office, I leave my cancer at the door and try my best to improve someone else's condition. I am grateful to pay for the opportunity.

What I am becoming increasingly aware of is the needs of the others in my life. There are many more than I could have believed in the past, and many of them fret. They need me to fight, to keep searching for a way – any way – to attempt to prevail. They desperately want me to stay here. I try my best to evaluate whatever is out there and to choose my path(s) carefully. Honestly, my situation is grave, but I haven't yet felt desperate. There's still time if I feel I need to go there, but I have also come to realize how many in our world prey on desperation. It is difficult to watch the people who love me grieve when I can't do anything about it.

My clients have had a range of reactions to my diagnosis. I wrote a letter to them all when I first learned of it, not disclosing the stage. Some people have simply vanished. I, of course, know them all well, so understand their fears. Others have written, stayed in touch, asked to visit me, offered all kinds of help, asked to schedule with me as possible, prayed long and hard via many belief systems. They are a strong, precious bunch. I am humbled by them again and again.

I decided to write a blog at caringbridge.org because I was overwhelmed by the sheer numbers of people who cared. It is populated by family, clients, friends old and new, athletes, colleagues, even people I don't know. There have been over 7,000 (yes – three zeros!) visits since early 2014, and I am continually floored by the kindness, love, and community shared there. Anyone can join, so I invite you all to visit if you like. Just go to www.caringbridge.org and search for Sherri Cassuto. The blog is called "In The Belly of The Whale." Remember to read the home page to learn why.

My world is narrowing and in all likelihood will continue to do so. I just returned from a trip to Florida where I spent some time at a surfing beach. Understand that the water is my home. I hadn't realized how cold the water would be there, so hadn't brought a wetsuit. None of the shops in the area rented them, so I just watched the waves curl and imagined the rides. I hope that the next time I go there (I have family in Florida), I will still be capable of surfing. This feels like a rapid, unpredictable form of aging. It'd be simply fascinating if my life wasn't in the balance.

On the other hand, I don't have to worry about things like dementia, having enough money if I live too long, losing all of my friends . . . I seem to be getting out earlier than I'd have chosen, but all of our paths are what they are, and I have certainly made the most I could of mine.

I don't know where else this journey will be taking me, but I have a ticket and a good seat. If I believe that there's a good reason to tell you more, I'll submit again. In the meantime, I wanted to say all of this to you, my colleagues, and to also articulate how grateful I am to have done the good work I have amongst you. I wish I could do more, since my work is now dimensionally better than it has ever been, but we can only do what we can. I still follow the path of the glutton.

By all means, get a colonoscopy. I wish you all good health, happiness, enlightenment, and joy. My love to you all.

Sherri Cassuto
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Reviews

Required Reading

Body Psychotherapy: History, Concepts, and Methods by Michael C. Heller (W.W. Norton & Co. 2012)

**Review by Michael Salvesson,
Advanced Rolwing® Instructor**

Michael Heller's book is, as Dr. Peter Levine states on the book's cover: "Unquestionably the bible of body-oriented psychotherapy." But it is also, for bodyworkers and Rolfers™ in particular, a much needed course in the history of the mind-body problem, an exploration of the emergence of a modern, scientific view of the organism, a detailed look at the interaction between psychoanalysis and early European body therapists, an analysis of the influence of non-conscious mechanisms in the regulation of the body and psyche, and the presentation of a model for situating various body and psychotherapeutic practices within a coherent view of the organism. That is a lot to offer between the covers of a single book but nowhere else will one find such an essential education for bodyworkers.

Michael Heller begins his book with a review of the two ancient systems of body wisdom that encompass the totality of the organism: the yoga of India and the Taoist practices of China. In these disciplines foundational links between mind and body are unified in ancient metaphysical systems, which have recently been imported to the West and influence the thinking and practice of many bodyworkers.

The course of Western thinking has broken apart this unified view of nature and the body, and the next section of Heller's book takes us on a tour of Western conceptions of what becomes the mind-body duality, or the mind-body problem. Heller starts with the idealism of Plato. He cautions us against the dangers of certainty inherent in any stance of absolute knowledge, a theme he will take up later, as a plea to accommodate the insights of bodily and clinical experience to the methods of modern science.

From Plato, Heller takes us to Descartes and then to Spinoza (Heller's favorite), where we are introduced to the modern notion of complex organisms capable of self-organizing and a view of nature that is not dependent on any transcendent source

of order. It is here we find one of the first discussions of the influence of the body on the mind: "The human mind is capable of perceiving a great many things, and is the more capable, the more its body can be disposed in a great many ways." (Spinoza, *Ethics*, quoted in Heller pg. 125).

Heller prods us throughout his book to see the complexity in the organism and to resist simplistic views of the body. In his section on "The Organism of the Biologists," he reviews the work of Lamarck, Wallace, and Darwin, commenting on the evolutionary necessity of a body that is the result of an accretion of accidental accommodations to a constantly changing environment. The very interesting interplay between a messy, accidental process of forming organisms and the need for coherence within organisms and species is dramatized in the debates among the evolutionary biologists.

From the early biologists come our modern notions of the internal milieu of Claude Bernard and Cannon's notions of homeostasis, essential ideas in the understanding of psychophysiology and Selye's stress response. Heller leads from the early work in homeostasis to more modern theories of the origin of emotion and the relationship between affects, neurohormonal regulatory systems, and behavior.

In part IV Heller critiques the theories "based on the assumption that there exists a linear and direct connection between psychological and bodily dynamics." After dispatching "linear models of emotional expression," he introduces the early practitioners of body-based therapies or what the European schools called Gymnastics. Most modern bodywork schools, including Rolwing Structural Integration (SI), trace their origins to these pioneers. It is the interaction of many of these practitioners of bodywork with the early psychoanalysts that gives rise to our modern notions of psycho-physical integration.

Heller's discussions of the topographies of Freud, the "first attempts to include considerations of the body into psychoanalytical treatments," and the work of Adler, Spielrein, Groddeck, and Fenichel is compelling reading for anyone working with bodies. Reich looms large and Heller treats him with respect and a critical approach to his lapses into idealism.

Heller has spent significant time studying with Dr. Paul Ekman and the section on

non-verbal communication research and psychotherapy reflects his familiarity with the research in this area. One of the most interesting aspects of this discussion is his treatment of the research on the mother-infant dyad and how one's self-regulation is learned from the style of self-regulation of an emotionally important other in early childhood.

Finally, I believe Heller's formulation of a model for understanding the interactions of aspects of organismic functioning (his dimensions of the organism model) provides a useful tool for practitioners and researchers. His plea that all clinical practitioners of body psychotherapy (and from my perspective, all bodyworkers) adopt a view of their work that is consistent with contemporary scientific knowledge is outlined in the introduction as "The Epistemological and Ethical Framework of Psychotherapeutic Knowledge." As he says later in the book: "I have noticed that, trained in the necessary restricted perspective of one school, practitioners often lack the necessary general culture to recognize that their knowledge has been polished for thousands of years in numerous cultures. In spite of the variety of elaborated approaches, most of them rediscover a certain number of robust practices and concepts that are sadly often drowned in a bizarre conceptualization. This textbook has been written so that in the future body psychotherapists [bodyworkers], will be able to face these issues with more confidence."

The Gestalt of Stretching

Fascial Stretch Therapy by Ann Frederick and Chris Frederick (Handspring Publishing 2014)

Stretch to Win by Ann Frederick and Chris Frederick (Human Kinetics 2006)

**Reviews by Szaja Charles Gottlieb,
Certified Advanced Rolfer™**

As fascia research transforms the somatic landscape, traditional manual therapy practices such as stretching are being reconsidered in the light of new discoveries. *Fascial Stretch Therapy*, co-authored by kinesiologist Ann Frederick and her husband physical therapist Chris Frederick is such a reevaluation. Fascial Stretch Therapy™ (FST) began in the mid 1990s and evolved through the crucible of Kinesis Myofascial Integration (KMI), of

which both authors are graduates, and the transforming research emanating from the Fascia Research Congresses, which they attended. The result is a mature, fully developed modality firmly based on scientific research and a manual therapy protocol that is rigorous yet based on the global structural integration (SI) model of fascial chains developed by Tom Myers. The authors' target audience is broad, manual therapists, and their book is nothing less than an attempt to reorient the manual therapy world to their new model of stretching based on the primacy of fascia.

The Fredericks' effort to project new and innovative concepts and practices into the mainstream therapeutic community, possibly hostile territory, demands precision and scientific rigor, a lack of which sometimes plagues publications within our own community. Not so *Fascial Stretch Therapy*! The Fredericks write clinically, and with purpose and organization, all heavily referenced. *Fascial Stretch Therapy* is, in fact, the basic manual for FST certification, offered with their courses at their website www.stretchtowin.com. This is not a book for the faint-hearted; it will require a concerted effort. But whether, after reading this book, you ultimately decide to obtain an FST certification or not, the book can serve several important purposes for an SI practitioner. First, FST stretching techniques fit hand and glove with SI and can be adapted into SI sessions, whether Ten Series or fix-it work. Second, the book offers many unique and stimulating ideas such as the StretchWave™, a synchronization of breath between client and practitioner, and the concept of prestress, the level of tension in a body when at rest or before movement. Lastly, the authors present a useful survey of current fascia research in regards to manual therapy.

Fascial Stretch Therapy is only 200 pages. The first eighty pages, copiously footnoted, present a theoretical grounding for FST based on recent fascia research and its implications for manual therapy practices. The remaining 120 pages are a visual catalogue of assisted stretching techniques developed by the Fredericks in their practice in Arizona, divided into lower and then upper body sections. The book begins with an in-depth review of the scientific literature of stretching, once a sacred cow in the manual therapy field, but lately mired in controversy concerning its benefits in terms of strength training, injury prevention,

and increased range of motion (ROM). An article raising similar points (Reams 2009) was published in this Journal. Suffice to say the issue has remained unresolved.

Recent discoveries concerning fascia, however, have seismically changed the conceptual ground upon which the controversy has been fought. Some of the most important of these are the discoveries that fascia contains 80% of the body's mechanoreceptors and that stretching and manual pressure heal injured cells. Fascia, rather than muscle, thus becomes the dominant factor in the body's load-distribution tensegrity structure. Armed with this understanding of the importance of fascia, especially its significant neural feature, the Fredericks enter the controversy concerning stretching and its benefits. Instead of discussing strength or range of motion of a singular muscle or joint, the Fredericks shift the argument to an old concept, flexibility, but with a new meaning: adaptability throughout the structure. Therapeutic stretching no longer aims at an isolated muscle or joint; to be truly effective and complete in eliminating a dysfunction or improving performance, a stretching modality must include the fascial chain as well.

FST assisted stretching techniques use traditional relax-contract methodologies similar to PNF (Proprioceptive Neuromuscular Facilitation) but with less time and intensity per stretch to reflect the FST emphasis on fascia rather than the PNF emphasis on muscle. They list, in fact, eighteen differences between the PNF and the FST models. Like SI, FST sessions are distinguished by an initial assessment of a client's structure, posture, and nervous system tonus before tackling localized dysfunctions. Every stretch is then organized according to the geometric planes presented by Tom Myers in Anatomy Trains®, for example, the superficial front line (SFL), or the deep front line (DFL), etc. I should mention that straps are commonly used in FST for body stabilization during some stretches.

FST is a stand-alone modality with its own rigorous protocol of assessment and treatment. Though the language, concepts, and practices in the book will feel familiar to the SI community, there is no intent to communicate directly with the SI community. There is no reference to the 'Recipe' for example. The authors' goal is more ambitious: to infuse FST principles

and practices into mainstream manual modalities such as physical therapy. It is quite remarkable for FST, and a positive signpost for SI's future, that the Fredericks have been able to achieve this seamless integration between a mainstream clinical approach usually associated with physical therapy and the 'alternative' SI concepts and worldview.

As the pace of fascia research quickens and as its effects reverberate, we are witnessing the transposition of Dr. Rolf's ideas in ways that were unimaginable. If Rolf is watching all this, it must certainly be with some delight. As for the rest of us, well, we swim in the eddies of her genius.

* * * * *

Addendum

I would be remiss if I did not include some commentary on another fine effort by the Fredericks, *Stretch to Win*, published in 2006, eight years previous to *Fascial Stretch Therapy*. Whereas FST is aimed at the somatic professional, *Stretch to Win* is a self-help book for the general population, particularly the weekend warrior and amateur athletes interested in improving performance. Like FST, *Stretch to Win* is timely and contemporary, incorporating the new discoveries in fascial research of the past twenty years.

Though SI practitioners may tend to divide clients into those with pain issues and those that come for improved performance, pain and performance lie on the same continuum of restriction and immobility. Once the restriction is removed allowing 'normative' movement, pain dissipates and motion is restored. It is easy to forget that even high-level athletes, even professionals, have ongoing restrictions and compensations.

Stretch to Win is meaty, chock full of ideas that the Fredericks have developed in their practice of working with high-level athletes, most prominently Donovan McNabb, a former NFL quarterback. But best of all, *Stretch to Win* is built on the principles and concepts of SI. How comforting to be able to recommend a book on stretching to a client knowing that your sessions and the book's contents are completely aligned.

Though this is a how-to book for the semi-serious athlete, it can be adapted to any client who needs stretching – in other words, just about all of them. The second chapter, "Anatomy of Athletic Flexibility," is a wonderful and simple enough explanation

of the new science of fascia and SI concepts in educated layman's terms. Though the stretches in the book are common and familiar, their organizational framework is different, based on Tom Meyer's Anatomy Trains. The Fredericks' introduction of undulating stretching and the Stretch Wave, synchronizing breath and stretch, attempts to expand beyond typical local joint mobility to include respiration and the nervous system and to effect the body as a whole. The Fredericks' concept of stretching is anything but mechanical, no stretch and hold for thirty seconds. The heart of the book is a detailed self-evaluation of areas of restrictions and inflexibility and a resulting personalized stretching program for correction. As previously mentioned, the stretches are well-known but are organized on SI transmission lines such as Superficial Back Line (SBL), Superficial Front Line (SFL), etc., beginning with four 'core' stretches of hip flexors, gluteus complex, quadratus lumborum, and latissimus dorsi. The Fredericks thereby bring stretching to a holism usually deficient in typical programs.

Together, *Fascial Stretch Therapy* and *Stretch to Win* mark a significant contribution to the SI literature. While many in our community have called for decisive scientific experiments to prove the validity of our work, sometimes forgotten is the sheer weight of articles and books published in the past fifty years, which would carry perhaps as great a weight with the public – if people knew about them! Unfortunately, the SI world is still too fragmented to provide an access point of such information to the general population, a sort of clearing house for SI. In any case, the Fredericks' efforts bridge the mainstream and our increasingly popular little corner of the universe.

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Two Useful Books on Osteopathy

At the Still Point of the Turning World: The Art and Philosophy of Osteopathy by Robert Lever DO (Handspring Publishing 2013)

Osteopathy for the Over 50s: Maintaining Function and Treating Dysfunction by Nicette Sergueef DO and Kenneth Nelson DO (Handspring Publishing 2014)

Reviews by Allan Kaplan, Certified Advanced Rolfer™

Here are two significant books from Handspring Publishing, osteopathic books that are very different from each other. If one takes a continuum from technical to philosophical, the books would find their homes on opposite ends. But each is equally important in getting a complete perspective on holistic care, ostensibly from the osteopathic perspective. I say "ostensibly," because I found the knowledge in these books equally appropriate for Rolfers as for osteopaths. Both books are written by practitioners of the European osteopathic tradition, oriented toward manual therapy, versus the American allopathic approach, which makes them much more applicable to the manual practice of Rolwing® Structural Integration (SI).

As I read *At the Still Point of the Turning World: The Art and Philosophy of Osteopathy*, I kept mentally substituting "Rolwing SI" for "osteopathy" on nearly every page, and saying to myself, "Exactly! Rolwing SI looks at this the same way!" I found this slim book to be a valuable investigation into the essence of osteopathy as art, especially because its author has sought to distill it down to principles and concepts that are, coincidentally, easily applied to the practice of Rolwing SI, as well as other holistic approaches.

Osteopath Robert Lever has divided his observations into three parts, first giving an overview of osteopathy's background, principles, and speaking of structure and function. He talks about the body and its systems – corporeal, energetic, and lesional – framing it all within a global, holistic viewpoint of the person that really suggests thinking 'out of the box'. One of his influences, Rollin Becker DO, taught a melding of "clinical knowledge" with the body's "definitive state of knowing," and

that's the tack that Lever has taken with his book. After laying out the concepts, he delves into the art of the work, the context of the relationship, how to "read" the patient, use creativity and analysis, and how to open up to get beyond technique in order to align with the client's state. Finally, Lever shares his inner thoughts concerning the dynamic of client and practitioner on multiple levels – support, dependency, purpose, doubt, unknowing, transcendence – all factors that enter into the mix

At the Still Point of the Turning World: The Art and Philosophy of Osteopathy is a valuable treatment of the essence of the art. It is fascinating, and certainly thought-provoking, leaving one with plenty of questions, and stimulating introspection, evaluation of the modality and relationship with the client, and the way of approaching the work to have it manifest. It's well-researched, eminently thoughtful, even profound, with simple conclusions. He's speaking of holism throughout: throughout the book, the body, and the relationship. It's a deceptively complex book, but conversational and approachable despite being deeply contemplated with layers of interwoven ideas. Yet, it flows like a well-composed lecture or skillful, engaging conversation.

Lever traces the questions of what we're looking for, what we're doing, how we're doing it, versus the step-by-step of technique; the questions of attitude, history, essence versus a manual of how-tos. This book is not a textbook, and supports development of the practitioner's creativity and analysis. Lever stresses the idea of disengaging from technique and basing the treatment (or session) on the practitioner's skills and knowledge from a place of "stillness" and reflection, where a true connection with the appropriate path of the session will manifest. I am reminded of Dr. Rolf's own book once more, in that one reading cannot possibly do either book justice; many general ideas will be introduced – some even well-grasped – but only through repeated visits will the real depths of the message be realized.

From the opposite pole of the continuum comes *Osteopathy for the Over 50s: Maintaining Function and Treating Dysfunction*, for which I waited with great anticipation. And the wait was well worth it. This book is more the textbook or reference that Lever's book is not, and holistic in its content in its own fashion. More than a third of its

four hundred pages are spent covering the nuts and bolts of osteopathic assessment and treatment techniques for the entire body, and the latter segment of the book is an examination of a very wide array of ailments.

The “Over 50” part of the title plays in the range of the issues explored in the book – but seriously, plenty of these are problems that I encounter in my practice on a daily basis, and not limited to ‘older’ clients. Conditions are divided into chapters of musculoskeletal, postural, cardiovascular, respiratory, gastrointestinal, urogenital, autonomic, and auditory/visual dysfunctions, and cover a wide array of common ailments. Every week I have people coming to my office mentioning fibromyalgia, chronic fatigue, irritable bowel, hiatal hernias and reflux, pelvic floor disorders, vertigo/balance, and sleep issues, and there are thorough perspectives on understanding and approaching them. There are more age-related problems covered, too, such as hypertension and heart disease, pulmonary disease, prostate issues, nervous disorders, and the like. Within each chapter, all the conditions are considered from a holistic viewpoint that thoroughly reviews their mechanisms and etiologies, the anatomy, physiology, and innervations, gives an osteopathic perspective to the issue, and then provides “advice to the patient,” which is essentially a summary of suggestions for the client to support the work.

Besides being a comprehensive, exhaustively researched reference of pathophysiology and treatment that is very approachable, *Osteopathy for the Over 50s* is well-suited for Rolfers in that the book’s viewpoint is based on fascia. Its first chapter is all about fascia, how it is all-reaching, and the treatments use an approach that relies on the mechanisms of fascia and the osteopathic ‘primary respiratory mechanism’, utilizing an array of fascial listening and indirect techniques, and cranial and visceral manipulation when applicable.

Both the above books can’t help but enrich a Rolfer’s library, and are highly recommended additions.

A Look at Yoga

Yoga: Critical Alignment – Building a Strong, Flexible Practice through Intelligent Sequencing and Mindful Movement by Gert van Leeuwen (Shambhala Publications 2013)

Review by Kate Bradfield, Certified Rolfer™, RYT-200 Yoga Teacher

As an alignment-based yoga teacher for the past eleven years, I was excited to read *Yoga: Critical Alignment*. I am always looking for inspiration and deeper understanding of the yoga system and the ways in which this field of study integrates with my practice of Rolfer® Structural Integration (SI). This book did not live up to my hopes as a tool for further study and knowledge of yoga *asana*.

The author began his yoga practice in the 1970s and studied extensively with the teachers Norman E. Sjoman and H.V. Dattatreya from Mysore, India. As the author credits in the preface of the book, “Their teaching was based on rational experience and research. They tested their anatomical knowledge and their theories of movement against modern scientific research.” One can clearly see that the author’s roots lie in this rational and systematic approach to asana, and he carries the torch with his development of Critical Alignment Yoga (CAY).

Van Leeuwen is interested in our physical, mental, and social stress and how the practice of yoga, specifically CAY, can help one to transform. In order to transform and release stress in the body, practitioners must learn to relax the movement muscles and stretch the postural muscles.

Reading this book as a structural integrator, one will instantly recognize that he is writing about tonic function. Most of the SI world would get behind this idea and, indeed, I do! Where the book falls short for this reader is the emphasis on feeling pain within a pose and then relaxing in to the pain so it becomes tolerable. He writes, “Too little effort, often done to avoid pain, will not lead to tangible results.” He goes on to write that the practitioner should aim for effort in which the “pain is experienced but tolerable.” This sets off all kind of red flags for me as an SI practitioner as well as a yoga teacher, and almost caused me to wonder if the translation into English was erroneous.

This book is intended for yoga teachers, teachers in training, and serious students, but I find this unrealistic. Compared to the many books I’ve read on asana and alignment, the format is very clunky and does not yield to practical application. The descriptions of the alignment of each pose are extremely verbose, and there is hardly any discussion of the use of props to accommodate the many different body sizes and shapes of his target audience. (Yes, even advanced practitioners and teachers deviate from the size 2 model shown in the book!) Each drawing or photograph of the yoga practitioner modeling the pose shows the most advanced and extreme variation and leaves little counseling on how one might go about doing these poses without the hamstring flexibility of a circus performer or the shoulder strength of Paul Bunyan. It leaves the feeling that this book is for the extremely malleable and strong and the rest of the world is just out of luck.

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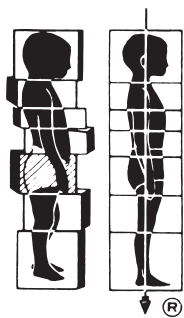
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