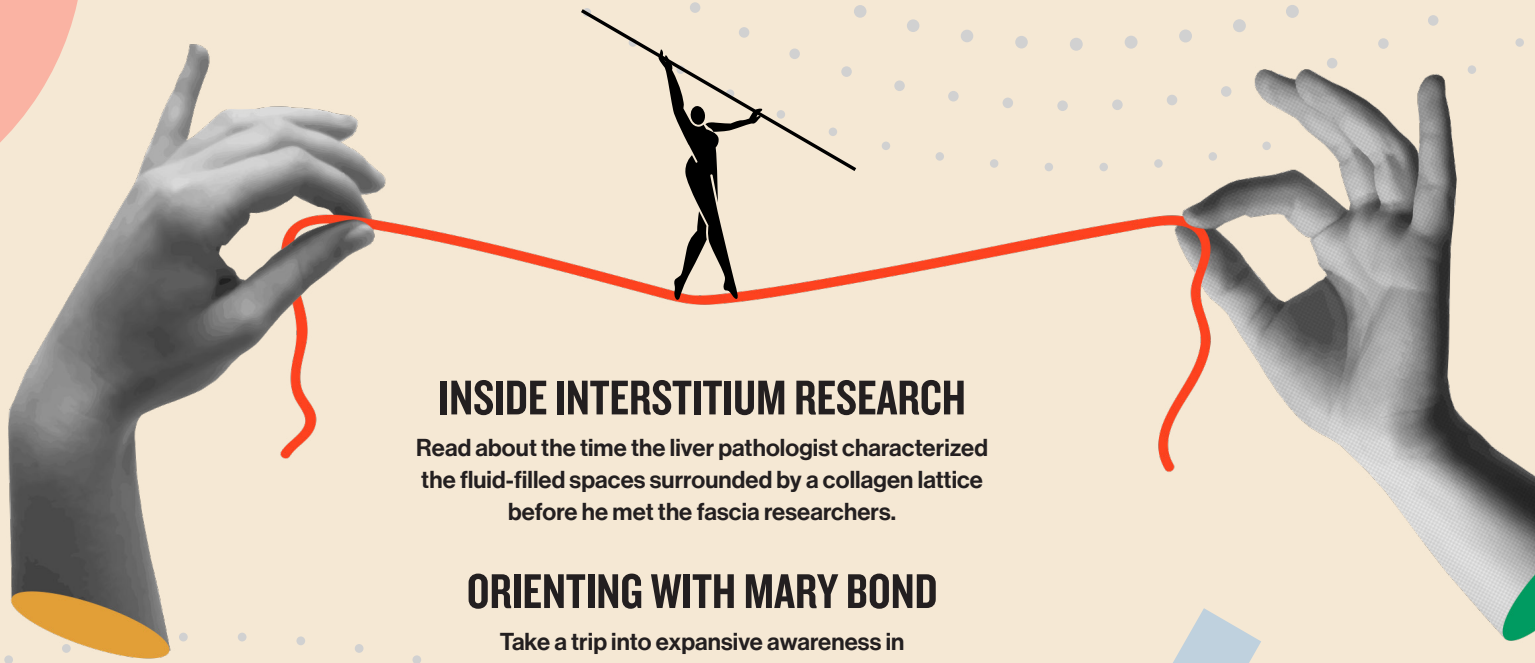
Structure, Function, Integration.

Journal of the
Dr. Ida Rolf Institute®

June 2025

ON BALANCE

Being in relationship with gravity, the body brings the heart and the nervous system into equilibrium.

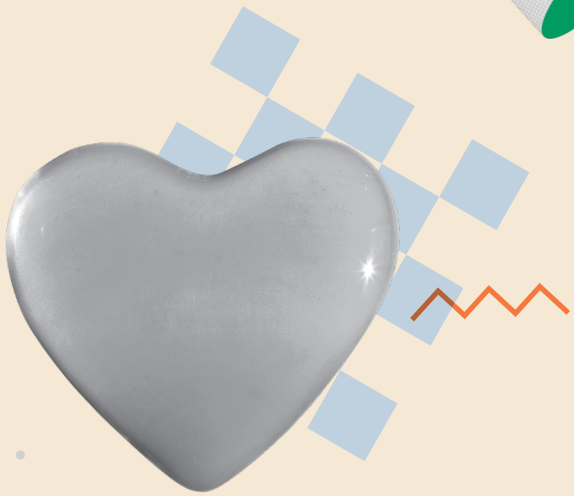


INSIDE INTERSTITIUM RESEARCH

Read about the time the liver pathologist characterized the fluid-filled spaces surrounded by a collagen lattice before he met the fascia researchers.

ORIENTING WITH MARY BOND

Take a trip into expansive awareness in your body mandala.



Also in this issue

Clinical Psychologist, Dr. Heather L. Corwin, gives the gift of witnessing.

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On Balance

June Cover

The cover design by Studio Oi for the theme "On Balance" can be likened to a skilled arborist nurturing a living network of trees in a forest. The "nerve tree," depicted as a stark, branching silhouette, represents the body's nervous system, inspired by Dr. Gil Hedley's article, in which he discusses his full-body dissection of the nervous system. As he describes beautifully, the nerve tree of the body is intimately accompanied by the cardiovascular system, which he lovingly calls "the heart tree." A throughline of the articles On Balance is the body as an experiential being, balancing the life of the heart and with the tissue associated with the mind.

The illustrative effect, with the pink circle, red thread, and abstract lines, are like the arborist's careful pruning and weaving of branches, deliberate yet organic, creating a visual tapestry that connects the nerve tree and heart. The hands holding the thread act as the arborist's guidance, supporting the delicate balance of the nervous system and heart, much like the body aligning itself within its environment. This composition evokes a thriving ecosystem, where the interplay between the nerve tree and the heart serves as the subject matter, balanced by the person walking the thread — a natural interconnected state of growth and stability.

Next Time

• Embodied Performance

A European Scientist and Rolfer™ explains the intersectionality of biomechanics and neurology, exploring force and power production and their relevance to Rolfing® Structural Integration

Contents

From the Editor-in-Chief

Lina Amy Hack

"The goal of [Rolfing® Structural Integration] is balance of the body in the gravity field; the principle of the treatment is, in brief, that if tissue is restrained, and balanced movement demanded at a nearby joint, tissue and joint will relocate in a more appropriate equilibrium."

– Rosemary Feitis (1937-2018)

In *Rolfing: Reestablishing the Natural Alignment and Structural Integration of the Human Body for Vitality and Well-Being* (Rolf 1989, Healing Arts Press), page 11.

Welcome to the June 2025 issue of *Structure, Function Integration: The Journal of the Dr. Ida Rolf Institute* (volume 53, number 1). The theme of this issue is – On Balance. Balance is what Rolfers™ and structural integration professionals offer their clients through manual and movement suggestions. We focus on the balance of human structure in the gravitational field, seeking ease and efficiency when standing and moving through our world. But what is balance? Dr. Ida Rolf (1896-1979) would take before-and-after photos of her clients as a demonstration of the balance her clients expressed after receiving a Rolfing® Ten Series. Since Rolf's time, we have broadened our observations about a person's relationship with gravity to include their lived experience.

What can we really know about a person's structural and functional balance when they are standing and walking? When I heard the Nerve Tour presentation in January by anatomist Dr. Gil Hedley, I knew I had to ask him to discuss how he views balance being achieved by the human form. In his article, "Lessons on Balance," it is all about the whole-body nervous system dissection and what practitioners are working with to achieve balance throughout their clients' systems. Next, we have movement expert Mary Bond talking about how she teaches balance in her book, *Body Mandala* (2023). Balance can mean so much more than simply how a person maintains being upright, as Dr. Heather L. Corwin writes, balance can also be found by developing the skill to witness both ourselves and others. Lastly, Certified Advanced Rolfer™ Alan Richardson wrote about the felt sense of being and how the relationships we develop with our bodies, our environment, and with gravity, all come together into this complex experience of balance.

Our columns in this issue have a lot to offer, from science, to philosophy, to the lived experience of decades of Rolfing practice, and a practical note about working with the dural tube. Be sure to read "Fascia Insights: Interstitium and Complexity Theory," which is an interview with Dr. Neil Theise, where he tells the story of how he came to document the existence of the interstitium and then integrate this knowledge with the fascia research community. Rolfer Andrew Rosenstock guides us through the intersection of phenomenology and somatic bodywork, examining how our thoughts, theories, and philosophies as practitioners shape the effort and outcome of our work. And we love to celebrate the Rolfers who have been doing this work for decades, and in this issue's "Meet My Rolfer: Kathy Rooney," we not only learn the story of how she maintained her over three decades of successful practice, but Kathy Rooney also shares some practical advice that contributed to her success. Rolfer, author, and continuing education provider Jeffrey Burch offers us a bite-sized consideration about the dural tube, a few thoughts to consider before heading off to another day of working with people's bodies. Enjoy our Rolfer-poet, Kathy McConnell, offering for us titled, "Mind's Eye."

This journal is the result of many people's passionate work, the authors who take the time to write and speak about their knowledge, and a team of volunteer Rolfer-editors who help me smooth out all the rough edges. I was very sad to learn that we lost one of our Rolfer-editors, Jason Beickert, who passed away in November 2024, suddenly and unexpectedly. Jason had been a significant contributor to this journal for many years, while also running his thriving Rolfing practice in New York. Our condolences to his friends and family for their loss.

Thank you to all our authors and editors; their work makes this journal possible. Additionally, we have the support of our copy editor, Megan Overholt, who provides top-notch quality control before publication, and the team at Studio-OI, who manage the design and production of our journal. A small team of professionals who make our ideas shine, thank you to them as well. If you'd like to reach out and give me some feedback, please do at hello@sfijournal.org.

Please enjoy the June 2025 issue,

Lina Amy Hack
Editor-in-Chief of
Structure, Function, Integration

Fascia Insights

Interstitium and Complexity Theory

By Lorraine Fauve, Certified Rolfer™, and Neil D. Theise, MD

Lorraine Fauve

Neil D. Theise

ABSTRACT *In this rich conversation between Rolfer Lorraine Fauve and interstitium researcher Dr. Neil D. Theise, they focus on the discovery of the body-wide human interstitium – a fluid-filled connective tissue network – and its relationship to fascia, complexity theory, and holistic health traditions.*

Editor's note: The conversation took place on Thursday, February 20th, 2025. It has been edited by the authors and SFI editors for clarity and style. The biographical information has been updated for the June 2025 printing.

Lorraine Fauve: Hello Dr. Theise, and thank you for doing this interview with me. As a Rolfer, I am so intrigued by your research. I imagine many people in our Rolfing® Structural Integration community are already aware of your writings and presentations on various popular podcasts. And those who don't yet know you will benefit from getting to know you and your work.[1]

You are a diagnostic liver pathologist who, as of May 1st, 2025, is retired from a long and productive career as a Professor of Pathology at the NYU Grossman School of Medicine. Let me start by congratulating you on your recent retirement and move to Portugal.

For this article, we are going to focus on your research regarding the anatomy of the human interstitium (Benias et al. 2018), and perhaps we will touch on your 2023 book about complexity theory.

I heard about your discovery of the interstitium when it was featured on the popular podcast *Radiolab*. In their episode called "The Interstitium" [Nov 23, 2023], the journalists showcased how your work with a team of gastrointestinal endoscopists led to the discovery of fluid-filled channels inside tissue, and how these channels are a part of a continuous network throughout the body. It was suggested that the interstitium was a newly discovered organ and "a bridge between ancient and modern medicine" [Radiolab Podcast 2023, online].

The *Interstitium* is:

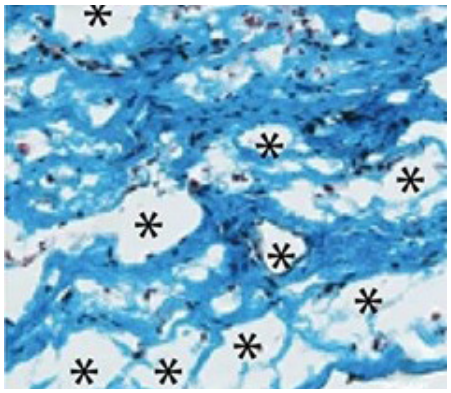
"a form of interstitial space in which interstitial fluid or 'pre-lymph' accumulates or forms" (Benias et al. 2018, 3).

It is a fluid-filled space that is supported by a collagen lattice.
- Compressible.
- Distensible.
- Shock absorber.

Fluid flow in the interstitium is subject to cycles of compression and distention, also noted to be affected by perfusion cycles of the body and the function of specific organs.

Constant movements that result in continuous and cyclic compression and distension in the interstitium can be found in:
- The lungs.
- The aorta.

Intermittent compression and distension in the interstitium of:
- The digestive tract after a meal.
- Urinary bladder during micturition.
- Skin under mechanical compression.
- Fascial planes during the action of the musculoskeletal system.



Microscopic view of a section of bile duct from Dr. Neil D. Theise's 2018 interstitium article, where the asterisks (*) indicate the fluid-filled tubes of the interstitium dispersed among the bands of collagen bundles (Benias et al. 2018). No changes have been made to the image. Permission was granted under Creative Commons Attribution 4.0 International License. To view the license, visit https://creativecommons.org/licenses/by/4.0/.

Complexity Theory

To quote Dr. Neil Theise (YouTube 2017):

"I started getting interested in self-organizing systems, which come under the heading of complexity theory when you're talking about living systems, and some non-living systems."

Complexity theory "is how individuals, if there are enough of them and if they fulfill certain criteria, they will self-organize into larger-scale complex structures."

Example: Ant Colonies

- Within an ant colony with a multitude of individual ants running around, no individual ant is planning what is going on in the colony.
- Each ant pays attention to the local environment and the signals of the other individual ants.
- By responding to their environment, they start to self-organize into food lines, building structures, having a cemetery, and having a dump for refuse from the colony.
  - Higher order events.
- Seems to happen spontaneously in a bottom-up direction.

"It turns out the cells of the body are like that, as well. Each cell in your body is not paying attention to what everyone is doing. There is no master-planning cell that's telling all the other cells what to do. They pay attention to signals from other cells, they pay attention to the temperature, the nutrient supply, all sorts of things. In those interactions, you get the neighborhoods of the body forming. The different tissues, the different organs, etcetera."

These quotes and information are all from the Science and Nonduality YouTube video "Everything Only Looks Like a Thing: Neil Theise," which was published on September 1, 2017.

Photo by EyeEm Mobile GmbH with istockphoto.com.

Before we dive into the details about the interstitium, I want to ask first – what inspires you to include perspectives from holistic and Eastern medicine practices in your conversations about anatomy and the interstitium?

Neil Theise: Yes, thank you for your well-wishes. And to answer your question, yes, I do like to include them to some extent or another, and I always have had integrative thinking. I'm writing about this for my next book, which is underway. Let me illustrate my perspective by telling you how I talk about it with graduate students in biomedicine. I have them think about their reasons for getting their PhD or their medical degree and PhD. They may say things like, "Oh, I had a grandparent die of cancer, and I want to find a cure." Or, they are entrepreneurial and they want to invent something that will make them rich and help people. Or, they dream of a Nobel prize. There are lots of well-organized reasons. But the majority of people who are doing science, if pressed, can think back to their younger self, and it started off as some sort of intimate connection with the world around them.

If you have this kind of experience in childhood and your brain is wired to do math or science, those studies in school often lead a young person to think that science is a way to explore that curiosity about the natural world. I think that spark happens very early in our lives. It's instinctual. I don't think people want to become rich and then think they need to invent something, so they go get a PhD. The urge to do science comes first, and then people start to attach ambitions to it as they get older.

I had that kind of experience early in my life, this sense of an intimate connection with the natural world, and very much through my parents, the feeling had a spiritual component as well. I never got the memo that said those two things aren't compatible with each other. That's where my integrative approaches first appeared, I think.

LF: Which is so great. It's inspiring to hear you weave these ideas together – that science can also have a broader experience for people.

Meditating Scientists

NT: I did an informal experiment once with a stem cell biology graduate program. A friend of mine invited me to speak to her students. I said I wanted to talk about the complexity theory stuff that is also my interest. She said, "Yes, that's okay." Then I said, "I'd even like to try it as a guided meditation," because I had done this for my Zen meditation group when I talked with them about my complexity theory. I had also presented it this way for some yoga groups, and it had been very profound for a lot of people. So, I thought, "What if I tried to do that with graduate students in stem cell biology?"

There were about twenty students, and I told them what we were going to do. I gave the reason for the meditation as wanting to help them recall and reconnect with their initial impulses to study science. Immediately, there was a whole bunch of people in the room with their arms and legs crossed defensively, and some eye rolling.

I had them uncross their legs, unfold their arms, sit up, close their eyes, and invite their attention to follow their breathing. It was a basic intro to meditation, to experience their body breathing. Then, I launched into the talk. When I got to the part of my talk where I discussed the body at a cellular level, about how your boundaries are not at your skin, they are further out there, where you leave your microbiome, where you have left your shedding skin cells.

When you go down in scale, what you think of as boundaries expand outward. I invited them to sit with their back upward, close their eyes, and follow their breath, then I guided their inner vision to feeling and experiencing their body as cells, then as molecules, at which they are one with the entire biomass of the planet. Then at the atomic level, you're one with the whole planet, all of its atomic substances, without separation. Finally, down at the quantum level, where we're without boundaries, the universe is our boundary, and all of us are inside.

There was a marked change in the energy of the room. Afterwards, a number of students came up to me and thanked me because I had reawakened that passion for science. What was more impressive were the emails I got later from those who didn't want to talk face to face. So, when it comes to science and spirituality, it hasn't been an either-or kind of thing for me. When I was younger, I used to think I was supposed to keep them in two separate boxes, but not anymore.

LF: A lot of people think of science and spirituality as very separate.

NT: Some people think, "No, the spiritual doesn't exist; it's only a material universe." Our culture pushes that hard. Other people are the reverse. And others beyond that live with significant cognitive dissonance. For example, we can insist on a materialist understanding of existence all we want, but then someone you know dies, and there's an experience of feeling their presence, and the world view has to shift – something impossible becomes possible – until you talk yourself out of it or forget how vivid it was.

I had my own very vivid, direct spiritual experience in my Zendō[2] one morning that was hard to deny. The complexity stuff I was studying became the Buddhist stuff, and vice versa. I realized, "Oh, these are not two different things. They're just two different views of the same thing." There was no shaking that experience from my memory. So, from then on, I always considered both – or even multiple – views. That was the context into which, when we came up with the interstitium anatomy, this is how I was already thinking.

Benias et al. 2018 Interstitium Paper

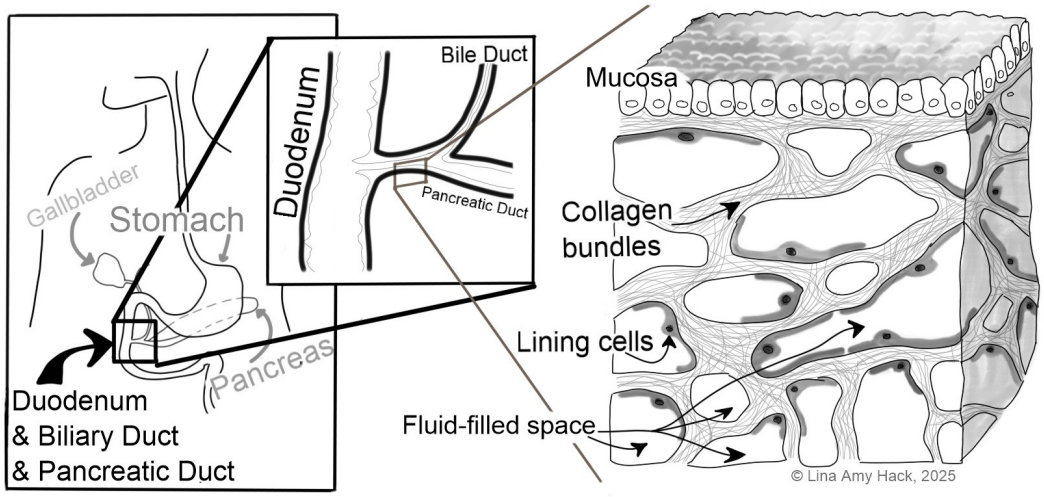
LF: Yes, I was wondering how your discovery and research of the interstitium has affected your way of looking at the world.

NT: That experience in the Zendō was around 2005, and our first interstitium paper was in 2018 (Benias et al. 2018). So, I was already thinking that way about complexity theory and its implications for how many different ways there were to view the human body when we published about the interstitium. But I didn't leap from the interstitium to other healing practices right away.

What happened was we published our findings on the anatomy of the interstitium and then people in other traditions said to me, "Oh, that's what I've been talking about for years."

Our original paper did not actually say the interstitium is an organ, and it didn't say that we were discovering the interstitium. The title said that there was a *novel* interstitium that hadn't been described in the allopathic literature before. Because we were using the new tool, probe-based confocal laser endomicroscopy (pCLE), to look at live tissue in the extrahepatic bile ducts and pancreatic ducts, the fluid-

Neil Theise: Our research group has come into this conversation to say that within dense collagen layers of the body, it turns out there are these fluid-filled spaces. And when you're doing *in vivo* microscopy, you can see them live.



By sending the probe-based confocal laser endomicroscopy (pCLE) into the duct shared by the gallbladder and pancreas, Dr. Theise and his research team were able to describe *in vivo* fluid-filled spaces surrounded by collagen bundles, deep to the mucosa layer of the duct (Benias et al. 2018).

filled spaces were still intact, and we could characterize them *in vivo* for the first time. Previously, the very same tissue was described as the "dense structure of the submucosa" and that it "represents an artifact due to loss of fluid during tissue excision and fixation, causing normally-separated collagen bundles to collapse and adhere to each other" (Benias et al. 2018, 2).

Now that we have this living tissue imaging, we can see the fluid spaces. And we can say that these tiny little cracks of spaces in dissected tissue that have been fixed for viewing on a microscopy slide – the ones we thought were artifacts [phenomena due to the fixation and slide processing] – are actually the remnants of those spaces. It was in our 2018 paper where we proved that the old observations are related to these new *in vivo* observations. This is something I love about science – the continuity of old findings with older technology evolving to new understandings due to new technology.

Our research group has come into this conversation to say that within dense collagen layers of the body, it turns out there are these fluid-filled spaces. And when you're doing *in vivo* microscopy, you can see them live. But when we take that same tissue out of the body, the sample is going to dehydrate, and we make sections to view under the microscope, but those fluid-filled spaces collapse and disappear from our view.

There were two forms of interstitium that had been described previously. One was comprised of interstitial spaces between cells. Most cells have tight junctions between them, but when they don't, they have little spaces, and that has been traditionally called an interstitium. The cells of the skin, the esophagus, the vaginal lining, and the oral cavity, have an interstitial fluid between them that is rich with hyaluronic acid and has tiny little collagen fragments in it.

The second and most important interstitial space, historically, is what's been called the perivascular interstitium. I prefer to be specific and say the pericapillary interstitium. That's the interstitium around capillaries and to some extent, smaller blood vessels where nutrients are coming into the tissue, through the blood, and waste products from the cells are going through that interstitial space back into the blood to be carried out either by the lungs [carbon dioxide exhaled], the liver, or the kidneys for excretion. That's the tissue that has been the primary focus of interstitial research. There aren't a lot of people who've been studying it, but

there's a solid body of work out there that's important.

LF: Are all those kinds of interstitial spaces connected to the interstitium you characterized in your 2018 paper?

NT: We have been assuming they must be, and more recent publications confirm that (Stecco et al. 2025). We first saw the fluid-filled interstitium spaces in the bile duct. As a pathologist, I see tissues from all over the body. I was receiving clinical specimens, like a colon resection or a stomach resection for inflammatory disease or for cancer. I saw those interstitial spaces in these varied body locations and I realized, it's not just the bile duct, the fluid tubes are throughout the whole digestive tract. I got a breast specimen that always has a piece of skin attached, and when I looked at that skin section on the dehydrated slide, I saw the same cracks in the dense collagen of the dermis.

That led me to reach out to my gastrointestinal colleagues with the endoscope. I asked, "What happens if you put the scope on the skin? Does it show the same fluid-filled spaces that we're seeing in the gastrointestinal tract?"

This part was left out of the Radiolab interview, but it's one of my favorite parts. They replied, "We don't put it on the skin; it's an endoscope; it only goes inside." And I said, "Well, couldn't we put it on the skin?" That's when they took me up to their lab and we injected fluorescein [a dye that shows cellular structure] into my own vein and we put the endoscope on my skin. We could see the same fluid-filled spaces in the dermis. And that was the moment when we realized the interstitium was throughout the whole body. In the 2018 paper, if you look at the skin images, that's actually my skin.

NF: Wow, that's commitment to the work.

Interstitium as Organ?

LF: Is the novel interstitium an organ?

NT: In preparation for the press release accompanying the original 2018 publication, a journalist asked me something to the effect of, "Isn't that tissue the size of an organ?" And I said, "Well, maybe it could be considered an organ." Because there's no single, standard definition for what makes an organ. One definition is that an organ is a piece of the body that differs from others, but wherever you look at it, inside it, it has the same structures repeating. Lung tissue doesn't look like anything else, but anywhere you look in the lung, it looks like lung tissue. The liver doesn't look like anything else, but anywhere you look in the liver, it looks like liver tissue. By that definition, when we went looking, the interstitium was found in the dermis, the submucosae, and other fibroconnective tissues throughout the body, and anywhere you looked at it, it looked similar (though we now know with interesting variations).

Ultimately, perhaps because we published when there happened to be no other major science news that week, the paper went viral. That's when people of the Fascia Research Society took notice, as well as the whole world of people interested in fascia – fascia scientists, osteopaths, Rolfers, etc.

A friend of mine, my yoga teacher, was also a Rolfer – Debby Green in New York City. She gave me a Rolfing Ten Series long before my interstitium work. She would say, "I can feel the fluid in your fascia." I remember telling her, "There's no fluid there." "But I can feel it," she would say. I would respond, "But I can see fascia under the microscope and it's just collagen – there's no fluid there." Microscopy at the time was not able to show us this kind of detail. With the new microscope I mentioned, the pCLE, we were looking at living connective tissue. That's when we could see that the slides had been showing tissue that had dried out. Looking at the living tissue, I realized, "Oh my God, there is fluid there! Debby was right!"

LF: Wow! There we go, a Rolfer is a part of the interstitium story, that is awesome.

NT: Yes. In fact, I put musculoskeletal fascia in the paper for her. In one of the paper's supplemental figures, we show the microscopy of all the tissue types where the interstitium had so far been recognized in our work, and I included that fascia because of her.

LF: I think the readers are going to enjoy learning that.

Meeting the Fascia Researchers

LF: So, before you published the 2018 interstitium paper, you hadn't met the group of fascia researchers that are involved with the Fascia Research Congress?

NT: Right, it was after the paper went viral that the people from the fascia world got in touch with me. I don't know if they were angry, but Robert Schleip [PhD] and Carla Stecco [MD] invited me to have a conversation with them. I was told subsequently that a lot of people were listening because there was a lot of anger about our claim to have discovered something "new," and there was an expectation of an exciting showdown when we met to speak. But I had no idea of this.

We had our meeting, they talked to me, and I listened. I talked to them, and they listened. What I basically said was, "We did our best to search the literature to see if other people had been describing this, but we didn't find anything."

What I now realize from that conversation, which turned out to be very friendly, was that the knowledge of the fascia research community was not typically being published in peer reviewed, "Western," allopathic-oriented scientific publications, which had actually and historically, often been excluding people who have spoken about the body from an experiential point of view.

There were books about fascia out there, but these wouldn't be found on a standard PubMed literature search. And there were the famous videos of Dr. Jean-Claude Guimberteau3, but they also don't appear on a PubMed search, so I didn't know about them. The conversation was, to me, eye-opening and fascinating, and went well enough that they extended an invitation to me to attend the 2018 Fascia Research Congress held in Berlin, Germany, later that year. I accepted.

The day of my keynote address, they scheduled me to talk in the morning, right after Dr. Carla Stecco. She was presenting her own fascia research, in particular focusing on her recent discoveries about cells she dubbed "fasciacytes" (Stecco et al. 2018). Her lecture was a standard science talk like you have at conferences, and everyone was interested in her new findings, but when she finished, the place went nuts like we were at a rock concert. Applause, yelling, and cheering; people were even standing up. And I thought to myself, "What kind of meeting is this?" And, "Obviously, she's the Queen of Fascia, and now I have to follow *her*?"

With some trepidation, I took to the podium, but as I had already planned to do, I started by saying, "I'm sorry,

we didn't know about what you all have been doing." I told them that I felt like our research led us on this path through the woods that seemed like it hadn't been followed before, and we felt really proud of ourselves. As we followed this path further through the woods we discovered that it opened up on a meadow where all of them had been having a great picnic the entire time.

LF: That's amazing, and it shows a lot of grace on your part to have been able to say that.

NT: A little humility in science goes a long way.

LF: And it's brought these two worlds closer together. Did this moment feel like it was a conversation about being able to see both sides? Or did it feel like people had chosen a side?

NT: There was definitely side-taking. At the time, I had no idea what was going to happen. I just tried to be humble and respectful, then show them our data.

In my talk, I emphasized the fluid nature of the interstitium because that is the way we saw it; we were injecting a dye that moves through fluid spaces. For the fascia researchers, their primary interaction has been through physical interactions and also classical dissection. They were dealing with the material, the collagen of fascia, as well as other molecules. Now we know hyaluronic acid fills interstitial spaces as well.

There is a complementary relationship between these two research inquiries, and it's hard to see them both functioning at the same time. You can test the liquid one in the manner we did, and you can look at the fibrous part in tissue sections. It's hard to stain them at the same time for microscopy. I can do it, but it's not easy. And they kind of obscure each other then.

So, part of what I said was that we're looking at the same stuff, but I'm coming at it through the fluid domain, and they're mostly coming at it through the mechanical, physical domain.

I don't think he'd mind me saying this, but when my 2018 paper was published, I received a very critical email from Professor Jean-Claude Guimberteau. His primary criticism was that the interstitium was "nothing new." I wish I had saved the email, it was long and I could tell he was French even though the email had been written in English. I thought, "Who is this guy?" I didn't know his work at the time, but he let me know he had a lot of opinions about my publication. He sent me links to his stuff and that's when I learned he's a classically trained allopathic surgeon and that he had documented the fascia and published several films on the subject, as I already mentioned.

NT: [We are] looking at the same stuff, but I'm coming at it through the fluid domain, and [fascia researchers are] mostly coming at it through the mechanical, physical domain."

When I gave my talk to the fascia researchers, I knew he was in the audience, and he terrified me more than anyone else.

LF: Oh, sure.

NT: Yes. And so, I gave my talk, and I got a huge rockstar ovation as well! This was nice. And I thought, "Okay, I survived that." Then we had the best part, some time for the audience to ask me questions, which always leads me to stuff I haven't thought of before. I was starting to relax and I was being asked good questions; it was a good conversation with the audience. And just when they start to announce that it's time for lunch, Jean-Claude gets up and asks for a microphone.

I'm thinking, "Oh no! Here it comes!" As he took the microphone, the room got so quiet. Then, he said something along the lines of, "Never did I expect to hear in my lifetime a pathologist speak about complexity, fluid, and fractals." What he said was incredibly warm and welcoming. And he invited me to the screening of his new movie that he was to present at that conference.

LF: That's wonderful. I always wondered how you and the fascia researchers came to know each other. Very cool to hear it directly from you. What an experience at a conference; 2018 was kind of a rollercoaster year with publishing that paper.

Bringing Interstitium, Fascia, and Health Groups Together

NT: Right. So, that was my experience. And then a few months later, I was in China doing collaborative work with Beijing Friendship Hospital regarding my primary medical specialty, liver pathology. They asked me to do a talk on the interstitium. One of the people in the audience was a liver doctor I knew, but I didn't know that he was also very high up in the Traditional Chinese Medicine world.

His first question was, "How have people responded to your research about the interstitium?" And I said, recounting my recent experience from the Fascia Research Congress by saying, "Well, there are communities of researchers, clinicians, and practitioners who said they knew about it for seventy years."

He laughed and said, "Yes, and we've known it for 4,000 years."

That was the beginning of this experience where someone from another culture said to me, "This thing you're describing, that's what we've been talking about. We've been using our own metaphors, our own language, and often describing what we feel through touch or from energetic perceptions that are not microscopic or anatomic. We came up with these ways of describing it. That thing you're describing, that's what we're talking about too."

Then, I found myself talking with a Tibetan practitioner, and we were talking about pulse diagnosis. I knew they weren't talking just about arterial pulses, but I didn't really understand what they were feeling. Then I thought, "Are they talking about the fluid pulses in the interstitium?" He said, "Of course we are." People doing

Ayurvedic practice, shamanic healing, different forms of energy healing, and others, they say, "Yes, that's what we've been talking about."

This is one of the things that excites me. I'd like to get practitioners from many different cultures gathered in an intimate meeting, like a dozen or so people. Where there's enough diversity in the room to get creative, but not so many people that you have someone lecturing to an audience. We would start with a day without formal talking but with an array of treatment rooms and rotate through so everyone in the group gets to experience three or four of the other people's practices. No talking, just the experience of the practices.

Only on the second day would we begin to discuss. My team and I would present all we know about the interstitium and the fascia. Then we'd invite each person to take their turn to get up and say, "This is how we relate to that information." It seems to me that the way the physical interstitium acts as a communication network between different regions of the body, the interstitium metaphorically acts as a communication network across cultures. I'd like to see such intercultural dialogues blossom.

LF: That's a beautiful idea. Why do you think you're so open to these different perspectives?

NT: I'm open to it because over my lifetime, it's how I've come to understand things. So I don't have to make a decision to include something or not. A favorite quote of mine from Suzuki Roshi (1904-1971), who founded the San Francisco Zen Center, "In the mind of the beginner, there are many possibilities. In the mind of the expert, there are few." It's something I live by.

A very significant influence on me has been my Zen practice. There was one Zen practice in which you focus one's meditation on a 'koan'. Koans are little stories or sentences that you use as an object of meditation. The most famous one is probably, '*What's the sound of one hand clapping*?' The answer isn't moving a hand in the air. Most koans are dialogues between a student and a Zen teacher in which the student has some sort of awakening experience, some sort of sudden *aha* moment.

Koans are often about seeing things on the one hand from the perspective 'of the Relative' – meaning you are you, I'm me – and the world is made up of separate objects that are in relationship to each other; on the other hand, one can turn it to look at it from the point of view of the 'Absolute', where all reality is one seamless continuum without separation. This is the view from the quantum scale; the whole universe is a single entity *within* which differentiation happens. No separation, everything intimate with everything else – non-local, entangled, in quantum physics terms.

Which is the right view? Neither is the single right view; both are inarguably true.

I use this famous image in my complexity theory talks, the one where there are two silhouette faces in profile, looking at each other. The space between them looks like a vase. Is it two faces, or is it the vase? If you say it's the vase, you're missing the faces. If you say it's the faces, you're missing the vase. But you can only see one at a time, or the other. People will say, "Well, I can see both." But actually, fMRI studies have shown that those who say that, their brain is just moving very quickly between face and vase conceptualizations.

Image by Martin Janecek with iStockphoto.com.

LF: So, we're naturally wired to see one thing at a time.

NT: Seems to be. I try to remember to always look at it this way, then look at it that way. That's how I think about everything I do in my life, including my science practice. When you see something this one way, stop a moment, and say to yourself, "What if I looked at this another way?" That's probably the most fundamental teaching I've received from my Zen teachers, and it's affected me deeply.

Suzuki Roshi talked about the mind of the beginner; when you've never encountered something before, you are so attentive, open to surprise, curiosity, and discernment. When I see people walking down the street in New York as a visitor for the first time, tourists notice everything. But having been a resident of New York, because I am home, I no longer notice the Empire State Building unless there's another person on the street and a tourist says, "Look, it's the Empire State Building!"

LF: Absolutely. I live in New Orleans, Louisiana, also a major tourist destination. As a child, I lived in Mississippi, which is just forty-five minutes away but a very different place. I can still remember the smell of my grandmother's hardwood floors when we would come to visit her in New Orleans. Even though I live here now and experience these older homes every day, it's as if the memory of the sensations from my first experiences are stronger than the sensations I experience today.

Beginner's Mind

LF: You're saying, then, that you try to keep a beginner's mind even when you're looking through a microscope at your thousandth liver dissection?

NT: When I look at a liver slide from a liver biopsy, I have an open mind, seeing this tissue in front of me for the first time. This is the custom of a liver pathologist, to not know the clinical history of the person the tissue is from. Liver tissue can only change and react to injury, disease, or infection in a very limited number of ways. So, a lot of different diseases will look the same. And if you tell me what the patient is suffering from, or you think the disease is something specific, I may then look at the slide and agree, "Yes, it's that." But, I may miss something subtle that indicates, "No, no, no, it's actually this."

When you are entering a room with a client, or for me a patient, I'm sure what you aim to do is to get to know the person. Even if you have worked with the person many times, maybe you're on session eight of the Ten Series, you know they're not the person they were. You are not the person you were the last time you encountered each other.

NT: To be fresh in the moment, be aware of the Absolute as your body enters their space, your bioelectromagnetic field enters theirs. This is also where your microbiome combines with theirs, your physical touch meets their physical being, and all of those things start to interact. If you are attentive in the moment, that's where the healing happens.

To be fresh in the moment, be aware of the Absolute as your body enters their space, your bioelectromagnetic field enters theirs. This is also where your microbiome combines with theirs, your physical touch meets their physical being, and all of those things start to interact. If you are attentive in the moment, that's where the healing happens.

If you come in thinking, "I know who this person is, and I know what they need," even before you get in there, then you're more likely to miss the healing moment.

LF: This is one of the reasons why I like being a Rolfer; the work bridges the world of science and experiential understanding, including what we can't easily explain, the unknown. The training is to step closer and then step back; we're continually having to do that shift in perspective to manifest the healing moment you're talking about.

NT: Allopathic medicine, having wedded itself to reductionist techniques, often has lost that. It is common for patients to encounter allopathically trained clinicians who don't have that ability. Obviously, some of them do, but it's by instinct. Our training isn't to cultivate that. When I look at manual medicine, osteopathy, and traditional medicine, they cultivate that. There's been pressure for osteopathic training to align itself more with allopathic training, and so you can have osteopaths who are blind to the tradition that they haven't awakened to what their full potential as an osteopath is. There's economic pressure, there's cultural pressure. Inherent in these manual medicine practices, the theory of this world – of osteopathy, of Rolfing [Structural Integration], of craniosacral work, of dancing, of poetry, of good science – is to always have that flexibility of perspective. The joy of that is that it also allows you to have the experience of awe. Who doesn't want that? It scares a lot of people actually.

LF: Yes, it is scary. It's a big leap to learn how to do this.

2025 Paper Defining Human Fascial System

LF: Before we say goodbye, can we talk about your collaborative 2025 paper (Stecco et al. 2025), "Towards a comprehensive definition of the human fascial system" that you co-authored with Carla Stecco, Rebecca Pratt, (PhD), Laurice D. Nemetz, (MA), Robert Schleip, and Antonio Stecco, (MD, PhD).

NT: When we stain the hyaluronic acid in the tissue sections with a brown dye, what we see throughout every tissue are these tiny little streams of brown that go into these larger streams of brown that become these vast rivers of brown; from between cells, to around the capillaries, and into the largest spaces within the connective tissue, the fascia, which we're now call the fascial interstitium (Stecco et al. 2025).

Now that we see the interwoven anatomies of the largest scale interstitium with that of the fascia, we recognize them to be two components of one vast, body-wide structure. However, a difficulty, as we've always discussed, is the gap between traditional anatomy based on dissection and the allopathic traditions for which such an anatomy is foundational, and other systems, particularly experiential ones, based for example on manual therapist, that rely on other concepts for understanding the body.

In this 2025 manuscript, we are trying to summarize the traditional anatomical view of the fascia and its interstitium – not to compete with or replace other views from traditions of manual work, but to find linguistic and conceptual bridges that can bring the different traditions into dialogue.

The interstitium connects everywhere. Also, once you see it, you can't unsee it. These spaces are a body-wide network. No one's arguing with that anymore. Yet, in fact, I'm having a hard time getting papers published, they get rejected often because, "Well, we already knew this, didn't we?" The answer is, "No, you didn't and you still don't."

Think: Organ System

NT: In this new paper, we are saying that the fascia and its interstitium aren't merely an organ but a distributed organ *system*. Some organ systems are localized, like the hepatobiliary system. You can define it well within a boundary. But then we have the cardiovascular system, which is dispersed through the body, and the central and peripheral nervous systems, which are dispersed through the body. There is certainly precedent in classical anatomy for a dispersed system.

On the other hand, the interstitium as a whole is not entirely contained within the fascia. That part of it is the fascial interstitium; as the largest scale interstitium, it is predominantly what I think

osteopaths, Rolfers, and craniosacral workers are experiencing through their senses – energetic and physical – when they do their manual work with clients.

However, there is interstitium beyond the fascia that is continuous with the pericapillary interstitium and the intracellular interstitium. The interstitial spaces of the body that are filled with hyaluronic acid *interpenetrates* with the fascia. And this anatomic interpenetration is the newly named fascial interstitium. The fascia and the interstitium it contains are a single system that is distributed throughout the body.

Now, why is that a problem for anybody? Part of the reason is because fascia has been on the outside of allopathic medicine for so long. There are many people, practitioners, philosophers, and scientists, who have described the nature of fascia that claim that it cannot be contained within classical anatomy. They assert, rightly I think, that the fascia tells us things about bodies that go beyond the classical dissection anatomy. But that doesn't mean we should skip having a classical anatomic view of it as well.

Is the body one whole continuum? I would say yes – at the molecular level there are no tissues, organs, systems, or cells, there are simply molecules floating in water, interacting with each other so that at larger scales, they appear to be cells, tissues, organs, and systems.

Likewise, is the universe one whole continuum? It depends on your perspective, as I explore in greater depth in my book, *Notes on Complexity: A Scientific Theory of Connection, Consciousness, and Being* (2023). At the everyday scale, the universe is made of separate parts, like you and me. But at the quantum scale – where entanglement and non-locality reign – there are no boundaries, the universe from the most vast, down through communities (cities, cultures, ecosystems), to bodies (animals, plants, sponges), to tissues and cells, down to molecular and atomic, and finally quantum scale entities, conceals some aspects and reveals others.

There are many doors to understanding fascia, each opens to a fascinating world. In this new 2025 anatomy paper, we are saying that human fascia can be thought of as a system in classic anatomical terms. You can dissect it; you can define it. But we're not saying this view is better or worse, it's merely useful for other purposes. May the other ways of understanding fascia be also beautiful and useful. There's Dr. Jean-Claude Guimberteau's images and videos we mentioned. There's Jaap Van der Wal's [MD, PhD] philosophical conceptions of the embryo. There are the people who talk about biotensegrity. All of these are appropriate doors for understanding fascia, all of them reveal things that other doors obscure.

No single view contains the whole; we need these complementary perspectives. If you want to speak to the people in the allopathic medical community, as we are trying to do with our publications, we do this in a way that finds classical anatomy really important. And what we're trying to do is to describe the interstitium in these classical anatomy terms and also not exclude all the other doors of knowledge.

LF: I like that, several doors into the fascia and the interstitium, which we are still working to define.

NT: We want to open that door into the continuous interstitium because no one has successfully done that yet. The Fascia Research Society came out with anatomic descriptions of fascia, and everyone recognized those very quickly, yet there are still a lot of holes or gaps to address.

For me, the biggest ones are they didn't include dermis or submucosae of all the visceral organs. Histologically, anatomically, functionally, and physiologically, these are identical to and continuous with all other elements of the fascia (Cenaj et al. 2021). If you exclude those, then your anatomic statement is incomplete. Those have been addressed in the 2025 fascial system paper as well.

Our ambition for this recent paper is to get fascia and the interstitium recognized in the allopathic world. If we don't have a language with which to communicate with the allopathic world, then there's no hope for bridging differences in experience and views. We're happy it's in the *Journal of Anatomy*. There has been a lot of positive reaction to it but also some pushback against such a classical anatomic approach. We're working to find that common language for all, the scientists and the practitioners, to communicate together. My coauthors and I look forward to presenting these ideas and having discussions at the upcoming 2025 Fascia Research Congress in August in New Orleans, Louisiana.

Final Thoughts

LF: What are some final thoughts on these topics for our readers?

NT: The body cannot be reduced to pieces and parts like a machine. Anytime you try to draw boundaries, you'll capture something but lose something else. What are the best boundaries to draw? There are subtleties about the traditional defining categories. There are tricky rules about the definition of cells, tissues, organs, and then systems. Some systems are diffuse, and some are localized, and so are some organs. We are required to have the system's primary function within a definition; this is the historical anatomical standard.

With fascia and the interstitium, we had two choices. We could say that its primary function is tensional loading and sheer mobility. But we could also say it's a communication network, which is a huge theme in these other fascia-related fields. While we know all that, and that's a primary interest, it is difficult to reduce it down to one sentence, one primary function. We wanted to include the smallest fascia, the interstitium bits. Then there's electromagnetic signaling, there's small molecule signaling, there's large molecule signaling, there's cellular signaling, and there's large-scale mechanical signaling. It signals across all scales; nothing else does that.

The nervous system is a body-wide communication network, but it doesn't do all that. The vascular system is body-wide, but it doesn't do all that. The fascia and interstitium do all that, but the data that details how it does this are still thin. We need more people researching these questions. Unifying the terminology is one way for those people to get attracted to fascia and to answer these questions. Maybe our definition will be changed one day, and it will be a body-wide communication network that also does tensional loading and shear mobility.

What we have published is our best suggestion. Some people have expressed that they feel we are forcing a definition on them. No, it's an offering, and yes, please critique it. Let's modify it. We weren't throwing away the previous efforts of the Fascia Research Society; we built on them. We tried to recognize its limitations and where the successes were. Our definition will change in time as the community starts to work with it. If those changes start to happen, it means

we were successful because people took it in and started using it as a language, and then the language evolves because it's a living thing.

LF: Thank you for being so easy to talk with today. I know my colleagues are looking forward to your presentation at the Fascia Research Congress in August, as well as your future writings on all these topics. Thank you for taking the time as well. You have clarified a lot for me and opened the door for more questions.

NT: Fantastic. That's my job, helping people find ways to put all this research and philosophy together into a tidy story. Bye for now.

Endnotes

1. See https://www.neiltheiseofficial.com for more information.

2. A Zendō is a Japanese meditation hall.

3. French hand surgeon, Dr. Jean-Claude Guimberteau has spent decades filming the fascia of living subjects by endoscopy and educating the public about the human fascial system. He is most well-known for his film, *Strolling Under the Skin* (2005).

Neil Theise, MD, is a recently retired professor of pathology at the NYU Grossman School of Medicine. Through his scientific research, he has been a pioneer of adult stem cell plasticity and the anatomy of the human interstitium. He is also a longtime student of Zen Buddhism. Dr. Theise's studies in complexity theory have led to interdisciplinary collaborations in fields such as integrative medicine, consciousness studies, and science-religion dialogue and have been published for a general audience in his book Notes on Complexity: A Scientific Theory of Connection, Consciousness, and Being *(2023). He is currently working on a memoir of his mother's last years of life and her extraordinary, spontaneous experiences of other states of consciousness, and other planes of existence, to be called* Sarah in the In-Between*.*

Lorraine Fauve is a Certified Rolfer and yoga instructor who lives and works in New Orleans, Louisiana. Previously, she has worked as a creative writing teacher to elementary students through the New Orleans Young Audiences Arts Program, as an artist selling her paintings in art markets such as Jackson Square and the Frenchmen St. Art Market, and as the director of a non-profit she initiated and operated for five years called the Ugandan Women's Program, which housed and assisted young women in Kampala, Uganda pursuing secondary and higher education. Currently, she's interested in researching and furthering her understanding of fascia and bodywork, while sharing what she learns with others through writing and her work as a Rolfer.

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Keywords

interstitium; fascia; complexity theory; Fascia Research Congress; Zen Buddhism; probe-based confocal laser endomicroscopy (pCLE); fluid-filled spaces; body-wide communication network; integrative medicine; Traditional Chinese Medicine; manual therapy; Relative; Absolute. ■

Andrew Rosenstock

The Philosophical Touch

Embodied Awareness

By Andrew Rosenstock, Certified Rolfer™

ABSTRACT *Rolfer™, podcaster, and author Andrew Rosenstock continues his exploration into philosophy and touch by contrasting phenomenology and somatic bodywork. The body is not merely a biomechanical structure, but an active medium shaping our lived experience. Through touch, movement, and guided inquiry, practitioners help clients develop embodied awareness, shifting from seeing their body as an object to experiencing it as an integrated whole.*

This second Philosophical Touch column, in honor of the late Advanced Rolfing® Instructor Jeffrey Maitland, PhD (1943-2023), delves into the intersectionality between phenomenology and somatic bodywork, exploring how somatic practices like Rolfing® Structural Integration and Rolf Movement® resonate with the principles of phenomenology, particularly through the works of Austrian-German philosopher Edmund Husserl (1859-1938), the principal founder of phenomenology, and French phenomenological philosopher Maurice Merleau-Ponty (1908-1961).

From *Mind Body Zen: Wake Up to Your Life* (2010, 177)

By Hokaku Jeffrey Maitland

"Imagine that you are looking at a flower.

You can distinguish two sides to this situation: your consciousness and the flower.

If you are studying the flower as a botanist, the flower becomes an object to be classified or analyzed, and your consciousness is in the reflective mode.

If you are just lost in the beauty of the flower, then the flower is no longer an object, but a wondrous bursting forth of color and life in which you are participating and your consciousness is in the pre-reflective mode."

Bridging Phenomenology and Somatic Bodywork

In modern life, a society dominated by speed, efficiency, and disconnection, a quiet revolution is taking place – one that calls us back to our bodies and the essence of our lived experience. This revolution is grounded in two profound disciplines: phenomenology and somatic bodywork. Phenomenology, a philosophical exploration of consciousness and experience, and somatic bodywork, a therapeutic approach centered on the body, converge to offer a pathway back to presence and wholeness.

Phenomenology, established by Husserl in the early twentieth century, focuses on describing experiences as they are perceived, returning to what he called 'the things themselves', in German as *die Sachen selbst* (Husserl 1913). Merleau-Ponty later expanded phenomenology's scope to include the body as central to perception and being, introducing the concept of the 'lived body', *corps vécu* (1945).

In Rolfing® Structural Integration and other somatic practices, the body is similarly viewed as more than a biomechanical structure – it is a medium through which we perceive, interact with, and understand the world. Rolfers™ can not only work with the structure of the body but also with its movement and functional patterns. Through the Ten Series, a systematic approach to aligning the body with gravity, the client is invited to a deeper awareness of how they inhabit and move through space. This integration of structural and somatic understanding extends beyond biomechanics; it embraces a philosophical dimension, inviting us to explore how the body shapes – and is shaped by – our lived experience and interaction with the world.

"*Rolfers make a life study of relating bodies and their fields to the earth and its gravity field, and we so organize the body that the gravity field can reinforce the body's energy field. This is our primary concept*."

– Ida P. Rolf, PhD in *Rolfing and Physical Reality* (1978), page 86.

In this sense, somatic practices encourage us to perceive the body not merely as a physical entity but as a dynamic medium for understanding and engaging with life. These practices emphasize the lived experience of the body, mirroring phenomenology's commitment to examining existence from the first-person perspective.

Merleau-Ponty's assertion that *the body is the vehicle of being in the world* resonates deeply with somatic approaches (1968). Both disciplines invite us to shift from seeing the body as an object to experiencing it as a dynamic, perceptive, and integrated

In modern life, a society dominated by speed, efficiency, and disconnection, a quiet revolution is taking place – one that calls us back to our bodies and the essence of our lived experience. This revolution is grounded in two profound disciplines: phenomenology and somatic bodywork.

whole. The body is then not just merely a vessel but an active participant in how we perceive, move through, and make sense of our world. It is a bridge between our internal experiences and the external world, shaping both how we engage with life and how life engages with us. The body is a living expression of our relationship with gravity, space, and the rhythms of existence.

"*We say therefore that our body is a being of two leaves, from one side a thing among things and otherwise what sees them and touches them; we say, because it is evident, that it unites these two properties within itself, and its double belongingness to the order of the 'object' and to the order of the 'subject' reveals to us quite unexpected relations between the two orders. It cannot be by incomprehensible accident that the body has this double reference; it teaches us that each calls for the other*." (Merleau-Ponty 1968, 137.)

The Lived Experience of the Body

Rolf Movement®, a gentle somatic approach to reorganizing movement and body awareness, illustrates the connection between phenomenology and somatic bodywork. Practitioners guide clients to explore their own sensations and alignment, facilitating changes in posture, movement, and overall well-being.

These inquiries are not meant to impose meaning but to foster direct engagement with the client's lived experience.

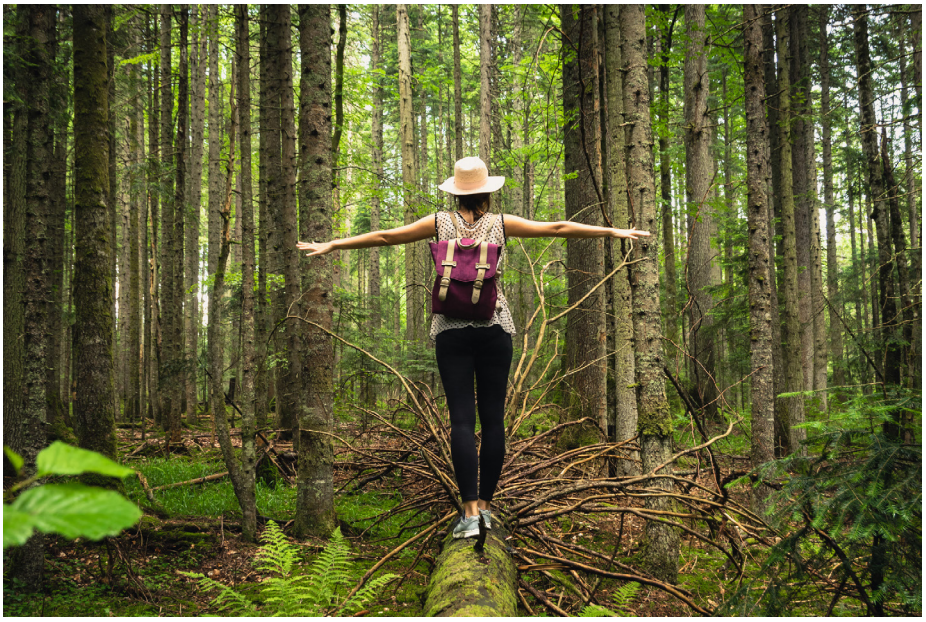
A typical session begins with the practitioner observing the client's patterns of alignment, movement, and tension as they stand, walk, breathe, or move naturally. This observation is most effective when it arises not from a place of analysis or intellectual judgement but from an embodied state of sensing – one that exists prior to conceptual thought. The practitioner feels in and attunes to the subtle qualities of the client's movements and posture, sensing shifts in tone, rhythm, and balance.

Through light, intentional touch, and carefully chosen verbal cues that respond to the client's state in the here and now, the practitioner invites the client to notice subtle sensations in their body. They may ask, "What do you sense in your shoulders as you lift your arms?" Or, "Can you feel how your weight shifts as you soften your knees?" These inquiries are not meant to impose meaning but to foster direct engagement with the client's lived experience.

The practitioner's touch is guided by a felt sense of the client's body rather than by preconceived outcomes, creating a collaborative exploration of movement and sensation. Small, mindful adjustments often reveal new *pathways of ease*, allowing the client to experience greater fluidity and balance. Clients frequently report a heightened sense of presence in their body, feeling grounded yet spacious, and connected to themselves and their surroundings.

This process aligns with Merleau-Ponty's concept of the *body schema*, the pre-

A common response I hear from clients at the end of a session is an awareness of something new – whether it is about how they now stand, sit, move, talk, breathe, occupy space, sense the space around them, or even perceive their reality. What they're describing is a clearer, more embodied understanding of their body schema: how their body moves, holds tension, and interacts with its surroundings. (Image by molchanovdmitry on istockphoto.com.)



The Line is not an idea or a goal but a field of being, experienced directly through alignment, balance, and presence. (Image by Beli_photos on istockphoto.com.)

reflective sense of one's body that enables coordinated action (Gallagher 2005). Through somatic practices, clients often experience a profound shift in their embodied awareness, reporting that their movements feel more purposeful and natural.

Such changes are not merely mechanical but existential. When clients integrate their body schema, they discover a deeper connection to their environment and themselves. Their way of being in the world shifts, allowing for greater ease, presence, and authenticity. A common response I hear from clients at the end of a session is an awareness of something new – whether it is about how they now stand, sit, move, talk, breathe, occupy space, sense the space around them, or even perceive their reality. What they're describing is a clearer, more embodied understanding of their body schema: how their body moves, holds tension, and interacts with its surroundings.

Insights from Practice

Somatic practitioners frequently describe moments when clients connect with their bodies in transformative ways. One practitioner noted, "It's like they inhabit their body for the first time." This echoes phenomenology's emphasis on returning to the immediacy of perception – experiencing the body directly, without preconceptions.

Clients, too, share profound reflections on their experiences. Beyond reduced pain or improved flexibility, many describe feeling more present in their lives. One client remarked, "For years, I felt like I was watching my life from the sidelines. Now, I feel like I'm standing in it, fully present."

These insights highlight the therapeutic potential of somatic bodywork, viewed through the lens of phenomenology. This work reveals how the body, once sidelined by habits and disconnections that originally served as responses to past lived experiences, can transform into a profound gateway for fully engaging with oneself and the world.

Challenges in Integration

Despite their profound parallels, integrating phenomenology and somatic bodywork presents challenges. Phenomenology's abstract nature can make it seem removed from the hands-on practices of somatic therapy. Translating concepts like 'intentionality' or the 'lived body' into practical applications requires effort and skill.

Moreover, the empirical demands of modern science often prioritize measurable outcomes over qualitative, lived experiences. The challenge for practitioners and researchers lies in bridging this gap – articulating the value of somatic practices in ways that honor both their philosophical depth and practical impact.

Somatic Practices as Embodied Phenomenology

To truly integrate phenomenology and somatic bodywork, practitioners must embody the principles they seek to teach. This means cultivating their own awareness of gravity, which Rolf called organizing around gravity's vertical 'Line', this concept in Rolfing® Structural

Phenomenology's abstract nature can make it seem removed from the hands-on practices of somatic therapy. Translating concepts like 'intentionality' or the 'lived body' into practical applications requires effort and skill.

Integration parallels Merleau-Ponty's lived body. The Line is not an idea or a goal but a field of being, experienced directly through alignment, balance, and presence.

Practitioners can foster this integration by:

1. **Grounding in Presence:** Feeling the Line within their own bodies as they work, ensuring their touch is connected and authentic.
2. **Honoring the Client's Experience:** Encouraging clients to explore their own sensations rather than imposing external frameworks.
3. **Bridging Language and Experience:** Offering practical insights through accessible language, grounded in a profound awareness of how language and culture are embodied and understood in lived experience.

Conclusion

Phenomenology and somatic bodywork share a foundational commitment to the lived experience of the body. Together, they offer a way of understanding and transforming not just physical structures but the very nature of being-in-the-world.

In a world increasingly shaped by cultures of disconnection and disembodiment – driven by the dominance of technology, the pace of modern life, and a growing disassociation from the physical and communal aspects of being. The integration of these disciplines represents a profound opportunity to reclaim our humanity. By returning to the body – the ground of all experience – we rediscover not only health and wellness but also a deeper engagement with life itself.

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Meet My Rolfer™

Kathy Rooney

By Mandy Cheek, Certified Rolfer™, and
Kathy Rooney, Certified Advanced Rolfer, Rolf Movement® Practitioner

Mandy Cheek

Kathy Rooney

ABSTRACT *In this edition of Meet My Rolfer™, Mandy Cheek explores Kathy Rooney's journey into the Rolfing® Structural Integration (SI) profession. She shares a few experiences from the many continuing education courses she has taken along the way, as well as her contributions to her Rolfing business in North Carolina. The conversation highlights Rooney's dedication to advancing the profession by mentoring new Rolfers and adapting her work to her clients' needs.*

Mandy Cheek recently had the opportunity to sit down and interview her Rolfer™, Kathy Rooney of North Carolina. Being that Kathy completed her training during the 1980s at the Rolf Institute® (now known as the Dr. Ida Rolf Institute®) and that she served as a board member for the Institute as well, some will be familiar with her long career as a Rolfer. This is how their conversation began.

The Conversation

Mandy Cheek: Thank you for sitting down with me today. I always credit you with being the reason that I can still move comfortably in my body because I had a bad back injury years ago where surgery was recommended. That was corrected after my Ten Series work with you. You're definitely the reason that I'm a Rolfer.

Initially, it was you who had the thought I could be a Rolfer. As I recall, I was getting a session, and I told you I was going to move from one physical therapy facility to another, and you told me I didn't want to do that – I should be a Rolfer. I didn't know that was a possibility for me, having worked in physical therapy for twenty years. If you hadn't put that idea into my head and told me how to do it, I wouldn't be sitting here right now. The rest is history. I don't know if I'd continue to be able to move and do the work because you're still helping me now to maintain my body's comfort. So, I deeply thank you for sitting down and talking with me. I'm happy to share your story as a Rolfer with the readers of our journal.

Kathy Rooney: You're welcome. Lucky me.

MC: Let's start with learning a little background about yourself for people who don't know who you are. How did you come to Rolfing® Structural Integration (SI)? How did you find out about it?

KR: As a young bookworm, I had never done anything physical until I turned thirty and, through a beneficial turn of events, I won a trip to a fitness ranch. It was a trip to Canyon Ranch in Tucson, Arizona when they first opened. I went there and they exercised me like a fiend. And then I spent the next weekend with my sister in Los Angeles, California, going to this class that, at the time, did not have a name. But it is now known as aerobics.

Kathy Rooney: This is what happened: The minute he put his hand on me, the thought I had was, this guy knows the stuff about bodies that I want to know. And before my first session was over, I knew I was going to be a Rolfer.

When I got back home, I had gotten past the point of being sore, which I had never gotten past before in my life. I wanted very much to continue with exercising and keeping myself in shape. I was very, very skinny already.

I saw a sign, another thing that didn't have a name yet at the time, which is now known as a health food store. In the store window was a notice for "Jazz Dance Classes." One of the things my sister had taken me to, in addition to aerobics classes, was a jazz dance class, and I knew it had a lot of exercise in it. So, I signed up and was incredibly committed, enthusiastic, and determined to learn it.

I have two learning disabilities. I have right-left dyslexia, which is very bad for a dancer. The other one is that I cannot remember what movement comes next. I have studied yoga. I have studied Tai Chi, which was like practicing the same dance for a year. After that, I was better at remembering what movement came next. Eventually, I can learn it. I studied anatomy, thinking that would make me a better dancer, but it doesn't.

In general, there were a lot of other personal improvement things I experienced around that time. I met a new Tai Chi teacher named Ed Hackerson. He was a Rolfer. So I was like, "Sign me up." I had wanted to experience Rolfing sessions. I had read about it when I was in college. Actually, I wrote about Rolfing work for an article in the school newspaper about the 'wild things' coming out of California, like primal scream therapy, Gestalt therapy, and Rolfing Structural Integration. I had not previously known anything about these practices, but I did some research and wrote about them. So when I met a Rolfer, I was like, "Yay! Rolf me!"

Kathy Rooney: And by the end of the fire walk, I knew I could do it. I could go to Rolfing school. (Image by Rusian Kain on istockphoto.com.)

MC: You are originally from New Orleans, Louisiana; were you still in New Orleans at this point?

KR: I was and Ed Hackerson did my Ten Series. (He now goes by Ross Hackerson.) This is what happened: The minute he put his hand on me, the thought I had was, this guy knows the stuff about bodies that I want to know. And before my first session was over, I knew I was going to be a Rolfer. This is it. My entire life I had been the kind of person that friends would say, "Rub my back," because they knew I would do it for more than twenty seconds.

MC: Right. So you already tried to make people feel better through a type of massage. You had a degree in chemistry before you became a Rolfer, correct?

KR: I did. I was working in a chemical lab as I had a degree in chemistry.

MC: How did you transition from working in a chemical lab to being a full-time Rolfer?

KR: I went to New York to do the fire walk with Tony Robbins [author and motivational speaker]. At the beginning of the fire walk process, they brought us outside where they were burning two cords of wood and we did a mingling process. People were face-to-face and each listened to their partner complete the same sentence. Then we moved on to a different person to do the same thing again. The sentence I had to complete was, "The thing I'm most afraid of is . . ." And at that time, the thing I was most afraid of was not getting a paycheck every two weeks. It was a terrifying concept. And by the end of the fire walk, I knew I could do

it. I could go to Rolfing school. I could not have a paycheck. I could make a business for myself. And I've had a successful career for myself without being someone else's employee.

MC: You actually walked on fire?

KR: Yup. Twelve feet. Me and five hundred other people. It was an interesting weekend. Yes.

Becoming a Rolfer

MC: Fantastic. What year did you go to do the training in Boulder, Colorado?

KR: I was going to do a workshop in Estes Park, Colorado, and I stopped at the then Rolf Institute to just check it out. Susan Melchior was part of running the office and she was a fabulous saleswoman. She had my name on the dotted line in twenty minutes. I agreed to take the class of the new comprehensive format of their program, which is now called Unit I (or Phase I). At the time, it was a six-week course, with four months of home study afterward, and a week together as a follow-up after that.

The course was in Marin County, California, near San Francisco, by Jason Mixter (1945-2009) and Rita Malette (1932-2019). Since I was still employed in New Orleans, I used the three weeks of vacation I would typically have. For the other three weeks, I was in class Monday to Friday in Marin County, and since I worked shift work, I would fly from San Francisco to New Orleans, drive home, get up at four o'clock in the morning, and go to work for a twelve-hour shift on Saturday and Sunday. Sunday, I'd leave work, get back on the airplane, and fly back to San Francisco for class on Monday. I commuted like that at first, then I had my three weeks vacation, and when the follow-up week happened, I think that's when I gave notice at work and quit. That was 1987.

Then I moved to North Carolina, and I returned to the Rolf Institute to continue my studies. At that time, it was called auditing. I remember it was winter in Colorado during my auditing phase because I remember throwing a snowball at one of my classmates. Then I waited, I took the whole summer off, and completed my practitioning phase in the fall in San Francisco – that was a special class taught by Neal Powers and Robert Schleip. I was certified as a Rolfer in November of 1988.

MC: Did you start your Rolfing practice right after that?

KR: Yes, I had moved to Greensboro, North Carolina. I immediately came home, got married, and started my business. Back then, I didn't have to get a massage license. I just put my sign up and said I was working. I had a table that I had bought from a beauty parlor.

MC: You told me at one point that when you moved to North Carolina, there were no other Rolfers around, so you had allotted two hours per client because you were trying to figure out how to do things on your own.

KR: There were two Rolfers around. One was Bob O'Rednik, who has passed now, and there was a local guy in Greensboro. He told me I'd never be able to get a practice started here, that it wouldn't work. He said nobody would pay $55 for an hour Rolfing session. I had been paying $60 for my sessions at the time, so when I started, I was charging $60.

Practice Building

MC: Once you opened your doors, how did you get your first clients? I feel like Rolfing Structural Integration is still not well known in our area.

KR: That will be forever that some people will not have heard of this work, but it is much more well-known now than it was then. I gave speeches. I passed out brochures. I left my business cards in places. I'm not much of a networker, so I didn't do that very well or very much. I had a professional picture made of myself, which was a good idea.

MC: How long do you feel like it was before you were as busy as you wanted to be? How long before you were booked up?

KR: It took me five years to build a practice. My speeches led me to be featured in local newspaper articles. At that time, I saved articles that talked about Rolfing, I was constantly looking for things like that and letting people know about the work.

MC: What was your office like? Was it in your home or a professional building?

KR: I worked out of my house for the first four years of my practice. When we finally accumulated enough money to buy a place, and we bought where we're living now, I pointed out to my husband that there was no office in it. With no room that I could use as an office, to which he said, "Rent a place like everybody else that is in business."

To afford that transition, I gave more speeches. I would go talk to anybody, any group. You just need to build your practice one client at a time. My office situation evolved over time. I started renting half an office condo in the building we have our office in now. Eventually, I convinced the person I was renting from that he could work from home, leaving me the chance to buy the professional condo. I then had enough space to rent out to other practitioners. I've rented to chiropractors, massage therapists, and acupuncturists to fill the space.

Volunteering with the Board of Directors

MC: Tell me about how you came to be on the Rolf Institute's Board of Directors. What do you remember about that time?

KR: Well, I skipped the first annual general meeting that first year I got certified and cried the entire weekend. So the next year, I went, and I went every year after that. One year, they announced that they had started the Rolfing research committee. I stayed at the meeting longer to find out what that was about, they shared the information about that new committee during the board of directors meeting. When I saw what the board meeting was like, I started going to the board meetings on my own after that, at my own expense. I was really interested in that work, and the board meetings were always right after the annual conference.

I think I went to each board meeting for three years before I finally ran for a position and then got elected. I think I was re-elected one time after that as well. We were faced with significant decisions. We fired the executive director and the three of us on the executive committee took over all the functions of the executive director for about four or five months.

MC: Were you in Boulder, Colorado full time then?

KR: No, I was doing that work from here [Greensboro, North Carolina]. I think we had email by then. I was in charge of service marks and finances, if I remember correctly. That was when I figured out that the service mark was being misused by us. I figured out what the actual correct

usage of a service mark was and got the staff and the rest of the faculty and members to use it correctly. We came up with the first guidance for our group to correctly use the service mark and how to protect it.

The mistake we were making was using the word "Rolfing" as if it were a generic term for our work. Using the word "Rolfing" as a generic term could lead to others having it. I'm the one who saved the service mark from that fate; we just weren't using it appropriately. I kept asking why were all these people around us doing Rolfing massage? They were wrongly calling themselves Rolfers and claiming their work to be Rolfing. Since it's a protected service mark, legally others couldn't use it. But the error of service mark owners using the work generically could lead to us losing that protection. People weren't capitalizing it. They weren't putting the registered service mark behind it.

You know that the word "Rolfing" is an adjective, right? It was being used as a noun and as a verb. When we say we got "Rolfed" or that we are "Rolfing" somebody – we are using it incorrectly.

MC: So you were behind protecting the trademark.

KR: Once we were protecting it properly, then we could report a misuse, and have the Institute send a letter to the person of interest. The problem was that everybody in the Rolf Institute was using the word inaccurately, which did open us up to lawsuits. Believe me, it was a big deal to get that correct, and I was the one that figured out how to get it right. I was the one that started insisting that we use the term correctly.

Kathy Rooney.

KR: I've only ever had three clients walk in and say, "I think my structure needs to be improved." The rest of them, over my thirty-five years of experience, came in with a complaint – my neck hurts, my back hurts, my leg hurts, and so on.

MC: That's a big deal! I'd like to hear more about the annual conference you were talking about, it must have been great to go every year. The school doesn't hold an annual conference in the same way anymore, when did that tradition end?

KR: I guess when we got too old. [Kathy laughs.] An annual conference was a great idea for that moment when we were just growing the profession. They were fabulous fun, really wonderful. We planned it to be a three-day workshop with panel discussions and breakout sessions. They were real conferences.

MC: How long until you went for the Advanced Training? What year did you take that training?

KR: That was 1991, I had to get dispensation to join that class. I had only been in practice for two years and ten months. The reason I was motivated was because Brian Hopkins had organized a North Carolina Advanced Training. We had Advanced Rolfing Instructors Jan Sultan and Jeffrey Maitland, [PhD (1943-2023)] come here to Durham for six weeks.

Advanced Rolfer John Schewe was a buddy of mind before we were both Rolfers, we had met in a Tai Chi class. And John came up and stayed with me and my husband, Doug, to also attend that training. He introduced me to Doug in the first place, they knew each other through their geology connection. John stayed with us and we drove to Durham every day together. We're both such extroverts, it was five and a half weeks before we ran out of something to say. I'll never forget those six weeks sitting in a car together.

MC: I feel really fortunate that you offered to employ me as a Rolfer and that is one of the reasons that I went and got the training. I didn't have the faith in myself or the confidence to do it on my own. I knew I could do it with you around to teach me. You have great techniques and you're very effective with everything – necks, ribs, knees, ankles, wrists, elbows, sacrum, and everything. How did you gain your confidence?

KR: I had to figure it out. I have a very high mechanical ability. I don't know what topics clients in other places bring to their Rolfers, I wonder what other people hear from their clients. I've only ever had three clients walk in and say, "I think my structure needs to be improved." The rest of them, over my thirty-five years of experience, came in with a complaint – my neck hurts, my back hurts, my leg hurts, and so on.

There was a massage therapist that damaged his knee dramatically in Winston-Salem who called me up. When I moved here, there were seven bodyworkers in town. That was the thing, being a bodyworker was a new profession. One of them had fallen and damaged his knee. He said he couldn't walk, couldn't work, couldn't pay me, and couldn't drive to me either. "Please come help me," he asked, "Drive to Winston-Salem and work on my knee for me." I said I'd do it if I could bring my anatomy

book and look at it while working on the knee. Okay. So, I did that for about six or seven weeks in a row. Oh, I really worked on his knee. I believe he had been a client of mine already, but that memory stands out to me. You just do the best you can.

You've looked at my list of continuing education training that I've taken, I've done extensive coursework. I picked up little bits from here and there, I studied with osteopaths for many years. And you learn when you're working on people. You feel stuff and eventually you start putting things together that work.

I'll come right out and say that I've never been that kind of Rolfer that can see where the work needs to be. I can't. But I can feel an entire body when I put my hands on it. That's why I'm constantly telling people to relax their tongue, I can feel that their tongue is tight. If I tell a person to move their foot, it is because I can feel that the system will respond in a way that I want it to by making that one movement.

Studying with Rolfer Richard Rossiter was a huge increase in my understanding of how bodies work, I met him at an annual conference. I remember once we were watching Rolfer Gael Rosewood [formerly Gael Olgren] give a Continuum demonstration – this would have been sometime in the mid-1990s. She lay down on the floor and it looked like her bones dissolved. She became like this amoeba on the floor and all of us were drawn to look at this movement. I had never seen anything like that in my life. And then, all of a sudden, her skeleton reasserted itself, and she went into a big front-to-back undulation movement and then just stopped. Richard looked at her and said, "I need a cigarette." [Kathy laughs.]

MC: What is Continuum? I've never heard of this.

KR: I didn't tell you about Continuum Movement®? Oh, you need to learn about Continuum. It was developed by Emilie Conrad (1934-2014). It is a non-directed movement or a bodily directed movement. At the start of a Continuum class, everybody will start in the same position, usually lying down. And then in ten minutes, nobody's in the same position anymore because people are following their innate sense of movement. Each person will be going one way or another because they have directed their attention internally with their breath. Then they are directed to let their body move the way it wants to move.

I noticed that every woman that I knew in the Rolf Institute that studied Continuum looked ten years younger than they were. I wanted to learn that. It's a daily practice like yoga.

Guerrilla Rolfing

KR: Maybe we should talk about guerrilla Rolfing?

MC: Yes, guerrilla Rolfing. That's your term for when someone comes in with a complaint but you are still doing a series with them to correct the problem.

KR: When people come to me with pain, if I don't touch the part that they're complaining about, they're not going to be happy with that session. But I want to do a lot of other work with them, as well as work on the thing that's hurting them. And the good thing is that Rolfing works. A ten-session series makes a huge difference in people's bodies. As long as they have some sense that you're also trying to fix what their complaint is, they're okay with it.

I sold the ten-session series. Let's talk about that reality. What do you do when someone calls you up and says, "I've heard about this Rolfing thing? There are ten sessions or something?" The truth is, they do not want to listen to your interpretation of what you do at all. They could care less. The correct answer to that question is, "What's going on with you that you think I might be able to help?" And then you shut up and listen to them. They will tell you about their body, as much as you're willing to listen to, and eventually, when you have heard enough, then you tell them if you think you can help them.

If the person tells you they've got fourteen rods in their back, pins and plates through their skull, there will be a limit as to how much you can help that person. But if, as they're talking, you hear some details that you think are issues you think the Rolfing approach will help them, then at that point you say, "Yes, I think my Rolfing work can help you." When they ask you where your office is located, then you know they're visualizing coming to your office. They are sold, they are ready to book an appointment.

I tell people to come in for one session and see what they think about it. Do a First Hour with them, which is designed to help them and also inspire interest in the rest of the sessions. We need to impress them so much that they know this is something that they want. Sometimes it's not until the end of the third session that I'm curious about if they are still interested in the work, and if so, then they should consider completing the whole series. At that point, they feel so good, of course they want to book the rest of it.

MC: When we organize the body in gravity, it does feel better.

KR: It does. The other thing worth mentioning is that I do a really long intake

KR: I'll come right out and say that I've never been that kind of Rolfer that can see where the work needs to be. I can't. But I can feel an entire body when I put my hands on it. That's why I'm constantly telling people to relax their tongue, I can feel that their tongue is tight.

KR: Everybody's doing fascial work now. No massage therapists work on muscles anymore. Everybody's working on fascia. That's what they say. But I really wonder, when they say, "I'm working on fascia." Do they know what they actually mean?

interview with my clients. We were trained that Dr. Rolf said trauma in people's pasts was a cause of a lot of structural imbalances. Back then, it was emotional trauma that we were talking about when we said 'trauma'. Now I think that physical trauma is also what generates a lot of imbalances in the body. So, I like to ask the client many questions about their body history. People will get animated talking about the time they slammed into a post when they were skiing or something like that. Sometimes I see the injury they described in the intake; I'll feel it when I'm working on them. Sometimes the emotional trauma they spontaneously share is a part of some interaction with the table work we are doing together. That the work is processing it out of their body. You know, our hands learn when we are touching, you know?

When I think back on my career, I was selling the Ten Series. That's definitely what I did.

Changes in Structural Integration

MC: Tell me what you think about how the profession has changed from when you first trained to now. Do you have an opinion about it?

KR: This work is legal now, legislated to be a distinct profession in many places. It's regulated, and it has a bureaucracy. It's harder to get into now. And, there's lots of people doing it, and lots of information to learn from out there.

The reason I picked the Rolfing profession over going to massage school was because there was a price differential. Rolfers charge more for their work. Why would I want to go to massage school when I could go to Rolfing school, where their graduates are earning more?

I think we have positioned ourselves in the manual therapy profession at the top echelon of it. And the work is at the top of the marketplace because Rolfing Structural Integration is so effective. We have been able to stay there with our efforts.

Everybody's doing fascial work now. No massage therapists work on muscles anymore. Everybody's working on fascia. That's what they say. But I really wonder, when they say, "I'm working on fascia." Do they know what they actually mean? And, what is fascia anyway? I don't even know if the experts have decided what it is.

You know that I like to tell people, when you touch a body, do you know what you can touch? Skin. You can touch skin. And other than that, the rest of it is feeling. You can feel through the skin, all the way down; you can feel the entire body through the skin. But, all you can touch is skin.

MC: I don't think a great deal of medical practitioners realize how much fascia there is in the body and what a big role it plays. You can't stand up without it. I don't think fascia is appreciated for how powerful it is.

KR: One of the fun things that I remember from one of those workshops – I can't remember which one – we cut one of those little bitty skinny muscles off of part of the chicken wing that has the two bones in it.

We put that piece on a cutting board, then got a couple of pokey sharp things and tried to figure out the fascia. We could cut it off the bone, and we could see the tendon. And when we kept poking at the fascia fibers of the tendon, we looked for where the muscle was. There is no attachment between the tendon and the muscle. It doesn't attach. The tendon is a type of condensed connective tissue that is continuous with the connective tissue embedded within the muscle fibers.

Connective tissue, as it leaves the bone, and right along the edge to the next bone, it starts to fill up with little muscle cells in it, until you get to the middle of the muscle belly where it has a lot of muscle cells in it. And that connective tissue keeps going to where there are fewer muscle cells in it, it gets smaller and condensed into another tendon, and it is continuous with the next bone. You can see with your own eyes that it is continuous from one bone to the next. There's no 'muscle attachments' to a tendon. That is not how the body works.

Every once in a while, I like to open Dr. Rolf's book and I say to myself, "Okay, I'm going to reread this book" (1989). The first time I read it, I didn't understand any of it, right? I have reread this book many times. These days, I get three paragraphs in, and there's so many concepts right there in those few paragraphs, I fall asleep thinking about them. So I like to reread Dr. Rolf's

book about three paragraphs at a time these days. Just kind of thinking about it.

The Business of Rolfing Structural Integration

MC: You have treated thousands of people in your career, and you've been so effective with those people. You've been able to hire and mentor five other Rolfers, which many people don't take on. So, to what would you attribute your success as a Rolfer?

KR: That my skill as a Rolfer is as good as my skill as a business person. And I just by chance happen to have a mind that understands business, how it works, the ebb and flow of money. And I understand hard work. I mean, seriously. I didn't get home before eight o'clock for probably fifteen years. At one point, I took clients at eight o'clock in the morning and was doing two-hour sessions. My first appointment was at eight in the morning, and my last one was at six in the evening.

Now, in the early days, there was a lot of time in between, and I was still working out of my house, so I could go do the dishes or laundry. But when I got my own office, when I was there, if I didn't have a client, there were lots of other things that always needed to be done. I've been in business for thirty-five years, and only three times have I looked around the office and said, "There's nothing that needs to be done here." Three times in thirty-five years. That's what running a business is like.

MC: And you're still offering some Rolfing sessions these days. After thirty-seven years of this work, what do you see yourself doing in the future? I know you finally scaled back a little. You're semi-retired.

KR: I've been reducing the number of clients by one every year. It's still good exercise. If I had known that becoming a Rolfer would mean I'd have beautiful arms in my seventies, I would have become one sooner. I didn't know that. Delivering Rolfing sessions gives you beautiful arms. It does keep you strong. You stay strong.

MC: When you were full-time in the past, you were seeing thirty-five clients a week. Did you do that for a few years? How did you manage your work-life balance when being that productive?

KR: It wasn't a good idea. At the time, I didn't have any children at home. My daughter was living in New Orleans, Louisiana, with my ex-husband. I had no responsibilities. So yes, I worked like that. And my husband was starting his own business. So, why not? My work-life balance was work. That was it. And dance classes, or Tai Chi, or whatever I was taking at the time. I was always looking for something like that. I taught Tai Chi when I first moved here. Nobody in this town knew Tai Chi, maybe two people. I gave classes and workshops, and got some clients from that side of things.

MC: Now that you're retiring, what are you planning to do in the future? Do you think you will work with some of your clients forever?

KR: Thirty-seven years and I'm only working with people that I've known for years. I do not take any new clients. I hope to help the clients I work with age as gracefully as they can, trying to do the same thing myself. Also, trying to have a good time. Now I'm working on work-life balance, which is why I'm only working twenty-six weeks a year.

MC: As we are at the end of our interview, what would you like to say to people that are new Rolfers? Any advice to give people just starting out?

KR: Yes, I'd say get a job with an older, more established Rolfer. [Kathy laughs.] Get a couple of years experience under your belt. You know, I would have no idea how to start a practice right now. All that stuff that I did years ago – putting out flyers, giving people cards, giving speeches, and teaching Tai Chi classes – all of that worked for me over time. At this point, I just try to do good work every day I do the work. I try to do something helpful for my clients and have a good time while I'm doing it.

MC: Kathy, thanks for talking with me for this article. You've made a huge difference in my life and the lives of many other people. I'm glad our readers know more about you, too.

KR: You're welcome.

Author's Note (Mandy Cheek): It has been my privilege to receive work from Kathy Rooney, to be mentored by her, and then to be employed by her for the last five years.

Mandy Cheek is a Certified Rolfer™ practicing in Greensboro, North Carolina. She has a background as a physical therapist assistant, and after searching for her own answers to persistent health concerns, she found Rolfing® Structural Integration to address her persistent pains the best. She enjoys many kinds of outdoor activities and sports, including softball, volleyball, swimming, and recently, yoga. She is also a singer and a music aficionado.

Kathy Rooney is a semi-retired Certified Advanced Rolfer and Rolf Movement® practitioner based in Greensboro, North Carolina.

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Keywords

Rolfing Structural Integration; Rolfing training; tai chi; Continuum Movement; practice building; manual therapy; mentorship; business of Rolfing; Rolfing service mark; annual conference; work-life balance. ■

Caution Column

Dural Tube Adhesions

Jeffrey Burch

By Jeffrey Burch, Certified Advanced Rolfer™

ABSTRACT *This article discusses dural tube adhesions, their causes, and a manual therapy point of view for their release. Author, Certified Advanced Rolfer™, and continuing education instructor Jeffrey Burch explores how adhesions form due to trauma (for example, whiplash) or infection (for example, meningitis), and how they may restrict spinal movement, leading to discomfort. Burch describes a manual intervention method that involves palpating vertebrae to assess the dural tube restrictions and then applying specific techniques to restore glide within the dural tube. He emphasizes precision and caution when working with the dural tube of your client.*

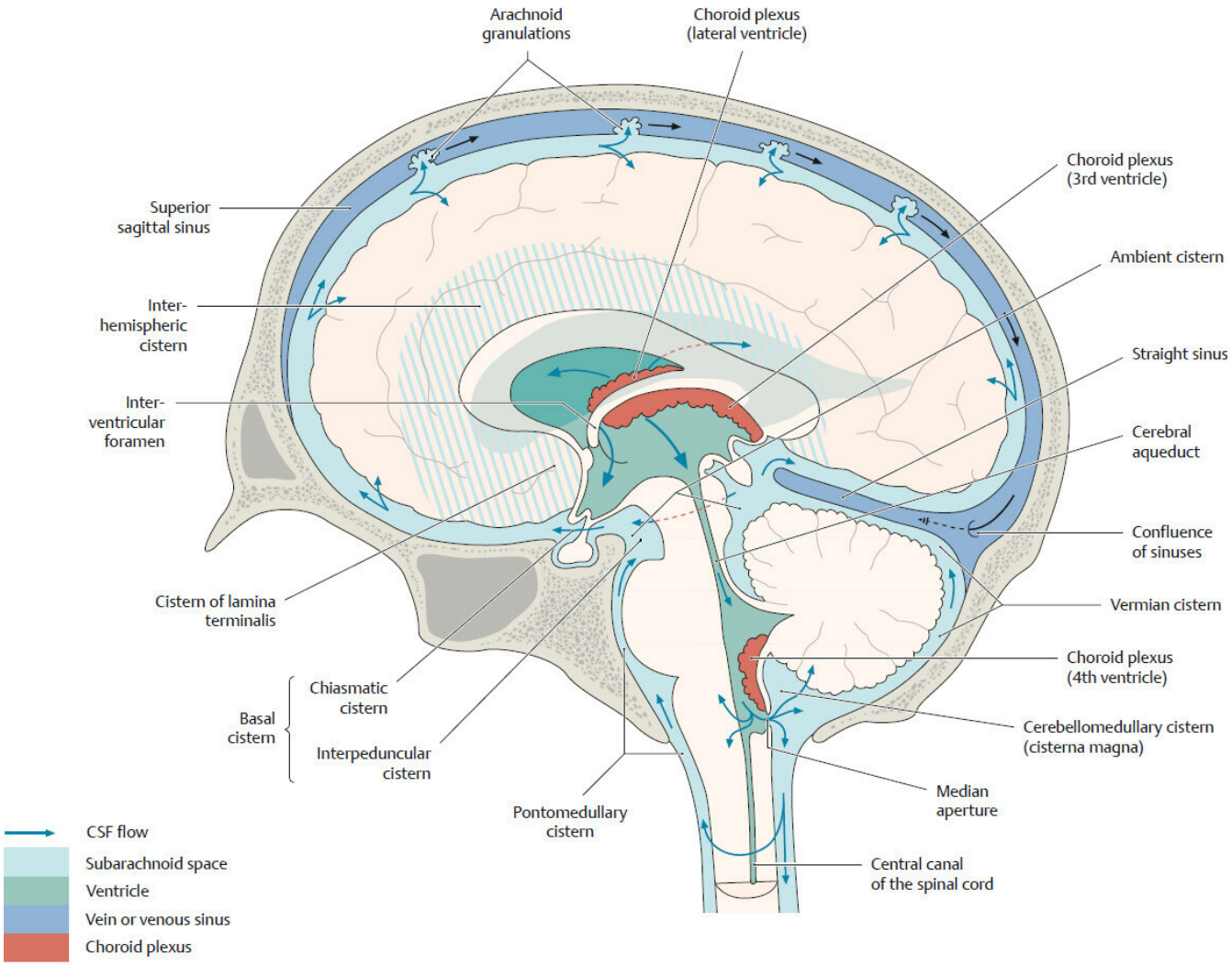
Dural Tube Adhesion Release Method

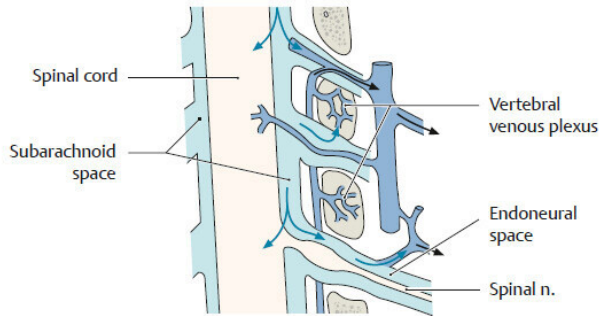
Assessment and Treatment

As Rolfers™, structural integration practitioners, and manual therapists, one of the fascial manipulations we deploy is to locate adhesions between the dural tube and the periosteum of the neural canal. This particular focus deserves caution because of the delicate nature of these tissues. Yet, with study and care, we can palpate through vertebral spaces and restore glide to those areas. The method is the same for all the thoracic and lumbar vertebrae; a somewhat different variation of this method is used with the neck. In addition, the upper cervical vertebrae C1, C2, and C3 have a distinctly different relationship to the dural tube than C4 to C7. Assessing and treating each of these sectors of the dural tube is explained below.

The dural tube is the outermost of three concentric tubular layers of connective tissue membrane surrounding the spinal cord inside the neural canal (Kekere and Alsayouri 2023). It has natural attachments to the full perimeter of the foramen magnum, the entire circumference of C1 and C2, and highly variable portions of C3.

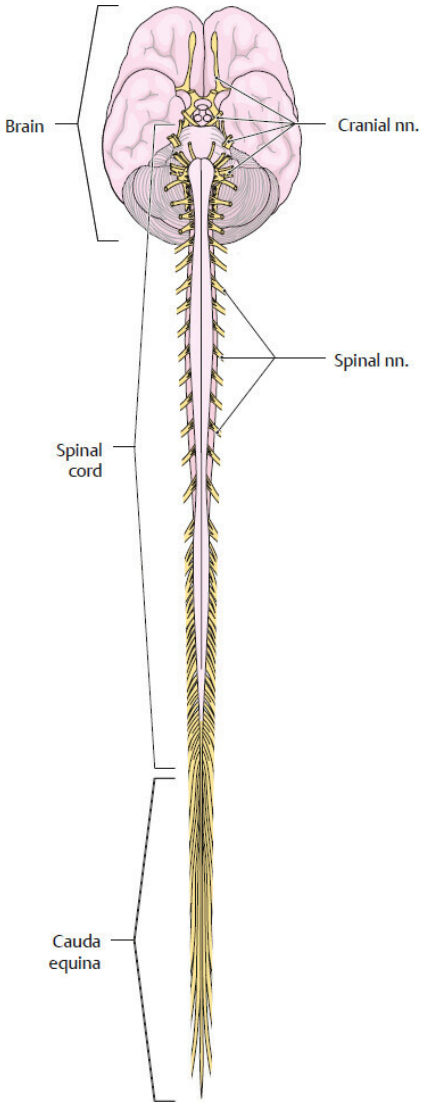
Following any injury to any portion of the dural tube, the fibroblasts, a migratory cell type, will work to repair the injured connective tissue. There are two common ways by which the dural tube is injured: whiplash and infection.





The brain and spinal cord are suspended in cerebrospinal fluid. The arrows indicate the circulation of the cerebrospinal fluid. The dural tube is the connective tissue layer that is called the dura when wrapping the outside of the brain, from the foramen magnum to the sacrum, it is called the dural tube. Image copyright 2025 Thieme MedOne.

If the whole length of the spinal dura, occiput through the sacrum, becomes infected, the dural tube will form adhesions to the periosteum of most or all of the vertebrae, producing lasting stiffness and back pain.



The dural tube extends from the foramen magnum at the base of the skull to the second sacral vertebra, enclosing the spinal cord and cauda equina. At its inferior end, the dural tube tapers smaller and smaller, covering the filum terminale and anchors to the coccyx. Image copyright 2025 Thieme MedOne.

At its inferior end, after all of the nerves have departed from the meninges, the now empty tubes condense to form a cord called the filum terminale, which attaches posteriorly to the first coccygeal segment. Superior to that, within the sacrum, the dural tube attaches to the body of the second or third sacral segment (Ünal and Sezgin 2021). Rarely the inferior attachment of the sural tube is on the anterior surface of the body of the fifth lumbar vertebra rather than to a sacral segment. Normally, the dural tube glides through all other vertebrae when the axial complex moves dynamically. This glide is important for good spinal movement and comfort.

Following any injury to any portion of the dural tube, the fibroblasts, a migratory cell type, will work to repair the injured connective tissue. Fibroblasts are cells that remove damaged collagen and elastin fibers and produce new connective tissue fibers to restore the structural integrity of damaged tissue, including the dural tube. Fibroblasts are migratory, swimming through the interstitial spaces of our body. Normally, the new fiber produced by the fibroblasts is woven into the structure of the connective tissue being repaired, in this case, the dural tube. Sometimes, portions of this new fiber are also laid down across lubricated gliding surfaces, like between the dural tube and the nearby periosteum

To assess these possibilities, have the client in a side-lying position. Put a pillow in front of their torso for them to drape their arm over. . . . With your right hand, engage the bone of the sacrum and draw it inferior. Be sure to engage the bone, not just the skin overlying the sacrum. As you pull the sacrum inferior, feel how the vertebrae under your left hand and forearm move.

on the bony surfaces of the neural canal through the vertebrae. The more severe the injury to the dural tube, the more likely such adhesions are to form.

Whiplash:

The dural tube has limited elasticity. It can only stretch about five percent of its length. Because the dural tube is anchored to the foramen magnum, when the head is ballistically accelerated, the pull on the dural tube from the cranium snapping forward or backward will instantaneously use up the stretch in the dural tube. Then, as the head continues to move quickly, the dural tube can become injured. If the dural tube is torn through, this serious injury requires a surgical repair. Short of a full tear, the sharp pull of whiplash can injure the dural tube, fraying it but not tearing through and through.

Infection:

Three concentric tubular membranes surround the spinal cord. Think of wearing three layers of socks on a cold day. The tough dura is the outermost of these three layers. Next comes the softer arachnoid layer. Deep to the arachnoid membrane, closest to the spinal cord, is also the soft pia mater. Think of these three together on the inner surface of vertebrae, like cushioned bubble wrap inside a cardboard box; together, they protect the contents, the rather fragile spinal cord. The dura, arachnoid, and pia membranes are collectively known as the meninges.

If the meninges membranes become infected, the condition is called meningitis. Several different microbes may infect the meninges. Meningitis is often but not always a severe condition that can result in permanent disability or death.

If the whole length of the spinal dura, occiput through the sacrum, becomes infected, the dural tube will form adhesions to the periosteum of most or all of the vertebrae, producing lasting stiffness and back pain. Fortunately, most cases of spinal meningitis affect only a local area of the meninges before the immune system kills the microbes. More serious cases of meningitis will be diagnosed and treated medically. The ‘subclinical’ cases often never come to medical attention. We associate meningitis with young people in congregate settings such as dormitories or barracks. More mature people rarely get meningitis because they had a subclinical case in their youth and then have lifetime immunity.

In a subclinical case of meningitis, the person will be aware of having a brief flu-like illness with some back muscle pain. This focal meningitis will produce one or more focal adhesions at the site or sites of infection.

Manual Intervention with the Dural Tube

To visualize the assessment and treatment process for dural tube adhesions, it is helpful to think of each vertebra, viewed from the side, as a little teeter-totter with the fulcrum at the facet joints. If the spinous process of a single vertebra is moved superior on this pivot, the body of the vertebra tips inferior and vice versa.

Since the dural tube is attached to the sacrum, if the sacrum is pulled inferiorly, the spine will lengthen, and if there are no dural tube adhesions, the row of spinous processes will fan open wider in a linear way in response to this pull. But if the dural tube is adhered to a vertebra, that vertebra will move differently than its neighbors when the sacrum is pulled inferiorly. The direction the spinous process will move when offering sacrum traction depends on where in the neural canal the dural tube adhesion is located. If the dural tube has adhered to the periosteum in the posterior half of the neural canal, then the posterior part of the vertebra will be pulled inferiorly faster than the neighboring vertebrae. On the other hand, if the dural tube adhesion is anterior in the neural canal, the spinous process will teeter-totter around the facet joints and go superior while its neighbors are moving inferior.

To assess these possibilities, have the client in a side-lying position. Put a pillow in front of their torso for them to drape their arm over. This provides some stability, so you can push into their back without their having to use muscular effort to prevent themselves from rolling forward. If the person is lying on their left side, place the ulnar edge of your left hand and forearm on their spinous processes, with the tip of your 5th finger at L5. With your right hand, engage the bone of the sacrum and draw it inferior. Be sure to engage the bone, not just the skin overlying the sacrum. As you pull the sacrum inferior, feel how the vertebrae under your left hand and forearm move. Do the spinous processes all fan open evenly, or did any of the spinous processes move inferior faster than the neighboring vertebrae? Or did any spinous processes move superior while its neighbors all go inferior? You will feel the spinous process movement as you pull the sacrum inferior. There is nothing to feel once the sacrum is in an inferior position, the movement is over. You have to catch it on the fly.

If you felt a vertebra that moved differently than its neighbors, first relax your traction on the sacrum, then move your left hand to contact that vertebra of interest with your fingers in a way that you can control that vertebra. Now, with your sacral hand, once again, draw the sacrum inferior. With the fingers of your vertebral hand, prevent that vertebra from making the aberrant movement it did before. If its spinous process went down faster than its neighbors, provide support from below (inferiorly), so it can’t go inferior as you again pull down on the sacrum. Now, gently pull down on the sacrum, just enough so there is a first barrier load between your two hands. This

Most people have more than one dural tube adhesion. Most people have had more than one head snap; it is paying for the big brain on the end of a narrow stalk.

sets up a first barrier shear through the dural tube adhesion within the vertebra you are holding.

The adhesion may be squarely posterior in the dural tube or more to one side, in either the right or left posterior quadrant. While you have the first barrier shear load along the dural tube established, with that tension between the sacrum and the vertebra, slowly rotate the spinous process of the vertebra around an anterior-posterior axis, first clockwise and then counterclockwise. If the tension between your hands decreases while rotating one way and increases while rotating the other way, this tells you the adhesion is more to one side, though still mainly in the posterior part of the neural canal. Use this rotary component to adjust your load on the vertebra more precisely with respect to the location of the dural tube adhesion.

After you feel a release between your hands, slack the pull on the sacrum and lessen the load on the vertebra. Recheck by pulling the sacrum down while monitoring that vertebra. You may now find an adhesion in a different sector of the neural canal of that vertebra. If so, use the same analytic process to figure out where the remaining adhesion is and set up a first barrier shear to release it. Repeat this cycle until this vertebra no longer moves differently than its neighbors when you pull inferior on the sacrum.

Remember to keep an open mind about the many possibilities of adhesions. The dural tube adhesion can be in any part of the neural canal. It can be narrow or broad, up to the full circumference of the tube. Two or more separate adhesions may exist in different parts of the neural canal at the same vertebra.

If the dural tube adhesion is full circumference, the spinous process will initially behave as it does for a posterior dural tube adhesion, which is descending toward the sacrum faster than its neighbors as you traction the sacrum. Initial treatment will release the posterior portions of the full circumference adhesion. Then, when you re-test, the spinous process will ascend rather than descend. Now, you can treat the anterior portion.

Most people have more than one dural tube adhesion. Most people have had more than one head snap; it is paying for the big brain on the end of a narrow stalk. Many people have had a subclinical case of meningitis. The process described here will usually, but not always, show you the adhesion closest to your fractioning hand first. After the first adhesion found is released, you can see the next one along the spine, and so forth.

This process works well for lumbar and lower thoracic vertebrae. Instead of pulling down on the sacrum, you can pull up on the occiput. This is more useful for upper thoracic vertebrae, although you may feel it down in the lumbar vertebrae. Make sure the pull on the occiput is straight, linear, and superior; do not flex or extend the neck. When you pull on the occiput, the movement of the spinous processes follows the same principles, but the direction of movement will be the opposite. If the dural tube adhesion is posterior in the neural canal, the spinous process will follow the occiput superior faster than its neighbors. If the dural tube adhesion is anterior in the neural canal, the spinous process will move inferior, away from the occiput, when you pull the occiput superior.

For working with the dural tube of the neck, have the person supine. Place the pads of the fingers of a monitoring hand on the tips of the cervical spinous processes and have the other hand under the occiput. Have the client's head in neutral with respect to cervical flexion and extension, neither chin down nor chin up. This will put the plane of the face near parallel with the table. Draw the occiput straight superior with the occipital hand while monitoring cervical spinous processes with your other hand. Do not let the chin go posterior or anterior, which would represent flexion or extension of the neck.

Just like other areas of the spine, if there is no dural tube adhesion, the cervical spinous processes will spread open superiorly in an even way. If there is a posterior dural tube adhesion, the spinous process of that vertebra will move superior faster than its neighbors. If the dural tube adhesion is anterior in the neural canal, the spinous process will move inferior with respect to its neighbors. As with pulls from the sacrum, this can only be assessed while you are moving the occiput superior. Once the occiput is in a more superior position, there is nothing to feel.

Treatment in the neck is the same as what was described for the lumbar area, with the understanding that if the problem is perceived at the level of C1, C2, or C3, then, because the dural tube naturally adheres to these vertebrae, you are treating a contracture in the dural tube between adjacent vertebrae rather than an adhesion to the periosteum within a vertebra.

Jeffrey Burch received bachelor's degrees in biology and psychology, and a master's degree in counseling from the University of Oregon. He was certified as a Rolfer in 1977 and completed his advanced Rolfing® Structural Integration certification in 1990. Burch studied cranial manipulation in three different schools, including with French osteopath Alain Gehin. Starting in 1998, he began studying visceral manipulation with Jean-Pierre Barral, DO, and his associates, completing the apprenticeship to teach visceral manipulation. Although no longer associated with the Barral Institute, Burch has Barral's permission to teach visceral manipulation. Having learned assessment and treatment methods in several osteopathically derived schools, he developed several new assessment and treatment methods that he now teaches, along with established methods. In recent years, he has developed original methods for assessing and releasing fibrosities in joint capsules, bursas, and tendon sheaths. He is also beginning to teach these new methods. Burch, as the founding editor of the IASI Yearbook, *regularly contributes to it, as well as to other journals.*

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Keywords

dural tube adhesions; structural integration; manual therapy; fascial adhesions; spinal mobility; whiplash injuries; meningitis; neural canal biomechanics; sacral traction; occipital traction; vertebrae; craniosacral manipulation. ■

Kathy McConnell

Mind's Eye

By Kathy McConnell, Certified Advanced Rolfer™, Rolf Movement® Practitioner

In my mind's eye, I see synapses firing,
Electrical storm, sparks and tiny bolts of lightning,
Shooting thoughts inside my head.

In my heart's eye, I see vessels.
I see deep and dark and wet.
I see oceanic movement
Calming the storm above.

My mind's eye opens wider
When my heart's eye is watching.

I see that standing in my heart
Lifts me to the sky.
I imagine floating,
Swimming among stars and galaxies.

And then,
I rest my hand's eye
On my heart's eye
And breathe.

Kathy McConnell is a Certified Advanced Rolfer™ and Rolf Movement® Practitioner in the San Francisco Bay Area. During her twenty years of practice, she has assembled an eclectic palette of formal and self-directed training that influence her work, including craniosacral therapy, medical qigong, and Western esoteric studies. Through her poetry, she is experimenting with the language of embodiment that is awakened by Rolfing® Structural Integration and Rolf Movement® Integration. ■

Lessons of Balance from *The Nerve Tour*

An Interview with Gil Hedley

By Lina Amy Hack, Certified Advanced Rolfer™, and Gil Hedley, PhD

Lina Amy Hack

Gil Hedley

ABSTRACT *Anatomist Gil Hedley recently finished his Nerve Tour lecture series, over the course of a year and a half, offering over a hundred dates where he described the whole human nervous system in a five-and-a-half-hour presentation. This article is a conversation between Hedley and Certified Advanced Rolfer™ Lina Amy Hack, who attended the North American Zoom presentation. They explore the nervous system as a "nerve tree," and the interconnectedness of humans with nature. Hedley shares about the life of the donor for the whole-body nerve dissection, and the importance of honoring the donor's gift while learning these profound anatomy lessons. He contrasts regional anatomy with his wholistic, integral anatomy model. The conversation highlights Hedley's unique approach to anatomy education that emphasizes the living, interconnected nature of the human form.*

Lina Amy Hack: Hi Gil, I've invited you to do this article with me for our June 2025 issue about 'Balance' because of your recent lecture series – *The Nerve Tour.* You spoke about the anatomy of balance in many different ways. I attended the North American Zoom meeting on January 8, 2025, and let me disclose my bias, I thought it was excellent!

Our readers are structural integration professionals, somatic practice experts, and people interested in their general structural and functional health and well-being. We are all striving to find balance in our bodies and support our clients to have balance in theirs. As I listened to your presentation, I wondered about your point of view on what it means to have balance in our human bodies.

Before you speak about that, I'd like to start with where your presentation started.

You presented many beautiful photos of nature, especially of trees, and you in the trees. As a fellow tree hugger, I connected with that imagery. Trees have the ultimate balance, as some of them soar hundreds of feet into the sky. What is it about trees that inspired you to make them a central theme of *The Nerve Tour*?

Gil Hedley: Thank you for reaching out. A few things come to mind. Let's start with how trees and nerves both have branching fractal forms. The tree was not an analogy for how the nerves appear in the tissue, I see the tree as a homologue to the nerves. They are the same natural form, which is why I called the neural tissue *the nerve tree*. We are trees that move around. Also in our bodies, we have this heart tree, right alongside that nerve tree, and those two wind together. And our branching bodies reach out to the periphery from those two amazing trunks.

But let me back up about the tree pictures themselves. People may have seen the Nerve Tour or on my website [https://www.gilhedley.com], a shot of me climbing a pine tree here in Colorado. The picture was taken when I was about halfway up it, and I remember Rachel had taken that picture when we were on a hike. Looking back at the image later, it looked like I was climbing the nerve tree (see Figure 1). So that image was a great inspiration to us during the Nerve Tour.

LAH: I like that you said, "We are trees that move around." That is how I think about my upright body and how I invite my clients to feel their legs and core, their trunk grounded on the planet.

GH: We have a nerve tree and a heart tree right at our core. And think about our breath, the gases we exhale are the gases trees inhale, and vice versa. We're literally sharing lungs with our treed planet. So, to me, they're not "other." The trees are mirrors of our form, and they may get on differently, but their root systems are interwoven with their neighbors through mycelial networks that are not unlike our own connective tissue form or invisible threads of connection with everyone we know. Trees are us; they're a part of our family.

LAH: Was it this dissection project that led you to think of neural tissue as the nerve tree? Or did you already think about the nervous system as a nerve tree?

GH: I've always thought of it as a nerve tree.

Dreaming of Whole-Body Nervous System Dissection

GH: Doing dissection over all these years has simply reinforced this idea that the nervous system is a tree. The nerve project was a dream of mine that I held onto for decades before embarking on the adventure. I had seen an amazing image of a 1924 dissection of the whole human nervous system (see Figure 2). The story goes that two medical students (Schalck, M. A. and Ramsdell, L. P.) had done a nice nerve dissection on an arm of a donor form for their medical school studies, and their quality dissection work was noticed by their faculty, who invited them to do the whole body like that. And they did. They spent about 1500 hours together working on extracting the whole nerve tree. It can be found today in the Museum of Osteopathic Medicine, pinned on wood and fixed with a shellac finish and small paper labels throughout the dissection. They didn't call it the nerve tree, of course, that's what I call it. That's what it looks like to me. But I don't like the word 'systems' so much. As you already pointed out, I look to nature for my mirror to describe human anatomy.

That specimen was executed at the highest level, as no one else has done before or since. There have been other attempts at a whole-body nerve dissection that I've seen on the internet. One of them I know is partly fudged, which I can tell by the overly symmetrical and stylized presentation. I do this work, so I know what they had to do to make it look like that. And no, that's not what that looks like. There are very few examples of the whole nerve tree extracted from a single form, and the 1924 example is, in my opinion, the best of them, hands down.

It's one thing to look at a book of the nervous system and see page-by-page many different examples, drawings, and graphics, but it is an entirely different kind of education to extract a single person's nerve tree. Schalck and Ramsdell did that on such an extraordinary level beyond the pale of my understanding. Those two people really worked it out. And I thought, "Wow, that would be fun to do."

LAH: Wow, what a starting point.

GH: When looking at that shellacked specimen, you have to ask – How did they get that? What does that structure look like in context with the rest of the body? Sure, the finished product is astounding, but what's its relationship to me? How does it literally fit into my body?

I was enamored for decades at the idea of doing *that* project by documenting it, so that as the nerve tree was revealed, it

Lina Amy Hack: What is it about trees that inspired you to make them a central theme of The Nerve Tour?

Gil Hedley: Let's start with how trees and nerves both have branching fractal forms. The tree was not an analogy for how the nerves appear in the tissue, I see the tree as a homologue to the nerves. They are the same natural form, which is why I called the neural tissue the nerve tree.

Figure 1: Gil Hedley climbing a tree near his home in Colorado. Photo courtesy of Gil Hedley.

would be a learning process to see it as it comes out. Less about the words for each particular stringy bit, but more about seeing that tree in context with other tissues. How do those branches relate to what they're in, what are they doing there, and then we can see that story come to life, giving the audience a much more in depth meaning to the final image as it is revealed as a whole.

When I finally had the time to start the Nerve Project, I only had four and a half months booked in the lab. That wasn't going to give me the 1500 hours they needed for their specimen, and they didn't film it – I was trying to film it. So I knew I was not going to produce what they had, obviously. I'd need a couple of years to attempt to do what they did. I knew it was going to take time to learn the technique, and by the time I learned it, I knew it wasn't going to look like their project. So I asked myself, "What am I going to emphasize?" I decided I'd try to emphasize things that people don't know. My audience being mostly bodyworkers, my gut feeling was to bring a deeper understanding of the peripheral cutaneous nerves. And we are pretty obsessed with talking about autonomic function, but who's ever seen those nerves? People ask, what do they look like? Where are they? How are they actually in relationship to other tissues? And so, as you know, I made those points my emphasis and tried to fill in the blanks as I went. I didn't have time to document the legs to the extent that I would have liked within my time constraints, yet I did have some of my team go to work on the nerves of the legs, so there would be some lower peripheral nerves to see.

The final image of the whole nerve tree astounded me. I didn't realize how far we could get in a detailed demonstration. I was pretty thrilled at the end. It took a bonus two weeks after the whole project was over of me alone at night, sawing and chipping, trying to get all the neural tissue exposed. I had to basically erase the skeleton bit by bit for this project, so much of the neural tissues are encased in the skeleton, and that was challenging.

LAH: The ending of your nerve presentation was so moving, that part where you showed us the entire nervous system as one piece. It was an incredible accomplishment to celebrate with you.

GH: Yes, thank you! Happily, there was enough detail to convey the idea of the spectacular complexity of the system. It was the Captain's nervous system, one individual being a perfect example of human anatomy.

The Captain

LAH: The way you treasure your donors is a profound lesson in your work. Can you tell our readers a little bit about Captain? Who he was, and also, a lingering question I had from your presentation, why was Captain a "blue lingcod"?

GH: The trees are mirrors of our form, and they may get on differently, but their root systems are interwoven with their neighbors through mycelial networks that are not unlike our own connective tissue form or invisible threads of connection with everyone we know. Trees are us; they're a part of our family.

GH: Oh sure. Captain Jim Gramke (1946-2022) was the father of my friend, Madhav Gramke. I knew the Captain as "Jim" of course, but when it came time to do the project, I wanted to commend him to the world for his accomplishments by denoting his service to the country. He was a pilot his whole life (he got his pilot's license at the tender age of fourteen!) and was a Vietnam War veteran. He flew helicopters in Vietnam as a teenager, literally, and then he was a corporate jet pilot for decades. He also flew medevac helicopters for some time, and then was the security detail for the space shuttle launches for many years at Cape Canaveral, Florida. Finally, when he retired, he had a stunt plane and he'd fly up and down the coast of Florida doing tricks at shows and things like that. So, he was a very accomplished pilot and a wonderful man.

LAH: The story of you and your donor has adapted my mind into a whole new level of understanding loving relationships. It took me a minute in the class to register what you were saying, that the donor – Captain – was your friend's dad, who you knew very well, and his wife as well. I felt like my neurons were making fresh synapses when I saw the picture of all of you so happily together. You allowed us to understand Captain's life as a person. Then, the tender instruction you allowed Captain's form to give us, your presentation was a multilayered offering, opening mind, heart, and soul. I remember you mentioned the many people who assisted you on the project, and Madhav himself figured prominently in the lab work, if memory serves me right.

Figure 2: Photograph of the 1924 whole-body human nerve dissection on display at the Museum of Osteopathic Medicine. The Museum of Osteopathic Medicine owns the image, catalogue number 1999.08.01. Printed with permission.

GH: Yes. He has given me a ridiculous amount of his life and service. Madhav assisted as the camera person for six months on the A-to-Z Project, and then three days a week throughout the whole nerve project. And so, his parents came to love his involvement with my work, and we all became friends. Jim had signed donor papers to donate himself to the lab, as I have, and as many other healthy people have done. We have a little donor program, and it's a nice thing to do. So, without any illness on the horizon, Jim told me he had signed up for the donor program in Christmas 2021, and then by late June the next year, he died unexpectedly from a brain hemorrhage.

Jim was diagnosed with a cancerous brain tumor, and within a week, he had surgery, and complications led to his passing. It was a sudden surprise to the family, to Captain himself, and everyone who knew and loved him. But then, his body came to the lab. I talked with his wife, Claudia, Madhav's mom, and we transported his body from the Denver airport together to the Institute for Anatomical Research in Colorado Springs, Colorado, in a U-Haul van I rented. I offered her several options regarding how we might best make use of his form: perhaps for a one-week dissection class, or in the lab for several months as a prosected lab "teacher" for the various groups served by the lab. Or, I had this third idea, and shared what I was thinking about doing a nerve project. She's said, "That's the one. That's it."

What followed was a kind of warning to her that this bigger project would lead to his form being famous, and shown visually around the world, and was she okay with that? It certainly wasn't going to be able to be an anonymous project if she chose that one. And she was absolutely okay with it, and so was Madhav. There he was after all, helping me work on the project.

And why was he a blue lingcod?

LAH: Yes, you had that beautiful photo of the blue lingcod, and you said that fish was a kind of an analogy for the Captain.

GH: Right, I showed some imagery from a fishing trip in Alaska where I caught a blue lingcod, a one in six thousand fish of that species (see Figure 3). It's an albino version of the lingcod. Lingcod are a common bay fish in Alaska, but there on my line was this beautiful blue lingcod with teal color throughout. It was so beautiful, an incredible fish. In the presentation, I shared that, "We are all variations on the theme of human, except, even more extraordinary, each one of us is truly one of a kind in eight billion, not merely one in six thousand."

The individual is the starting point of my human dissection work, which I call integral anatomy. You have to witness what's there in front of you. Each person is a perfect representation of the human form, which cannot be reduced to common anatomy images. Those images are averages that represent literally no body. People feel like they have mistakes in their bodies when they don't match those averaged anatomy images, but those drawings are not generated from the flesh of one person; it is an average of many dissections reduced to one image. No single body will ever represent that average.

You couldn't find four points on the human body that would be identical between individuals; it doesn't exist. You can't do it. A town tried. They wanted to do a sculpture of the average human, and so they got all the statistics and found that the best they could do was find someone who came close to two points of a fifty-point checklist. There's no such thing as the average human. We are each rarer than the blue lingcod. There is only the spectacularly unique individual person.

Figure 3: Blue lingcod caught by Gil Hedley on an Alaskan fishing trip. Photo courtesy of Gil Hedley.

LAH: This is a profoundly healing message for me, as I grew up, my body was an outlier and I had this desperate feeling where I wished I could be an average body. You helped me with this in a dissection class twenty years ago – each one of us is perfectly unique.

GH: The individual is the starting point of my human dissection work, which I call integral anatomy. You have to witness what's there in front of you. Each person is a perfect representation of the human form, which cannot be reduced to common anatomy images. Those images are averages that represent literally no body.

Not to be overly critical of the before and after shots, but the proof of balance is in the lived experience, not in the photo.

Gil Hedley

No Pictures

LAH: I feel it necessary to mention, as you rightfully mentioned several times throughout your presentation, you asked all your participants to not take pictures of the screen of the Zoom presentation. No screenshots of the donors. Not only is the dissection your intellectual property, you emphasize the sacred sharing that Captain and all the donors have trusted us to learn from their forms. So I only took notes from your workshop, old school. Now these notes feel like I did kind of 'copy' your presentation, but the copy is filtered through what my brain and what my hand could reproduce on the page. I drew drawings, I copied the drawings, and made notes of whom to attribute to the different things, of course. I hope that kind of thing is okay.

GH: Absolutely, I encourage that. And thank you for hearing that request. As much as I asked folks to respect that, a few people somehow still don't hear it, they don't pay attention, or they just think they're above it. I had a lady in the front row whip out her camera and take a picture of one of the in-person presentations. I was so shocked. She claimed (dubiously) it was just of me, and evaded me when I asked her to delete it, yet I had said so many times, no pictures of the donor images I was sharing. We're talking about my friend's body here, and I'm very keen to protect it. All of my donors are friends by the time I'm done with them. Whether I know them or not, I treat them with all the same reverence. I have someone's family member's body in front of me, an intimate diary of that person. And I kept telling people, I was going to make my recordings available to them to learn from later, so just enjoy what was being offered.

LAH: And we really feel that connection as an audience. It's beautiful how you help us learn through your care and sacred intentions with your donors. It's hard to convey that to our readers in words; it's a felt thing. And you did give us access to the video to study later, and I did just that. I thought that was generous as well.

GH: I am keen to teach, right? I'm not trying to conserve this intensive work; I'm sharing it. I have a website with 350 hours of visual content on it. You don't need to take pictures, I will provide them to you right there, in that safe and appropriate container.

LAH: And I know I was better off pausing the video, drawing the image myself, and letting my brain process the information. It's creating my mental map.

Regional and Integral Anatomy

LAH: Speaking of anatomy maps, can you tell us more about the difference between the common regional anatomy that all of us learn in school and the integral anatomy that you teach?

GH: Sure. Regional anatomy and integral anatomy are buddies; they're friends. If we're talking about human anatomy, regional anatomy is the process whereby we systematize our knowledge of the human form. Regional anatomy is interested in the division and separation of the body into parts, which it then takes great pleasure in naming, organizing those names into taxonomies, to organize knowledge and make it transferable, to make it possible to communicate with one another about the human body. I have no objections to studying regional anatomy, and have spent quite a bit of my own energy doing exactly that.

At the same time, we must add to the conversation about regional anatomy that it's a complete falsification of reality. We miss out on integral anatomy if we end the inquiry at regional interests. Integral anatomy is less interested in naming and taxonomies and organizing knowledge in that way; integral anatomy emphasizes the relationships between those created "parts" and the demonstrable continuities of the whole, the context for everything.

People who have an interest in integral anatomy want to see the nervous system in its context and know the relationships. When learning about anatomy, we imagine the parts and recreate them in our mind, but to witness the actual whole from which those parts are derived is an entirely different endeavor. This is the emphasis of integral anatomy: context, relationship, and continuity. I do not dissect to create "parts" to be believed in. I dissect to feel into the relationships and continuities, adding that information to my remembered sense of the whole, which is more complete and better understood for the effort.

We can look at the whole-body layers in relationship to each other, right? And then beyond that, I invite people to notice textures and shapes that emphasize the qualities of this individual, to see the newness and uniqueness that is in front of your face in the moment. With integral anatomy, you address what is actually there as opposed to the memory of what should be there from the imagined pictures held in their minds from the study of regional anatomy.

As an anatomist, I do this, and this is a useful point of view for bodyworkers. When you are with your clients, you have the opportunity to witness the uniqueness of a person in that moment, and serve their needs, as opposed to re-enacting your memories and fantasies of what might be good for them. When working with people, we are stepping into an ever-unfolding process. That was one of the reasons I thought it would be neat to be a Rolfer way back when; to me, Rolfing Structural Integration was a profession that would require me to always be learning. In my mind, it was a practice that was going to keep me on my toes, to keep learning and studying to get any good at it. Of course, I bailed long before I got any good at it, haha, I found this other passion for sharing anatomy, and this became an important part of my life's work, my unending unfolding of learning. The body is a universe, and you never get to the bottom of it.

LAH: By sharing your path, the rest of us get to learn. You are such a good communicator. In my view, you are also an artist in presenting your nerve tree ideas. You showed us many tree pictures, so then I started picturing the nervous system with an overlay of a tree.

Nerve Tree and Heart Tree

LAH: Here's my big question: Since the peripheral nerves reaching surfaces like skin and organs are so small, they are like the leaves of the tree, then their nerve fibers are so slender so they are like the small twigs, the nerve fibers bundle into thicker and thicker nerves, which is like the branches of the tree that reach the trunk; the thick trunk of the tree is like the thick spinal cord of the body. But then, does that make the roots of our human nerve tree the brain? Is the nerve tree an upside-down tree with roots upward? (See figure 4.)

GH: Why not? Let's make the brain a big root ball. Yes, this is how I see it. Why not, just think of Groot.

LAH: That's a new model for my mind and I love it, I'm still integrating this idea in my Rolfing concept. We teach our

GH: People who have an interest in integral anatomy want to see the nervous system in its context and know the relationships.

clients about the head going up, seeking the upward direction, with length and softness in the rest of the body. So now, I see this as my upside-down nerve tree roots – the brain – going upward to the far stars.

And before we go too far with the nerve tree, you also spoke about the heart tree being intertwined and inseparable from the nerve tree. Throughout your presentation, you taught that the nerve tree and the heart tree are together.

GH: Hard to miss when you dissect it. You might not get that connection just from your imagination when learning body systems because books present them as separate concepts. In the body, our arterial tree is coated with nerves. So if you want to see an artery, you have to kind of strip its autonomic tunic of neural tissue. Once you've done that a few hundred times, you can't help but realize it is hard to get these two things apart. Nerves climb arteries like vines.

And on the flip side, I shared in the Nerve Project tour a beautiful image of a brain with the intricately branching heart tree intimately penetrating it. With respect to the brain, the heart tree is embedded in it, and continuous with it. The blood vessels are so intricately buried amidst the brain tissues, they are one. Again, we have the hardest time understanding ourselves as being one.

It's this crazy struggle for us with our dualistic minds, language, and teaching style. This idea that we start with parts and then try to work towards understanding the whole is a real challenge. We learn anatomy with a list of names of parts we need to know, and we end up with this giant pile of parts, pieces, names, and words where we spend the rest of our lives trying to stitch it all back together.

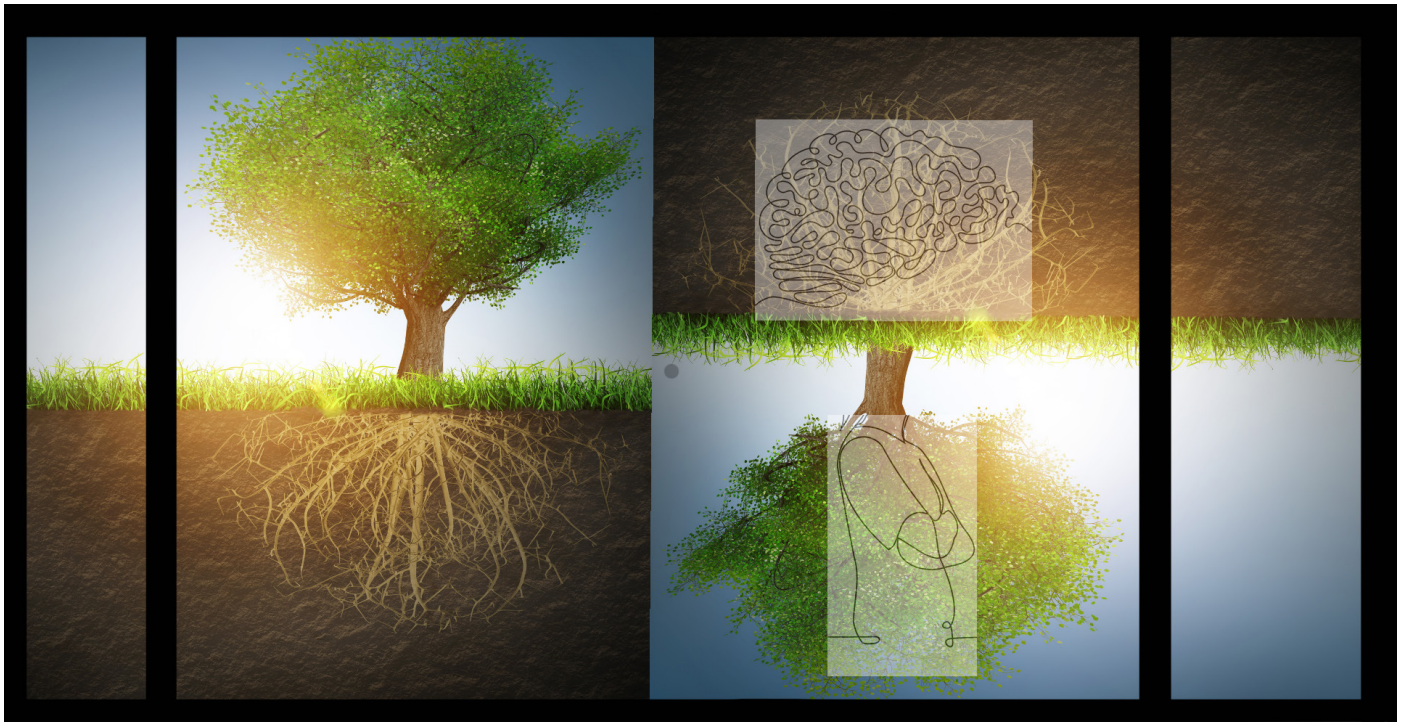

Figure 4: The nerve tree is upside down, where the leaves are the periphery of the body, the trunk is the spinal cord, and the brain is the roots. (Image by Lina Amy Hack, with images by Kamila Balmukasheva, zzayko, and andreusK on istockphoto.com.)

In the lab, if you show up with a regional mindset, you will create a pile of parts that meet your concept. You can produce it, confirming the model with which you showed up. But if you show up with an integral perspective, then instead of placing your energy on that separated set of things that you created with the scalpel, you place your attention on the things you disrupted to get that pile of parts. In other words, when I apply my scalpel, I'm conscious that I've started to falsify the whole as I cut. The whole is what is true, the parts are not. I just can't ever see those parts as true, yet it's the only way to understand the whole better is to take it apart. So, I'm not objecting to taking it apart, I'm just saying that while you're taking it apart, realize and remember what you did, because it's the remembering that brings us to the wholeness, not the disarticulating.

My message is to pay attention to the separation and how much energy it takes to do it. When I'm working with the donors, I'm paying attention to the density of the tissues. Is it super-fibrous? Is it kind of slippery and mushy? Is it loose and areolar? Or can I pass my finger through it? When I do, does my finger get stuck on something? If so, what does it get stuck on? What's the texture of the thing it gets stuck on, and how does the thing it gets stuck on relate to this, to that? It's probably a vessel or a nerve. If it's a membrane, I can generally disrupt it manually, but does that mean it no longer exists because I disrupted it? Does that mean the things I have disconnected are distinct parts? No, there's no disconnection in the whole. The disconnection I've made is a kind of lie; the connection is the truth.

The question is not whether these parts I have made are two separate and different things, the question to ask is, what is the quality of their relationship? How do I embody and bring into my body a consciousness of the quality and texture of the relationship? Can my understanding of these parts become part of my conceptualization of the whole? I'm not saying to not explore the parts. I'm saying to do it in a way that doesn't trick you into believing your pile of parts is the truth and that the whole never existed, because once you start disassembling the donor, the whole, that truth, is gone.

LAH: I found it intriguing that you had to change your dissection style in order to show us these qualities of the nerve tree and heart tree. I didn't expect to hear that, I thought your nerve presentation was going to be scalpel work. You talked about using a paddle, and paddling through the tissue, which made me think of you in a canoe moving through the tissue.

GH: That was it. The scalpel is the worst tool for nerves, just the worst. The refinement of the dissection approach that was required to produce the Captain's nerve tree was a huge leap in my own patience, attentiveness, and skill. Even after thirty years, I feel like I could be a lot better, and this project demanded me to get better. The scalpel kills everything before you've seen it. It's this death wave of separation. And I'm pretty good with the scalpel, I've grown to have skills over the years, but it really pales in comparison to what it took me to do the nerve tree. It was a very intimate meditation on those tissues and an incredible level of paying attention and being present to what's in front of my face. It was a contemplative process.

LAH: Hearing you say that sounds similar to my self-talk when I'm tableside with a client. It's a contemplative process. I don't know what I'm indirectly touching through the skin, but I have decades of study backing me up. Ultimately, I feel I don't know, and from the not knowing, I begin by being curious. It seems I have the best outcomes for the client from that mindset, and in my mind, I'm making my best guess with my beginner mind every minute.

GH: Exactly! It's upon that knowledge foundation that not knowing becomes meaningful. A beginner's mind in the container of a wonderful decades-long foundation of study can make all the difference in the world. I want my surgeon to have a beginner's mind; I don't want a surgeon who is stuck in their left brain and can't be present in the newness of my body. Every surgeon faces in the operating theater what I face in the lab and what you face on your table – every human body is different. The client you have in the morning isn't going to have the same texture and shape of tissue as your client in the afternoon; they cannot be the same.

LAH: Exactly. I want that surgeon too!

Look – It's the Vagus Nerve

LAH: You made some good jokes for those of us who are a bit ravenous for information about the vagus nerve. I'm firmly in the polyvagal theory camp, a big fan of Dr. Stephen Porges, and despite reading all his works many times over, I was hoping you'd show us the *whole* vagus nerve. You did not disappoint, you gave us so much detailed imagery and mini-lectures about the details of this neural pathway, and then you did give us some whole vagus pictures and drawings. It was the most complete anatomical discussion of the vagus that I have experienced.

GH: I did tease the vagus nerve folks a little bit. Having heard so much about polyvagal theory over the years, many people come to my classes who have studied with Stephen Porges and have done the deep dive into his polyvagal theory books and articles. They would say, "I want to see this about the vagus nerve, and the other thing." And I thought, "You know something? It's about time we saw all of it." Let's not talk about it, let's look at it.

LAH: In Porges' original 1995 paper introducing polyvagal theory, and in his subsequent books, he's talking about this anatomical neural pathway like it is one thing, one structure. It took my brain a long time to integrate the idea that the vagus nerve is bilateral, a left vagus nerve and a right vagus nerve. When Porges says something like, *the ventral vagus part of the vagus nerve downregulates the heart rate and breath rate when a person feels safe* – there are actually two ventral vagal nuclei, left and right. And two dorsal vagal nerve tracts. And when the vagus nerve exits the brainstem, there is one on each side of the brainstem, one on the right and one on the left.

You gave us the whole picture. And you called it "tracking the wild vagus," like a person can follow the tracks of a wild animal in the snow.

GH: The vagus nerve has become reified, thingified, one-version-ified, and personified as this magnificent nerve. I was committed to actually seeing an actual individual's vagus nerve tissues in their uniqueness, as manifested in relationship, and to document that. No small challenge, given that the representations I necessarily had to use as my guides were "maps" as it were, and not the territory. Sometimes it turns right, and not left, and you're wondering, is this "really" it? Well, yes, it is! And it is a constant effort to see what's in front of your face and believe it, rather than the representations and guides that we normally accept as dogmatically and indisputably true, because they got a page or two in the book.

That's what I mean by "tracking the wild vagus." Following the real thing, not the memory implanted from a book and believed without question or reference to what's in front of you. And I'll tell you, it's a little scary to work that way, because you have to spontaneously follow the tissue, rather than the book. You have to be in a space that is constantly open to newness, surprise, and to accept difference, uniqueness, and beauty as facts that reshape you for the encounter. That's right brain dissection, as opposed to just cutting it until it looks like it's "supposed to." I had a blast, it was like riding a roller coaster emotionally because you never know what's coming around the bend!

Quotable Gil

LAH: Folks who have attended your events will know you are a wordsmith, a poet, and a peaceful person. You gave us these quotable moments, sentences that just cut right through to the heart, mind, and soul. They do wonders for building the anatomy map in our minds. I'm wanting to tell you some of the impactful quotes from the nerve tour and have your further comments about them.

GH: Gil quotes. Okay, we'll see if I recognize that man.

LAH: It was hard to choose which to say first, there were so many. Here we go.

"No such thing as 'just fat' in the body." – Gil Hedley

LAH: And the context was that you were showing the cervical plexus, discussing what it was like to look for the cervical plexus as a structure. Part of the challenge was that you had the practice of removing the adipose tissue to reveal the neck muscles that everybody wants to see, and then in that adipose tissue that you would dispose of, there within was the cervical plexus.

GH: You quote me accurately. Yes, in other words, and I've talked about this in other places, our culture has a violent disdain for the word "fat." It's a dirty word, which is such a great shame because it's so cozy. I've been trying to reframe our thinking about adipose tissues and took the opportunity in the Nerve Tour to say repeatedly that, "You ain't going to get to know nerves too well if you're not willing to be very patient with the adipose tissues because they're embedded in them, and the lymphatics are fatty." Right?

Our lymph tissues are in adiposal beds, and then the nerves are embedded in that, and so without patiently paddling my way through adiposal lymphatic fat matrices, I'm never going to see these nerves, especially the autonomics in particular. They're just yellow. If you're carving yellow tissue away, well, say goodbye to the nervous system. You're not going to see it.

Even something as huge as the sciatic nerve lives in loose aerial or fatty tissue. Its context is fat, which makes it slippery, has differential movement, and has lymphatic drainage. In a former anatomy tour, I elevated the superficial fascia to its rightful status as a whole-body layer. We need to heal our hatred of it; we need to understand how it becomes ill.

LAH: I love that, I know that message is needed. And such a wild update that the neural tissue is embedded in those juicy parts of ourselves.

GH: We have such rampant ill health in that layer, and it's not a chicken or the egg thing. The fat hatred comes first, and then we have a distorted relationship with that tissue, and it's hard to work it out from there in our own body sensibilities.

LAH: Next Gil quote. I hope I wrote it down accurately.

"The human spinal cord is undulating in the spinal canal like a snake in water."– Gil Hedley

GH: Yes, that's pretty close! Every breath we take is a whole-body movement. Every rhythmic pulsation of our heart center is having its movement imputed to every tissue continuous with it, which means all of them. What's true for the cells of our arm is also true for our brain, which is completely infiltrated by the heart tree. The pulsation of the heart literally sloshes the brain. It's so big. Our vertebral and carotid arteries come together inside of our skull in the form of the basilar and the internal carotids which then form the circle of Willis. This pulsation is then beating through our brain, which is sloshing inside of our cranium in its fluid suspension and gently whipping that spinal cord.

LAH: You showed us a video of a snake swimming in a pool, evoking this beautiful movement.

Figure 5:

Gil Hedley: [If] you want to see an artery, you have to kind of strip its autonomic tunic of neural tissue. Once you've done that a few hundred times, you can't help but realize it is hard to get these two things apart. Nerves climb arteries like vines. (Image by serfeo on istockphoto.com.)

GH: Indeed, that's how to see it! Also, you can look up imagery of live brain MRI videos of the brain jiggling with every heartbeat (Science Museum 2018). There is a propeller for our spinal cord, and within that we have the movements of our cerebrospinal fluid circulating. They're very slow in comparison to the movements of the heart rhythm and the breath rhythm. There are multiple wave oscillations being generated in our form that are impacting the spinal cord in its liquid suspension. That's life in there, that's how it is when it's alive and moving.

LAH: Okay, here's the next Gil quote.

"Fascia is alive!"– Gil Hedley

LAH: I assure you this is a safe space to say such controversial things as fascia is alive, and you also said, *"Life is not limited to just the inside of the cell."* Meaning the extracellular spaces are also alive.

GH: Fascia is alive. I go off on that, don't I, haha.

LAH: Yes, and say more!

GH: We are back in the conversation about everything broken into parts. There is some philosophical commitment to where life is living, here, but not there. It is in the cell, not outside the cell. [See page 6 for interview with Dr. Theise.] You could reverse that claim. Why not? Dr. Neil Theise actually talked about this at the 2018 Fascia Research Congress in Berlin, Germany. He gave a wonderful presentation. Among other things, he challenged that decision and philosophical commitment to reducing life to the activities inside the cell. I'm on board completely with that challenge. Life permeates through and extends beyond the whole form.

My statement that, *"Fascia is alive,"* incites the funniest controversy. It's just wild how this statement serves as a provocation to certain sensibilities. There are those wandering about who are committed to this sense that fascia is some sort of inert packing material and that it is essentially dead, inert, and clinically irrelevant. I'm here to assure you, no part of me is dead, I'm not part of the walking dead crew, I'm not part zombie. The whole of this body is alive, and in fact, my life is not even contained simply by my skin. My life exists way beyond my skin.

Figure 6:

Gil Hedley: I do like the jellyfish metaphor because of their beautiful pulsation and the sense that our nerve tree isn't some static, dead wood. No, it's come into life. It's a living thing, and I'm extrapolating that from being the witness. (Image by Ricardo Campiteli on istockphoto.com.)

LAH: Yes! We talk about that a great deal in our Rolfing paradigm, the space around us is also part of the body, the brain processes it that way.

GH: Yes, and we fill it with life. If you've ever hung out in the lab with me, you can see firsthand how contained a dead body is. It has an impact beyond the surface of the form because people enter into relationship with that form. And then that becomes the quality of the space in the container. We can run into each other long before our skin is touching, we feel people's energy, heat, warmth, and what have you.

LAH: Okay, this is fun. Here's another Gil quote.

"It's just one jellyfish with many tentacles, with many functions that can't be separated. It is this incredibly beautiful pulsing living form existing within each one of our human bodies, one miracle among layers of miracles. And the body itself as a whole is just one aspect of the whole person, who is in relationship with everything else, on into the universal whole." – Gil Hedley

GH: That sounds like me.

LAH: I'm collecting these metaphors; they enrich my understanding. This jellyfish metaphor delivers intelligence and texture.

GH: The jellies are very nervous-looking, we could add the man o' war creature too. Coming back to nature to describe what we find in the human form. The jellyfish was my way of witnessing the whole. After separating and dividing, I couldn't leave it there. Those many tentacles extending from a single form bring the message back together. It all works – jellyfish, tree – whatever metaphor you want to run with. I'll use them all, and when one stops working, pick up another one. Otherwise, it's just dogma and not a metaphor. We've got to keep it rich.

I do like the jellyfish metaphor because of their beautiful pulsation and the sense that our nerve tree isn't some static, dead wood. No, it's come into life. It's a living thing, and I'm extrapolating that from being the witness. I know that as I'm moving around, my nervous system is alive, right? Along with my fascia, the whole thing, kit and caboodle, it's all a big story of life and wonder.

Humans Balancing in Gravity

LAH: As you know, Dr. Rolf (1896-1979) focused on the natural alignment of people standing and walking in gravity, that part of our wellness is structural health. That we can tap into that comfortable feeling when our spine is at ease, fluid, and reaching upward, while our feet and legs feel grounded on the planet.

Dr. Rolf would take before and after pictures of her standing clients to teach the outcome of her manual therapy. Those clients' standing shapes revealed what could be visually assessed about the relationships of their internal structures. She taught about the balance of human tissue in gravity; stacking the heavy parts of ourselves on the plumb line of gravity can lead towards optimal function. I think the public gets the impression that Rolfers are looking at the symmetry of the body side to side, that the two arms and the two legs are doing the best job when they are mirror images of each other. At least that's what my clients talk about when they look in the mirror at my office; they want me to make them symmetrical. So then, it becomes some education about what it means to be balanced in gravity.

What are your thoughts about how the human animal balances on this beautiful planet?

GH: Well, balance certainly isn't symmetry. At the more superficial level, people have paired structures from side to side. There is an eyeball on either side of the face, a nostril on either side, and an ear, an arm, and a leg on either side. So generally, that's the deepest level you can take the notion of symmetry.

In the Nerve Tour presentation, I made the distinction between Euclidean and fractal geometry. Euclidean geometry is a mathematical system based on a set of notions about two-dimensional and three-dimensional space. These are the foundational ideas people have about forms, shapes, and space – the cube, the cylinder, the circle, the sphere, the triangle, etc. These are the forms of Euclidean

geometry; and these are decidedly not the shapes we find in the body (see Figure 7).

That's not us; when we really look, it is all asymmetry, even upon the most superficial aspects of the human body. Put your two hands together, they're not identical in the way that an equilateral triangle's opposite sides are identical. If you draw a line down the middle of the body, you have two very different shapes left to right when you really look at it. We are not Euclidean geometric forms, we're poorly described by Euclidean concepts like symmetry.

On the other hand, fractal geometry doesn't succeed at describing the body perfectly either, but it is an attempt to describe nature better than Euclidean geometry mathematically. Fractal geometry is a branch of mathematics that describes successively smaller copies of a pattern nested inside itself. Where Euclidean geometry deals with zero, one, two, and three dimensions, in fractal geometry, you can play out what it means to be in the 1.47960 dimension. So, fractal geometry gets us closer to describing the shapes we find in nature where we don't find whole-number dimensions. These mathematical ideas are an imposition on nature, which is yet more complex and irreducible than even fractal geometry manages to achieve with its beautiful algorithms.

So what symmetries exist within us are of a fractal rather than a Euclidean nature. When nerves branch and branch again, there's a repetition of the phenomenon of branching. But if you put the right side branching spinal nerve side by side with its left side partner, the two things are not a mirror match. You can't place them on top of each other. You can't place two oak trees on top of each other and expect every branch to match. Not even one side of an oak tree will match when compared to the other side of the same tree (see Figure 8). That's how we are. If you look at our organs, our nerve tree, our heart tree, they are fractal branching forms. They demonstrate self-similarity, but they are not symmetrical in the way that a bisected equilateral triangle is. So, the balance that we manage to achieve is not because we somehow manifest that kind of symmetry.

Our balance doesn't come from symmetry, it comes from a relationship to everything else and to ourselves. Right? I practiced Tai Chi for about seven years every day. Balancing on one leg, waving my arms around, and trying to be balanced – meaning not fall over. Sometimes these moves will make a person get off balance, but that doesn't mean they are bad at Tai Chi. The question is, can you return to balance from being off balance? Years ago, the World Health Organization included in their definition of health the rapidity with which you can return to balance from being out of balance. You're healthy, not because you never get sick, but because when you do get sick, you're easily restored to balance.

Similarly, in our movements, it would be odd to never risk being off balance, movement is about returning to balance nicely. So, what is balance? It's in your living, moving relationship to gravity, which is never standing in front of a camera in your underwear while someone takes a Polaroid of you. That's never going to capture pure balance. A snapshot is the carcass of balance in a moment, and it's embarrassing. People will assemble themselves under those conditions, with whatever layers of tension are necessary to impress upon the camera the similitude of symmetry to please the camera's eye, and the practitioner's too.

LAH: Yes, a valid critique of that process. People will work to meet what they think the expectations of the person holding the camera are. Or, at least, that's the risk, that it is performative.

GH: People are encouraged to assemble themselves for that photographic record of their balance. And don't we see this all day long on Instagram and Facebook, pretty people and places in impossible positions that were held for a microsecond and then put down as a record of balance. A performance of balance.

What we know about still shots and postures that people present in their sessions is that they amount to layering of tensions onto the actual living reality.

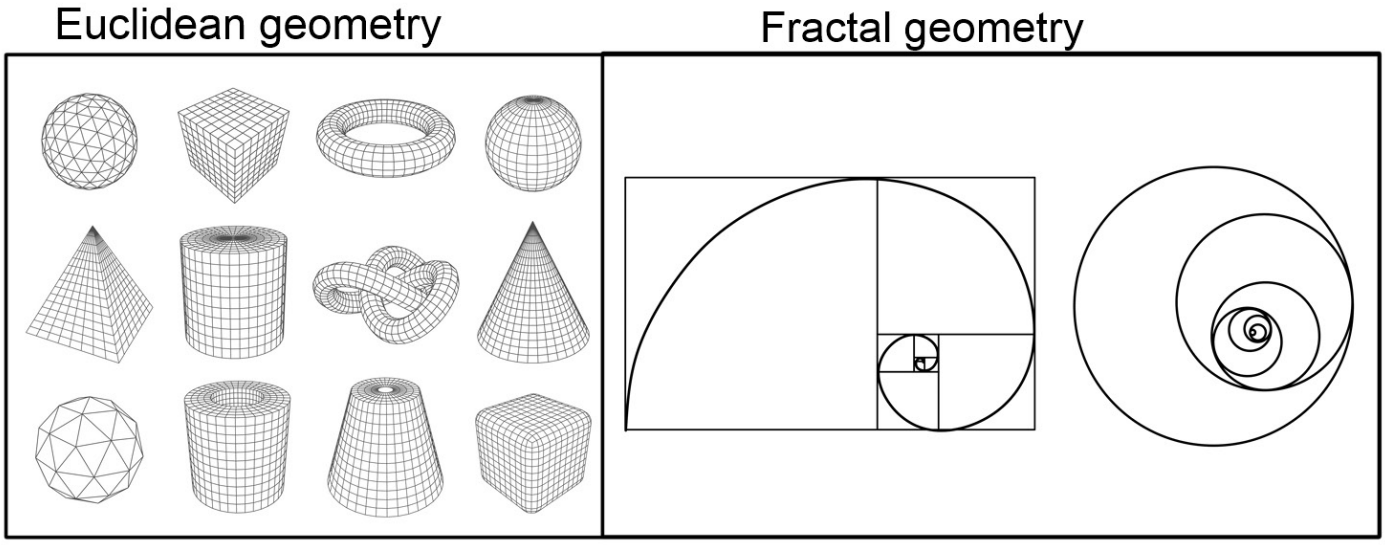

Figure 7: Euclidean geometry is a mathematical system based on two-dimensional and three-dimensional shapes; fractal geometry is a branch of mathematics that describes successively smaller copies of a pattern nested inside itself. (Images by Sensvector and sutana on istockphoto.com.)

Figure 8:

Gil Hedley: When nerves branch and branch again, there's a repetition of the phenomenon of branching. But if you put the right side branching spinal nerve side by side with its left side partner, the two things are not a mirror match. . . . Not even one side of an oak tree will match when compared to the other side of the same tree. (Image by Mikhail Martirosyan on istockphoto.com.)

People wear these habits and choices on top of the life within them, and that photograph is a fleeting moment to show off. Not to be overly critical of the before and after shots, but the proof of balance is in the lived experience, not in the photo.

LAH: Such key ideas to ponder when we're deciding our philosophy in our treatment rooms. Here's my final question, inspired by your talk, you taught us in many ways that our attention energizes our anatomy. You led the group on several beautiful meditations that I experienced as powerful, and landed the message of living in my whole, integrated flesh.

If it's okay with you to share, you invited us all to feel in a grounded way, our pituitary glands, and I felt activity there that shifted my senses, seemingly, forevermore. Now, I have been able to access that place behind my eyes, and it has become another tool in my toolkit. And here's another one, you generally invited us to consider doing – on our own – focusing our attention on the neural plexuses. You said, pick one of them, and focus on it in a meditative, mindful way. Those are my words and interpretation of the invitation I heard. The anatomy parts feel different when I do that!

What do you think the connection is between our mind imagining specific anatomy, being meditative and slow with our attention, and the enlivening that we feel of that place thereafter?

GH: Good, that thrills me that you heard that invitation, thank you. That's great feedback.

LAH: For years, and I'm sure many people reading these words do this too, I put my attention on my heart to soothe myself, I put my hands on my heart, and it so clearly supports me self-regulating back down into that rest and digest state. Then you showed us the cardiac plexus, and I'm thinking about how change really happens. And what is that change in the tissue that helps us feel better?

GH: Your attention is energy, it is consciousness. Your attention is the battery fueling your life, and we are very random in the use of our outrageous power of attention. Our attention is a commodity right now. There are companies battling for our attention because it's what they are selling. We must be careful not to fritter our attention away to thieves.

Our attention, if intentionally placed, is power and consciousness. To my mind, you don't really know anatomy for knowing some words and how to string them together. But if you say the words and you command the thing named with your attention, whoa, now you're going to go to another level. What you just described of your experience, there's power, and that's power restored to you by your own choice of where you place your attention.

And I ain't bragging here. My attention is as scattered as anybody else's, but at least I know sometimes what I'm doing with myself. You know what I'm saying?

LAH: Totally.

GH: We're all just people here and we're just doing the best we can do. Like meditation, you sit there and you float away. But then, you notice you've floated away and you come back. That's the thing. That's balance, the coming back. That's the whole thing for the whole planet. It's like, where's our attention? Are we exercising our power over it? Because we don't have power over much else. We don't even know what we have in this beautiful world, no less how it works.

What we humans do have is our capacity to attend intentionally, and there's an outrageous amount of intelligence and power in that. We have underestimated this side of ourselves and at times give it away because we think, "Oh, there's nothing I can do about the world." But don't get all floppy and helpless, you have power in your attention. Us people, we spend decades complaining about something in ourselves, to ourselves, and my message is we can all actually pay attention to the way we work with our attention, that can empower our change.

LAH: Beautiful. You embedded so many useful, practical, and sacred lessons in your Nerve Tour, it made me think about the notion of balanced human anatomy in a different way. And moreover, you model what a balanced, wholistic practitioner looks like, profound friendships all around you. Thank you for sharing your ideas, your time, revisiting a few of the ideas from that presentation.

GH: It's been fun. You are most welcome!

Gil Hedley, PhD, has been teaching integral anatomy in the lab, lecture hall, and online at www.gilhedley.com since 1995 to professionals from the whole range of healing and fitness modalities. He is the producer of 'The Integral Anatomy Series', the author of several books of poetry and prose, and has

now created the "Anatomy from A to Z" project, more than two hundred hours of a comprehensive on-camera tour of human anatomy based on his integral, whole-body approach. Hedley is based in Colorado Springs, Colorado, where he presides over the Board of Directors of the Institute for Anatomical Research, a 501(C)(3) non-profit corporation focused on expanding the study of integral anatomy through cadaver studies.

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"Support Is a Balance of Elements That Are Not Solid at All" (Rolf 1978)

An Interview with Mary Bond

By Dorothy Miller, Certified Advanced Rolfer™, and
Mary Bond, Certified Advanced Rolfer, Rolf Movement® Instructor Emeritus

ABSTRACT *In this conversation, Rolfer™ Dorothy Miller asks author and Rolf Movement® instructor Mary Bond about how she teaches the idea of balance. Bond's thoughts about her body mandala books, fascia, and biotensegrity are explored.*

Dorothy Miller

Mary Bond

Editor's note: The title of this piece is a quote from Ida P. Rolf, PhD (1896-1979), in the book Ida Rolf Talks about Rolfing® and Physical Reality *(1978), page 181. The authors speak about this particular quote in the article.*

Body Mandala and Beyond

Dorothy Miller: Thank you for joining me in this conversation. As a somatic educator, Rolf Movement® practitioner, and Certified Advanced Rolfer™, you are an expert in our June 2025 main theme – how human beings balance while moving. Thank you for taking the time to share your understanding.

In your books, *Your Body Mandala: Posture as a Path to Presence* (2018) and *Body Mandala: Posture, Perception, and Presence* (2023), you use the beautiful geometric pattern of the mandala to teach people how to find balance in their bodies. I have *Your Body Mandala*, 2018, on my bookshelf. Your movement ideas are a joy to read and practice. Personally, I find myself comfortably revisiting the practices in the book for myself and my clients. As my body, my Rolfing® practice, and the way in which I work with my clients continues to evolve, the exercises that you have in your book are so foundational and profound. I never fail to appreciate them.

In the years since your book came out, do you find yourself satisfied with the messages? It's like you've made a gift to the world with these movement suggestions. Do you have more to say?

Mary Bond: Thank you Dorothy, first for appreciating it and also for making use of it. That's really what I was after, that people would find a way to use it in their own self-care and to translate it for themselves into how they work with clients. And, yes, I have more to say. I am forever interested in the body. I don't know whether another book is the way to do it. People seem to put books on shelves.

When offered to do a second edition by the publisher, there was an opportunity to make improvements in it. But it was a busy time for me, so I didn't. Later I thought that I would have liked to address what I call the *interoceptive midline* differently because I don't teach it the way it's presented in the book anymore. But because midline is referenced fifty times in the book, the changes would have had to be pretty extensive, and by that time it was past the deadline. And I realized it didn't really matter to my overall message, so I had to let that go.

There was also more to be said about Dr. Neil Theise's work with the interstitium [see page 6 for an interview with Dr. Theise]. It's a different point of view about the importance of fascia. I wrote that I thought interstitium was a better name than fascia. Interstitium means in-between things, and fascia just means bandage. But that didn't make the second edition either, and continues to draw my attention.

Preparing for this interview, I was looking back through the book and was reminded of all the scientific information I researched to support my own themes. But I haven't retained all that information, so I was learning things just like a reader would.

DM: That must have been fun. Readers of the book will discover that it takes more than just doing exercises to inhabit our bodies differently. It takes curiosity about dynamic balance. Not only are we feeling what's within our body and how it's connected, but we also understand our relationship with the space around us, our relationship to gravity, and the concept of biotensegrity – an organizing principle for human structure.

Just out of curiosity, what is your elevator speech when you tell someone about *Body Mandala*? What is a mandala in this context?

MB: A mandala is a visual representation of universal harmony that is used in Buddhist meditations and other religions (see Figure 1). It symbolizes the search for enlightenment. In the book, your body is the focus of the meditation through which you're cultivating a relaxed, open, and responsive way of being present in your life – an enlightened body. And, as a side effect, you also become more physically balanced and upright. Is that short enough for an elevator ride?

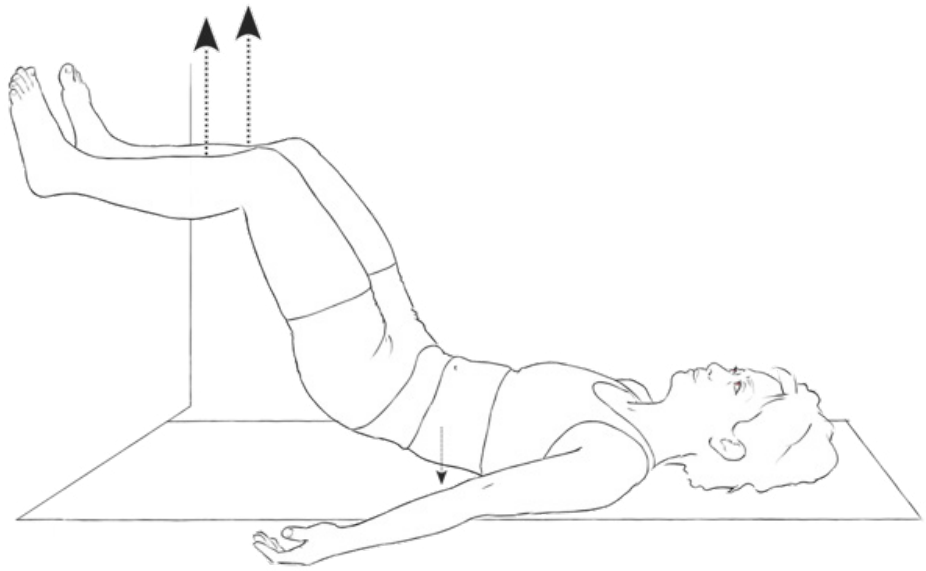
DM: Yes, and beautifully said.

Figure 1: (A) Buddhist mandala made of colored sand in a monastery in Tibet. Image by Achim Schneider / reisezielinfo.de on istockphoto.com. (B) Mandala image from Bond's books, it illustrates the four pathways to Hubert's concept of tonic function, or as Mary thinks of it, healthy presence (personal communication, image courtesy of Mary Bond).

Mary Bond: A mandala is a visual representation of universal harmony that is used in Buddhist meditations and other religions. It symbolizes the search for enlightenment.

MB: And really, you can't maintain a shift if you don't feel it. It's really important that we help our clients to value their sensations.

Figure 2: "Curling into hammock" visual representation with shin vectors. Image courtesy of Mary Bond.



MB: I was surprised when the book first came out, it seemed like most people didn't know what a mandala is.

In the second edition (2023), they changed the title, removed 'Your' and the subtitle became *Posture, Perception, and Presence*. 'Posture' is the hook for the general public because people don't think much about perception. But for me, perception is the real message. Most people are only aware of sensations of pain and extreme pleasure. But our everyday sensations are rich in wisdom. By learning to listen to our body wisdom, we can save ourselves a lot of trouble.

DM: Definitely. When I talk to clients about my work, I emphasize preventative care. When people are able to have a more embodied experience, they can adapt to situations more quickly and often avoid injury, especially overuse injuries. It's very empowering for people to realize they can achieve a perceptual shift through these meditations, which can result in more efficient movement and less discomfort.

MB: And really, you can't maintain a shift if you don't feel it. It's really important that we help our clients to value their sensations.

Movement Explorations

DM: You have a movement exercise called "curling into hammock," which is one of my favorites. You describe reflexive coordination and activation of core stabilization muscles, and that's just not something that you hear about often in traditional strength training. Could you tell us a little more about that?

MB: Sure. First of all, curling into hammock is a variation of what Dr. Rolf

MB: [What] you're doing by practicing that slow, careful, sometimes tedious movement is teaching your body to be bigger and to be able to really operate the way it's meant to operate, in contrast to training at a gym, where we may be getting more compressed by repeating things over and over.

called the pelvic lift. For years I was playing around with the pelvic lift, which I think is poorly named. Nevertheless, that's what we call it and it has to do with integrating the spine with the pelvis and the sacrum.

I found that by putting the feet on the wall, people could get a better sense of that relationship than if the feet are on the floor or on the table. That is what the hammock exercise essentially is (see Figure 2).

To give readers a little context, in 1999 an Australian group headed by Carolyn Richardson came out with a book entitled, *Therapeutic Exercise for Spinal Segmental Stabilization in Low Back Pain*. It was about activating core muscles, and the fitness community got on the bandwagon. Fitness coaches started teaching pain management through strengthening the deep abdominal muscles. But the research was actually indicating that managing low back pain depended on the precise timing of muscle activation. So, it's not about strength per se. It's not about having rock-hard abs.

The hammock exercise makes use of your perception of the space outside of your body by using imaginary vectors into space through specific locations on your body: the feet, the tibial and ischial tuberosities, and the lumbar segments. It's a kind of spatial fantasy that sets you up for what I think of as tensegrity-informed movement.

When your focus is on your perception of space (through those imagined vectors), sensing your body's weight expands your awareness of space inside your body. So, when your body moves through that expanded volume, it changes your timing and your muscles come online as required without your having to think about it. They just do it.

The hammock movement is an invitation to this kind of orchestration rather than a series of solo muscle control coming from your cortical brain. When we invite movement that feels fluid and powerful but not so effortful, it can diminish back pain. But how does it work?

I think that being big, having volume, is a normal state of our bodies that begins to diminish when we go to school and we're made to sit still and to more or less leave our bodies in order to develop our minds. I think it's normal for human movement to be expansive. And when it is, you get that timing phenomenon, which is absent when the body is more compressed. When your body is compressed, you begin to use your thinking brain to manage movement.

MB: I would suggest that for manual therapists to integrate the movement suggestions into their sessions, a necessary step would be to embrace them in their own bodies first.

DM: That compression seems like it might come from the bracing that people do to avoid pain, or for whatever reason, they've adopted this habit. It can really impact expansive movement because they tend to use their larger locomotor muscles for postural stability.

Following your movement cues for the hammock meditation, it's not like I've told some of my muscles to turn off, they just do. Your instructions lead a person only as far as they can support in that moment. It feels like a safe way to allow the smaller postural muscles to participate.

For me, one of the hardest things to access is that reflexive coordination piece, those little postural muscles that haven't been working for so long because they haven't had a chance. I have personal experience with low back pain and the hammock exercise was particularly meaningful.

MB: There's another piece to that, Dorothy. By moving very slowly through the unfolding of the spine, or through the

Figure 3: An example of a movement exercise by Mary Bond. People usually initiate head turning from the face and eyes. Placing hands on the occiput helps them notice that the face can rest and ride along on the head as the neck rotates. This can also improve perception of the space behind the body (personal communication). Image courtesy of Mary Bond.

lifting up, curling upwards of the pelvis in the other direction, all of that feeds our capacity to fully sense what we're doing. It's only by sensing deeply that you can integrate it so that it becomes useful.

So, what you're doing by practicing that slow, careful, sometimes tedious movement is teaching your body to be bigger and to be able to really operate the way it's meant to operate, in contrast to training at a gym, where we may be getting more compressed by repeating things over and over.

Complementing Content with Video

DM: I appreciate that your books include access to videos for the meditations. It is so helpful to see the demonstration. Having a guide makes a huge difference.

MB: Right, thank you. Both *Body Mandala* books (2018, 2023) incorporated video into the book because many people wrote to me after *The New Rules of Posture* (2006), saying they wanted to see what I was talking about. So, that's what I did. I made a DVD called *Heal Your Posture: A 7-Week Workshop* (2016). It can be purchased and streamed on vimeo.com. It's storyline is different from *The New Rules* (2006), but it teaches the same exercises.

In both books the video links are right in the text. Many people are getting the audiobook as well. They read the book, view the movement videos, and can listen to it while doing the explorations. So they are getting more of their senses experiencing the content of the book.

DM: That's an enriched experience. What a good idea to lie down and listen to the book while exploring the movements.

MB: Exactly. Without the audio, you have to stop, pick up the book and read the instructions. That doesn't work as well.

DM: The meditations in your book are super effective, but they do take time, and it takes a commitment to them to create lasting change.

Offering Movement Suggestions for Clients to Take Home

DM: Manual therapists have limited time with clients; we have to keep an eye on the clock. Do you have any thoughts about ways that manual therapists can efficiently integrate this work into their sessions?

MB: Yes, staying on time can be a big problem. We have so much to offer our clients and change takes time, like you said.

My aim in writing *Body Mandala* (2018, 2023) was to share what I had learned from working with French Rolfer Hubert Godard in the 1990s. His work made me aware of my orienting perceptions. That is, the perception of my relationship to the ground and my perception of the objects, the people, and the events in my environment – basically, my spatial awareness.

Orienting is about finding your sense of being safe in the present moment. Unconsciously you ask yourself, "Where am I? What's going on here?" By valuing my perceptions and by gradually expanding my own orienting repertoire, I found more physical ease and confidence, more freedom to express myself. Those seemed like gifts to be shared, hence the book. And this is where the "presence" in the subtitle comes in.

I would suggest that for manual therapists to integrate the movement suggestions into their sessions, a necessary step would be to embrace them in their own bodies first. I haven't found any shortcuts. It takes time. It just does. It can take a long time. But as you're working on it for yourself, you begin to notice other people's orienting tendencies. Or at least the tendencies they bring into the therapy session with them.

Then you can begin to tailor your sessions and the things you say to your clients about movement according to the perception that tends to be underactive in them. For example, if a client is more reliant on the ground to feel safe, you might help them expand their perceptual repertoire by introducing awareness of the space around their bodies.

There's an exercise in chapter three called "moving from the back of your head" (see Figure 3). I actually learned it from Jane Harrington [Rolf Movement Instructor - Emeritus] decades ago, but there it is in the book. Evoking spatial awareness that way could become a recurring theme for that client throughout your work with them.

DM: I use that one a ton, especially when I'm trying to help people with either rotation or general movement at the atlas-occipital joint. I've never had a client who didn't understand it when I explained that most of our life is in front of us. So we all have a really good connection to the space in front of us. The space behind us is often ignored and underused. Guiding people into sensing their occiput and the space behind them can make a big difference, especially for those who have neck and shoulder pain from sitting at a desk all day.

MB: It led to the thought that balancing one's perceptual orientation was a tensegral activity, like the balancing of tension and compression. In the book I called this *perceptual tensegrity*, and the hammock exercise is an example of that.

A tensegrity model is a metaphor for the functional principle of the relationship between compression and tension; between compression elements that push outward and tension elements that pull inwards. So, structural organization is a result of this relationship between in-pulling and out-pushing forces. A structure like that doesn't require gravity to maintain its shape. This was interesting to me. It made me think, "Uh-oh, gravity isn't everything."

Mary Bond

Somatic Education

DM: I want to take a moment to share with our readers how powerful your courses are as well, your way of teaching micromovements is so effective. I know for me, as I embody the work, your instruction made the process much easier for me to teach it to my clients and help them shift into new patterns. I'd love to know if you're planning any classes for practitioners in the future.

MB: It's great to know that it helps you and thanks for the endorsement. Since the COVID-19 quarantine, I've mostly been teaching online workshops, and most of the participants are somatic educators of some stripe or another. They do Tai Chi, Pilates, yoga, or Hanna somatics. There are also people who Google posture and discover me and they show up in my classes too. So, I'm teaching a whole range of people, and maybe a third of them are structural integrators. As a result, I keep my topics fairly broad, but I'm always sticking Dr. Rolf's messages about gravity and fascia in there. Also Godard's sensory approach to teaching movement. That's my real agenda – our work inspired by these two great teachers. I share what seems appropriate for my wide variety of participants. These people are all interested in the body and it's a great opportunity to help everyone understand the importance of gravity. People take from the training what they need. Recordings of all those classes are available on Vimeo. It's easy to get access to watch them (see vimeo.com/marybond/videos). And, lately, I've been repurposing some of those videos for deeper study with small groups.

DM: Yes, I did the pelvis course you offered like that, it was wonderful.

MB: I also do some one-on-one coaching and mentoring online. I love when I get to work with students in real time. It's a challenge for me to organize classes for myself. If someone else does it, I'm happy to teach in person. Last year, there were some classes in Europe and one in Hawaii.

DM: The SFI Journal editor, Lina Amy Hack, showed me the very first issue of this journal, called *The Bulletin of Structural Integration* (Bond 1969). It has an article written by you, "Implications of the Theory of Structural Integration for Movement Therapy." We were wondering what it was like working with Dr. Rolf to publish a movement article in the first issue of this journal.

MB: That paper was an assignment for a course in "Dance Rehabilitation" at UCLA. I must have written it while I was receiving my first Ten Series in 1968. It reminds me of the way I crafted writing assignments back then, piecing together the viewpoints of various authorities but without a central premise of my own. I doubt Dr. Rolf read it beyond the first few paragraphs that introduce her belief that structural integration aimed at 'evolution leading to a greater mankind'. To be honest, it's a bit cringeworthy now, but it does make me appreciate how far I've come as a writer.

2025 Movement Explorations

DM: What kind of movement topics are you exploring these days?

MB: I am playing around with the concept of tensegrity in movement. It's what has emerged from combining tensegrity's relationship between tension and compression and Godard's integrated relationship of spatial and ground orientations.

I've been curious about how biotensegrity as an organizing structural principle influences movement (Martin 2022). Tensegrity incorporates the element of space into structural balance. This is so different from the 'stack of blocks' lining up with gravity that Rolf focused on, even though with her concept of span (renamed palintonicity) she certainly understood that space was involved in integrating structure. And this leads me to Godard's work about the integrative function of balanced space and ground orientations. There are some fruitful correlations to be made in all that, I think.

We orient ourselves before we begin to move, so we can feel stable and safe. A person usually prefers to orient to the ground or to the spatial environment. As a part of movement education, we invite clients to cultivate their underused perception.

That was what I was suggesting earlier. When a ground-oriented person begins to open their perception to their surroundings, that creates a more spacious body. It's more upright, more balanced, and guess what? Better posture and more orchestrated movement.

For more space-oriented people, some tissue may be held upward, so their bodies also become less spacious. For them, learning to embrace the weight of the body as they sense the ground helps promote expansion..

I was musing on all of this as I was developing the book. It led to the thought that balancing one's perceptual orientation was a tensegral activity, like the balancing of tension and compression. In the book I called this *perceptual tensegrity*, and the hammock exercise is an example of that.

When the book was finally done, I forgot all about perceptual tensegrity until a couple of years ago. It's led me to begin a new quest, and this time I really want to understand it and not just journalistically. There is a growing worldwide community of somatic educators and movement teachers also who have become fascinated with fascia and biotensegrity.

Keeping Up with Fascia

DM: Where do you go to get current information about fascia and movement research?

MB: Lately I've been delving into the archive of written and recorded materials on a website you may have heard of – the Fascia Hub – it's an organization out of the UK (see https://thefasciahub.com/who-we-are/about-us for more information). They have a collection of key academics like Dr. Jean Claude Guimberteau, John Sharkey (MSc, clinical anatomist), Joanne Avison (international anatomy instructor), Jaap Van der Wal (PhD, MD), and Stephen Levin (MD).

DM: They are great, I'm also a member. I would recommend their Fascial Heart webinar from a couple of years ago, it was phenomenal.

MB: They're so great, I'm glad you know about it. I'm not very science-minded, so when I'm looking at those research papers, I read them more than once, but it's starting to sink in.

I like starting out with the Fascia Hub website when I want the new information that is becoming available. I also like understanding what impact all this research could have on how we are teaching movement. So, now, I've read a lot of papers and watched some webinars, which leads me to playing around with my own movement. I stick with my explorations enough to see that a real understanding of these subjects pokes holes in much of what we think we know about the body.

For example, that structure is integrated by aligning its weight units, or that movement is achieved by hinges, levers, and pulleys. And the words 'tensegrity' and 'fascia' get tossed around to attract clicks from the search engines. In the marketplace, you see ads for 'tensegrity yoga' and 'fascialites'. I'm not kidding, they are out there.

DM: Wow, okay.

MB: Yup, these are some of the fancy new buzzwords for wholism and body connectivity. I'm a wordsmith, and this bothers me when language is used superficially.

Typically, movement teachers use a tensegrity model to convey the idea of ubiquitous connectivity in the body. But that's a superficial understanding of those models, like my own a couple of years ago. I used to see a one-to-one correspondence between the wooden struts and the bones, and the rubber bands and the soft tissues, fascia. One little tensegrity toy and you've got fascia and tensegrity all summed up.

A tensegrity model is a metaphor for the functional principle of the relationship between compression and tension; between compression elements that push outward and tension elements that pull inwards. So, structural organization is a result of this relationship between in-pulling and out-pushing forces. A structure like that doesn't require gravity to maintain its shape. This was interesting to me. It made me think, "Uh-oh, gravity isn't everything."

DM: It isn't everything, and yet it exists.

MB: Yes, right! When I chew on these topics, my mind goes way back to sixty years ago when anatomists thought of fascia as laboratory waste. Back then, Dr. Rolf understood it as the organ of structure, which is certainly one of its roles.

I think Dr. Rolf must have had her own perceptual experience of fascial continuity because she practiced yoga, and she had experience with osteopathic practitioners in getting help for her own body. I think she felt this. She didn't have access to the present-day research that tells us that it is actually through the fascia that she was feeling what she was feeling. Right?

DM: Absolutely.

MB: Fascia is a bona fide sensory organ. This is very good for us to think about, that the proprioceptive feedback we get from fascia when we have a Rolfing session or a movement session is what makes it sustainable after we've left the office or studio. It's what makes the work, work.

I think it was [Certified Advanced Rolfer] Rosemary Feitis (1937-2018) who said, something to the effect of, *what you feel is what you keep*. From my time taking classes with Dr. Rolf, I think that what she was trying to convey with that visual template of vertical and horizontal lines was that regarding the body as a whole is essential. She was trying to help us to see with that grid, to look beyond the muscles, to see the whole picture. Then, [one of Rolf's students, founder of Aston Kinetics™] Judith Aston observed that the underlying reality of those perpendiculars resulted in spiral motion. For Dr. Rolf, that observation was a little step too far. She liked her verticals and perpendiculars.

I remember in one of my classes with Dr. Rolf, she asked a student named Kalen Hammond to write about tensegrity and Buckminster Fuller. I remember because he had an interesting name, and the paper was so good that it was printed up as a leaflet. I've looked and looked for it, but it's gone. If anybody reading this interview remembers this, please contact me (see https://healyourposture.com/). I would love to see that essay again.

Support Is Relationship

MB: Dr. Rolf also spoke about spatial organization and appropriate tension in the tissues. I have a quote from *Ida Rolf Talks* (1978), may I read it to you?

DM: Oh, please do.

MB: This is from page 181:

"*In a human body, support is not something solid. Support is relationship. Support is a balance of elements that aren't solid at all, elements that are incapable of withstanding the weight that presses down on them, except as they are balanced. Could you translate this balance as tone? I don't know. I don't know what tone is in words, only in experience. I once equated it with span, but I don't know how to define span. When you get span in a body, you get tone; When you get tone, you get span. Span is a spatial thing; tone is physiological. Both words refer to balanced structure in a living body. Both tone and span indicate a readiness to act and respond. And that is the touchstone of a healthy body*."

That sounds like a description of tensegrity to me.

DM: It really seems like she's also speaking of that reflexive coordination that you talked about. That healthy tone is not overprotective, hypertonic. It is the tone that results from the movement, the bare necessities, the amount of tone required to maintain balance and support. As opposed to the typical high tonality of some places in people's bodies and low tonality in other places of the same person.

MB: Yes, exactly. Also, I've learned that fascia is pre-stressed. This state is a characteristic of living tissues, a base level of tone associated with being alive. You don't just have flabby old fascia doing nothing. It's the fabric that's pulling in on the bones while they are pushing out. In structural integration we think so much about releasing fascia. The fitness world talks about releasing fascia in some pretty aggressive ways. There can be places where dehydrated fascia needs to be rehydrated somehow or another. But the end result is not the absence of any tension whatsoever.

DM: This makes me wonder what happens to our tissue during a surgical procedure because that space would lose its pressure balance.

MB: That surgical aspect is how Stephen Levin got into this whole concept of biotensegrity, the tensegrity of living organisms. That is different from tensegrity.

DM: Thinking about all these musings together makes me wonder what is alive for you in your current movement practice? Do these ideas have you moving differently?

MB: Yes. And in exactly what we are talking about, experiencing the body as a tensegrity system. The idea that the structure is maintained by this balance of tension and compression. And that tension is not a bad thing. Stress is not necessarily a bad thing. There's an appropriate degree of stress. And achieving that expansive balance in our bodies gives us support and strength through sharing the load throughout the whole body. Rather than being strong by contracting certain muscles, strength and balance can be found through spaciousness. That really intrigues me.

A favorite book on this whole topic is *Living Biotensegrity: The Interplay of Tension and Compression in the Body* (2022) by Danièle-

Claude Martin. She's a mathematician and a teacher of Tai Chi. She describes how tensegral movement has dynamic spaciousness, resistance, strength, internal support, omnidirectionality, spirality, efficiency, dynamic equilibrium, opposition, optimal recruitment, and what she calls, comfortable self-stress. I love this list. When I watch a dancer's or an athlete's performance that takes my breath away, I think this is what I'm seeing - tensegral motion.

How do we teach that? Not just teach, but release the imbalances that prevent us from finding it? Martin describes her teaching approach in her book, and it seems pretty derivative of Tai Chi. She's very much in favor of very slow movement and a feeling of resistance in the body. As if you're moving through thick air or Jello. It gives you this tension-compression feeling as you move. When I tried out this kind of movement after reading her book, I did feel bigger, more spacious, and fluid. So, that's the kind of thing that I find inspiring these days.

I already mentioned the UK Fascia Hub, another one of their experts is author and yoga instructor Karen Kirkness (2021). Her work is looking at the embryological influences on the shapes of joints and how that dictates spiral motion. Also, she looks at how to teach yoga in a way that honors and respects those characteristics.

As I'm developing my movement practice, part of it is derived from things Ida Rolf taught me. I'm looking to help myself and others restore the expansiveness that we've all lost along the way. Perhaps I'll discover a set of spatial cues that can be applied to any movement practice, and to anything a person does in daily life. Movement as commonplace as rolling over in bed.

I hope that gives you an idea about my tinkering with movement.

DM: Oh, yes. And thank you so much for your time today, for speaking with me and the readers in the printed article. We honor your career as a Rolfer and movement expert.

MB: It has been a pleasure to have this conversation with you, Dorothy.

Mary Bond has a master's degree in dance from University of California, Los Angeles, and trained with Dr. Ida Rolf as a structural integration practitioner. Formerly chair of the movement faculty of the Dr. Ida Rolf Institute® (formerly the Rolf Institute® of Structural Integration), Bond teaches workshops tailored to the needs and interests of various groups such as dancers, Pilates, yoga and fitness instructors, massage therapists and people who sit for a living. Her articles have appeared in numerous health and fitness magazines and she hosts a popular blog at www.healyourposture.com.

Dorothy Miller is a Certified Advanced Rolfer™ living in Bend, Oregon. She is a lifelong learner and is passionate about furthering her understanding of the human body. She loves languages, traveling, hiking, skiing, swimming, and biking. You can reach her directly through her website, www.rolfingconnections.com.

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movement; balance; support; mandala; interstitium; fascia; tensegrity; biotensegrity; reflexive coordination; core stabilization; strength training; perception; presence; prevention; posture; structural integration; Dr. Ida Rolf; Hubert Godard; fascia hub; compression; tension. ■

Can I Get a Witness?

A Healer's Most Needed Skill

Heather L. Cowin

By Heather L. Corwin, MFA, PhD, Clinical Psychologist

ABSTRACT *Author and clinical psychologist Heather L. Corwin explores the concept of witnessing as a crucial skill that she applied in her former career as a Rolfer™, in her current clinical work, and in her personal relationships. Healthcare providers in particular benefit from developing witnessing as a skill, which involves observing, acknowledging, and giving meaning to experiences. Witnessing fosters self-awareness, emotional regulation, and deeper connections with others. Corwin discusses the role of mindfulness, presence, and intention in witnessing, highlighting their significance in therapeutic relationships in particular.*

We make sense of the world by witnessing events and giving meaning to our experiences. This process is most evident in how we engage with others through work and social activities. Structural integration sessions, Rolf Movement® sessions, and embodied therapy sessions work well for clients not only because of the functional gains, it is also because of the relational aspect of the work. We witness.

As healthcare professionals, we hone our awareness of what draws our attention when working with others. Authenticity and integrity can aid in the effectiveness of witnessing, both in our personal lives as well as our professional lives. Having difficult conversations with our clients can be a part of doing a good job; some suggest that we begin this skill by having difficult conversations with ourselves. We must be able to speak about what is happening in the present moment, even if to do so is to introduce a pause. Honesty and awareness in our witnessing, when combined, can enhance our satisfaction in both our personal and professional lives.

As a direct experience of witnessing, I invite you to take a moment to notice where you are right now as you read this. Embedded in this article are some meditative cues to ponder as you reflect on witnessing. Many of these will resemble techniques for becoming present in the moment. What I suggest is that we cultivate this mindful observer while working with our clients or socializing with someone in our personal lives. I invite you to witness the contact your body makes with your seat. Do you feel the support of the chair or sofa? Are you as comfortable as you can be? What adjustments do you want to make? Go into your inner space. What do you notice about your breathing? Is it deep or shallow? Does the rate of your breathing make you feel any kind of way? Stressed? Calm? What is foundational is how *we witness the cues we are taking in and* how *we ascribe meaning to them.*

Image by monkeybusinessinmages on istockphoto.com.

What I suggest is that we cultivate this mindful observer while working with our clients or socializing with someone in our personal lives. I invite you to witness the contact your body makes with your seat. . . . Go into your inner space.

When I witness myself, I find that I am most aware of my breath. If I feel I'm holding my breath at all, this alerts me to the fact that I am likely stressed and may want to find a moment to do a breathing exercise or take a walk. Green space is the reset button I adore the most! When I was a kid, we had a cabin on a lake, and I've never felt so at peace as I have when I was there. I call on this knowledge within myself when I know a person I'm working with requires witnessing of a triggering and difficult event. I combine this knowledge with the memory of unconditional love I experienced with my daughter when she was an infant. This does not mean I think of the person as a baby; I am reminded that triggers dysregulate our nervous system in ways that make emotional regulation challenging. By remaining regulated myself as I witness, I can help the person I am with tolerate the emotions through my nervous system. If I see that the other person is experiencing too much, too fast (such as fast talking, fast breathing, darting eyes, etc.), I can ask for a pause so we can tolerate the pace at which we share the information.

This is what I mean when I ask: Can I get a witness? This article explores the concept of witnessing, provides examples of how I conceptualize this idea, and discusses how we can utilize this skill to achieve balance in our lives as healthcare providers. Witnessing fosters literacy in ourselves and others, which can include vicarious learning, self-awareness that leads to self-acceptance, an understanding of the complexity of situations, and more. These pieces of knowledge can foster powerful connections with ourselves and others. In contrast, dysregulation and overwhelm can occur in all people, and understanding how we enter experiences can help us support our clients as they navigate challenging life terrain. To me, the witnessing skill is a fundamental element of the therapeutic relationship that builds trust, fosters connection, and makes our work so valuable to those who can experience being in a relationship with another person in a healthy dynamic.

Notice in your body what sensations are happening right now as you read this. Pause to take a moment to have a few breath cycles and witness. Words have different intensities depending on our past experiences with them. What did you notice in your system as you read these ideas so far?

In my thirty-two years working with others as a psychologist and as a bodyworker, I would attribute witnessing as a foundation of successful connections. Witnessing is a generous act, and we must be able to balance our needs with those of our clients – or risk being sapped of all our energy. Nobody wants that.

Witnessing is taking note of what is happening, the quality of the moments, impressions of the events, and translating the information into memories. Witnessing can be an overlooked avenue to fostering life satisfaction, which is defined by the American Psychological Association as *the extent to which a person finds life rich, meaningful, full, or of high quality.* Even if we already have the belief that the work we do is a vocation or calling, witnessing can be a powerful way to deepen how we work. Witnessing ourselves can bring

richness to our personal lives at the end of the day, after hours of supporting others. Finding time to reflect on your day can help you find ways to work more effectively, for yourself and your clients.

For me, a necessary step to allow witnessing is to be able to be present, ideally to be able to acknowledge what is true. All my life, I have continued to refine my understanding of what makes life meaningful to me. Witnessing alone can and does provide me with a deeply profound and satisfying engagement with others, personally and professionally.

Witnessing allows me to foster awareness of what I need because the process allows me to slow things down to orient to the situation. A crucial element that supports witnessing actively in my work is accepting people for who they are, unconditionally. I apply the same kind of witnessing to my private life. This includes myself, my family, and when I'm out in public. This is an active practice for me because judgement can show up and get in the way of caring for others or myself. This reaching into the fabric of the moment to determine how I engage is satisfying to me and makes me feel vibrant and empowered.

Grace, Balance, and Presence

Grace is something that I can access through witnessing. Grace is allowing people, including myself, to be messy and human. Humans have imperfect reactions and big feelings. Grace recognizes that the person in front of me is flawed, as I am flawed. As a perfectionist, grace is not a usual first reaction for me; critical judgments can be first. Though being critical can be a helpful skill, it can get in the way of witnessing because witnessing is about chronicling information. Better yet, being able to name what is happening can be a healing way to engage because you are helping another person articulate their experience alongside your own.

In many ways, people in the caring professions engage in the service of witnessing, even if this is not a primary goal. As a young bodyworker, I thought I needed to give all my empathy and kindness to clients to help them facilitate health and well-being. While that might be naïve, I saw this as the key to supporting others. My intention was to offer some relief.

Intention is powerful because it gives context to how we engage.

Throughout my life, but especially in bodywork and psychology education, I was taught that the intention we have in the room is over 90% of the healing process. Intention defines the quality of our relationships. I also learned early on in my career that by giving so much to others, I had little left over for myself: I needed balance to achieve a healthy personal base. This brings me back to the importance of witnessing as a crucial skill.

The cornerstone of balance for witnessing lives in regulation of emotions. How I witness and monitor myself allows me to remain emotionally regulated and present with another person. This is especially important when others become dysregulated. In the same way that a child re-regulates emotions by being near or held by a regulated adult. Also called coregulation, the regulated person can help others traverse emotional landscapes that are triggering by remaining emotionally regulated, so that the triggered person can come back to a place of tolerance while in relationship with the regulated person, coregulating with them.

What have you noticed about your witnessing while reading? How is the state of your nervous system at this moment? Is it revving high? Or are you so relaxed you could have a nap? If you can, take a moment to look around the space you are in. What colors do you see? What sounds fill the space? Are there objects you find pleasant to look at? As you do this, what do you notice about your nervous system state?

To coregulate with another person can be a choice, especially when the relationship is not as the caregiver of a child. As bodyworkers, we are not trained to regulate others' emotions. Nevertheless, we can recognize when a person becomes dysregulated because we will feel a pull at our own nervous system alerting us that something is off. Witnessing offers the opportunity to make choices. We can engage by coregulating with them. We can be nearby to allow the other person to manage their own regulation. We can offer regulation skills like breathing or being in the moment through engaging in senses, or many other options. Each instance of interaction will require consideration, which is best aided by pausing, listening, and witnessing. The old adage is 'time heals all wounds'. Time is a tool that, when used to help a person integrate past injuries or hurts, can be the difference between trauma (an event happening too fast) and resilience (the ability to pivot and adapt in a healthy way).

Balance is best supported when you witness what is happening, identify

Witnessing fosters literacy in ourselves and others, which can include vicarious learning, self-awareness that leads to self-acceptance, an understanding of the complexity of situations, and more. These pieces of knowledge can foster powerful connections with ourselves and others.

Heather Corwin: Grace is something that I can access through witnessing. Grace is allowing people, including myself, to be messy and human. Humans have imperfect reactions and big feelings. (Image by simonapilolla on istockphoto.com.)

options in the moment for yourself perhaps informed by the others in the room, and proceed to honor what you need. To remain able to coregulate others, a person must be able to access resources in the moment, to avoid becoming triggered or dysregulated. Triggered is another way of saying dysregulated and is not the same as having a big feeling. Big feelings can lead to dysregulation. You can hear a moving or disturbing story from another person, have big feelings, and remain emotionally stable without disassociating or having your nervous system activate, going into fight, flight, freeze, or fawn states.

Witnessing is a complicated process that seems deceptively simple. To witness requires being present, attentive, focused, and listening both inwardly and outwardly, and it often demands empathy, sympathy, or compassion. When we witness, we allow our humanity to echo with the experience of others. Carl Rogers, PhD (1902-1987), the American psychologist who created the person-centered humanistic approach, believed that witnessing others without judgment helps people become self-actualized. This means that being with someone as they articulate their experience supports them in a deeper knowing of themselves, which fosters wholeness. I ascribe to this idea. By acknowledging who we are and how we operate, we can find ways to accept ourselves, develop our talents and potential, and evolve into our best selves.

Free to Make a Choice

A recent story about witnessing happened when I was on a cruise with my family, and it was time to disembark. We have a family member who requires assistance, and I was with them in the holding area of the ship where the people requiring assistance were told to wait. Since we were at the end of the cruise, people were tired and cranky. One woman was crankier than most. She did not require assistance, her partner did. She was able bodied and was easily walking over and through the masses to get to the other side of the room where she wanted to be, her partner was not able to do this. She was yelling at him across the room and telling people to make way, saying unkind mutterings under her breath. This embarrassed her partner, who was trying his best to make his way to her while managing a roller suitcase and a few other items either falling off his electric wheelchair or getting in the way for him to move.

A person in my group observed out loud, but quietly to me, that she was a terrible person because she was acting offensively. Through witnessing, I made a choice to assist.

When I got up to help the woman's partner, he was appreciative. I assisted him to cross the room, not because I was trying to teach anyone a lesson, but because I could see this woman was at the end of her rope and this was not going to go well if no one helped. When I got her partner to her, she looked at me, thanked me, and I could see her relief. I recognized her behavior because she does what I do when I'm stressed – get critical.

By witnessing a person act in a way I recognize, I gave some grace and empathy. I chose to do what I could do, which gave a little relief to everyone in that room, including the stressed out, crabby woman. I have learned my life satisfaction is better when I engage this way. This is one example of witnessing another – and I would have been fine had I made the choice to do nothing.

What does your witness notice about you now that you've read my example of witnessing a mildly difficult moment for another person? Has that had an effect on your breathing rate or heart rate? Simply notice what is happening without any attachment to changing it. To witness is to notice what is real.

Making Choices with Clients

When we are in relationship with another person, like when we are being their Rolfer™, we have agreed to work with them to aid them in more functional body mechanics. Strangers do not have an explicit agreement on how to engage. As bodyworkers, it is us who know the steps of doing the work. We have the spoken and unspoken boundaries or limits of how we work with someone. Expertise in witnessing can enable us to say what is true and challenging in a way that is therapeutic and supportive.

For example, when a presenting client has a medical diagnosis that impacts the direct health of their tissues, like diabetes can, you may want to explicitly state how you are going to work with the client in a way that is slower. This may not be a traditional approach, and so you want to acknowledge what is true and different. This might not be something you say out loud, but doing so

can make clear some factors that impact your ability to work together.

Transparency and honesty, even when people are irritated by the truth, tends to build trust. If the person doesn't like that you must adjust how you work because of their body's ability to tolerate the work, agreeing that perhaps the client should not pursue this type of therapy may be the best thing to do for both of you. Rolfing® work is not for everyone. Any given therapy is not for everyone.

A more common bodywork experience might be witnessing a place in the client's body that is not functioning well. We then may decide to work on that area to increase alignment and function. What sometimes gets in the way of our work is when we are told that the area is tender and cannot handle pressure. We observe the client's breakdown of structure and form, which informs how we proceed to approach their body. This approach includes deciding where to focus – on which part of the body, what pressure to apply, and utilizing ways to engage, including movement training. Ida Rolf, PhD (1896-1979), encouraged people to look at the structure from how it is functioning and aligned, in order to give more support where they're able to do so. We are continual problem solvers because we know there are many ways to create support for our clients.

Sometimes there are factors that can impede function that have little to do with physical ability. The shape our body takes as we walk, for instance, will inform our posture. Our posture will be heavily impacted by our idea of what we want (or don't want) to invite into our interactions with others. Let's say a client, a young woman who is self-conscious because she recently developed breasts. The attention she receives focuses on her maturing body, and she feels embarrassment and discomfort. She might curve her shoulders forward and hunch in an effort to ward off attention. Witnessing, noticing, and curiosity work together to help us determine what we do next. If the hunching of the young woman is why she has come to us for physical support, knowing the reason she is hunching, even if unconscious, would be useful. If a pattern is serving a need, the need does not go away. That need can be addressed by changing the way it is served. Our inner witness can have the curiosity to explore why patterns exist and how to better create support, finding more appropriate possibilities.

We cannot save another person. As people seek to give relief to others, the idea of what it is 'to help' another person can be confusing. Trauma fragments how a person engages. We cannot carry the trauma of another. We cannot unload the trauma on the other person. Worse, we can retraumatize the other person if we move too fast when trauma is present in the work we do together. We can, most importantly, *be* with another person.

Follow one inbreath. Follow one outbreath. What has happened in your body, in your system? Now, what sensations do you feel? Allow an accurate impression of this moment to fill your awareness.

What are some things we can do? We can be with them to gently articulate and name some of the moments or feelings that the person recognizes as trauma. Trauma can visit in the moment when you are working together. In other words, if you're working on a person's sternum and they have a memory come up that is triggering, you pause to witness what is happening. How is your client breathing? How are you breathing? Are you feeling your nervous system activation in any way? Are you seeing your client behave in a way that suggests they are not present or tolerating the moment?

Haunting memories or trauma can be acknowledged and supported in tandem with other healthcare professionals. Remember, we are not alone as providers. Have people you can refer clients to in your community. Have people you can call if you have a challenge and seek guidance. Regardless, noticing that the client is not able to be present or is triggered is the clearest way to know it is time to slow down, pause, witness, and orient; all may be useful skills in the moment. Orienting means recognizing and naming what is happening in the moment. By naming what you witness, you and your client can both understand what seems to be true in the present moment, possibly informed by the past.

'The more you know yourself, the more you forgive yourself.'

– attributed to Confucius

There is no 'fix' to trauma. In its core, trauma is an event that happens so quickly that it cannot be integrated into the person's body or experience. To integrate it means to take little pieces of it, therapeutically process it one step at a time, and to titrate bit by bit. Titrating is like the ride of a teeter totter – going back and forth between discomfort (a piece of the memory), and then go into resources (the warm, safe space with a person the client trusts) so that integration of the memory of the trauma can occur, to reduce the trauma. I make this sound easy, but it's not. As a bodyworker, we can stir up trauma at a pace that surprises both the client and the practitioner. Pausing is your best strategy when it comes to trauma states appearing in a session. Invite yourself and your client to come back to being present. Witness together.

When I am engaging as a psychologist with a client, I am practicing my witnessing continuously. This is important because I am monitoring myself to learn more about the landscape the client and I are creating around their experience, and remaining curious to see if we can both tolerate the

My body is my best gauge when it comes to hints about how to proceed in our work together. These witnessing clues are true and apply to both manual therapy and talk therapy.

landscape. If I notice that my heart starts to beat a little faster, I will ask for a pause and check in with the client because my body is letting me know that something is off. If I suddenly can't concentrate, I ask for a pause to listen more to my body's signals and see if I observe any signs in my client that indicate dysregulation. My body is my best gauge when it comes to hints about how to proceed in our work together. These witnessing clues are true and apply to both manual therapy and talk therapy.

If you feel you do not have a connection with your body and your witness, I encourage you to find ways to develop this personal relationship. Some ways to do this include journaling to foster hearing your inner voice, spending time, even as little as five minutes a day, sitting and following your movement impulses. The sensory awareness work of Charlotte Selver (1901-2003) can be an avenue to approach awareness and self-understanding. Movement work like the Feldenkrais Method® examines premovements, which can offer insight into expanding meaning of motion. Silent meditation can expand our relationship with time and thoughts. Visual arts can make conscious what we often leave in the unconscious. Pick the avenues you like to engage in for self-learning and run with that! The best part is there is no wrong answer!

Developing your most important relationship, you with yourself, will make your life better in all other relationships. Your ability to know yourself will give you opportunities to foster balance in all areas of your life.

Aristotle is credited with saying, *Knowing yourself is the beginning of all wisdom*. Witnessing will add depth to our relational moments, both alone and with others, and can foster the much-needed balance in our lives. By expanding how we engage with others, we open ourselves to discovering ways to establish and pursue healthy relationships that offer relief and healing.

Heather L. 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. Currently, Corwin is the director of a mental health and holistic wellness collective, Garden Health Group, and practices as a psychologist in River Forest, Illinois. As an actor for over twenty years and a theatre arts professor at institutions such as Roosevelt University, Ashland University, and Pasadena City College, her research and work examine behavior through the lens of psychology, allowing the flaws of being human to unite us through creative expression. She is an author for a chapter in a book on Psychology and Stanislavski, linking somatic psychology and the Chekhov acting approach. Her book on mental health for actors with Routledge Publishing is due out in 2026. Corwin graduated as a Certified Rolfer; she is also a belly laugher, a talk therapist, married to the love of her life, mom to an energetic teen, and a fan of historical romance. To read more publications and learn more about her, visit GardenHealthGroup.com or HeatherC.com.

Keywords

witnessing; presence; self-awareness; emotional regulation; coregulation; mindfulness; therapeutic relationship; empathy; intention; balance. ■

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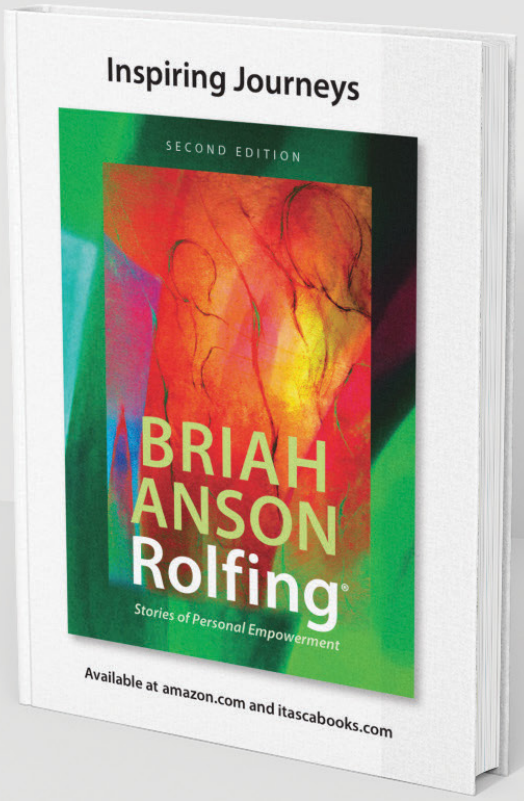

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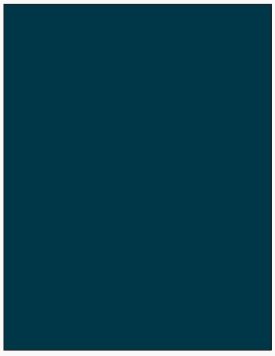

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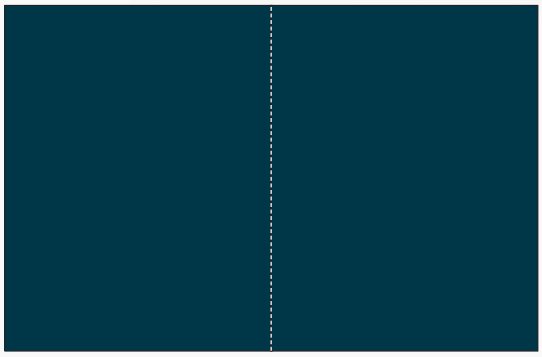

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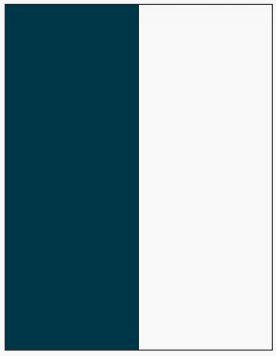

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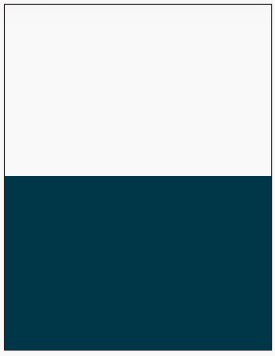

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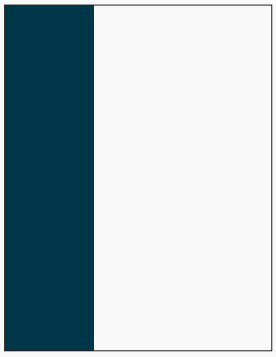

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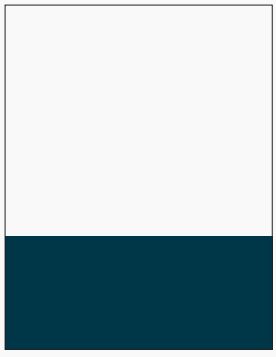

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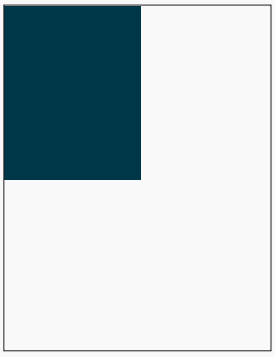

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Rolfing® Structural Integration and the Felt Sense of Being

Alan Richardson

By Alan Richardson, Certified Advanced Rolfer™

ABSTRACT *Rolfer™ and author Alan Richardson explores the intersection between the felt sense of being and Rolfing® Structural Integration, where the work of structural integration promotes embodied presence through hands-on manipulation of the body's structures and integration of the client's sensory experience. His observations of people over the last few decades have led him to wonder if technology has shifted not only people's social engagement styles, but also their bodily awareness, leading to a culture where people feel disconnected from both their bodies and their relationships. Western culture has long considered the mind and body separate, with bodily awareness often resulting in a lack of awareness regarding the nuances of pain, the physical experiences associated with emotions, and a missed opportunity to appreciate the joys of pleasant sensations. Richardson discusses three relationships of embodiment: the relationship a person has with their body, their environment, and gravity. A key element in feeling our body in space is sensing our relationship with gravity.*

"We have learned much about the world by reducing it to its constituent parts. But in the process, we have separated ourselves from our world and, most tragically, from our own bodies as part of that world. As a consequence, we may know what we are made of, but we do not know who we are. We are quite literally knowledgeable, yet out of touch; and we suffer from being out of touch."

– Advanced Rolfing® Instructor Michael Salveson (Maitland 1995, xi).

"We have so little of each other these days, so far from tribe and fire."

– Poet Laureate emeritus Danusha Laméris, in poem *Small Kindnesses* (2019)

The monk Gelong Thubten, author of *The Monk's Guide to Happiness* (2019), did a four-year silent retreat in Scotland between 2005 to 2009, where he received no news about the world outside the monastery. At the end of the retreat he revisited London, United Kingdom, and had the impression of being in an unfamiliar world. Before 2005, Thubten knew only a few people who used BlackBerry devices. By 2009, however, smartphones had become mainstream (McCall 2024).

For many years I have walked from Whole Foods Market in Piccadilly, United Kingdom, to my clinic in Harley Street, and can recall the gradual change in the experience over the years. It used to

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be enjoyable to see the faces of fellow pedestrians walking in the opposite direction along the bustling Carnaby Street, their heads up, making eye contact. Now, however, almost everyone is so absorbed in their phone, staring at those little screens, that they don't see me. I frequently have to side-step to avoid a collision. In many situations, human connection has been replaced by compulsive, dopamine-driven engagement with our electronic devices.

The digital age began in the 1970s with personal computers like the Altair 8800 designed in 1974, the Apple II computer was produced from 1977 to 1993, and the IBC PC that was first released on the market in 1981, making computing accessible beyond large institutions. It accelerated significantly after 1995 with the widespread adoption of the internet and has profoundly reshaped human behavior since the introduction of the iPhone in 2007, the iPad in 2010, and the subsequent rise of social media. The ubiquitous use of screens as a means to connect with each other has largely replaced face-to-face interactions, once the cornerstone of human connection. The rise of asynchronous communication through messaging and email, along with the formation of online communities and virtual relationships, has further displaced social engagement based on physical proximity.

Our compulsion to interact with our phones hijacks the neurological self-regulation we naturally receive from human-to-human social engagement through facial expressions, the nuanced timing of conversation, the unconscious reading of body language, and the entrainment of nervous systems. Instead, we sit for hours while our minds engage in digital dialogue, or else repeatedly break contact with the people around us by obsessively checking our phones or Apple watches. Indeed, many people now seem more comfortable expressing themselves through text messages and images rather than face-to-face interactions. The comparison culture of Instagram and TikTok has given rise to new forms of social anxiety. On a physical level, constant device use also leads to neck and shoulder tension from prolonged hunching and wrist pain from scrolling.

Additionally, modern capitalist societies prioritize intellectual achievements and abstract reasoning over physical labor, a tendency reflected in the school system's focus on career preparedness at the expense of bodily awareness and emotional intelligence. This reinforces a cultural disconnection from the body, where the mind is seen as the primary tool for success, and the body is relegated to a passive or secondary role. I see many people when I am out walking, and also including my clients, who remind me of myself before I experienced Rolfing® Structural Integration – primarily identifying with their minds and largely unaware of the nuances of sensory experience. It is as if they are using their rational intelligence to suppress their emotional and kinesthetic intelligence.

It seems that we are easily distracted from feeling connected to our physical being. Is it inevitable that we human beings, with our highly developed neocortex, have a conflict between mind and body? Is this primarily due to the internet and smartphones? Or is the digital age just the latest iteration of humanity's ongoing struggle to remain in touch with the felt sense of being?

We know that Rolfing Structural Integration delivers on its promise – enhancing the integration of the human structure by improving the adaptability and mutual support of the myofascial system. But can it also help people achieve greater mind-body integration, fostering a deeper sense of embodiment? What exactly is embodiment? And what are its benefits?

Embodiment

"One of the clearest lessons from neuroscience is that our sense of ourselves is anchored in a vital connection with our bodies."

– Boston-based psychiatrist, Bessel van der Kolk, MD (2014, 326).

"'Embodiment' is a personal-evolutionary solution to the tyranny of the yapping 'monkey mind'. One that paradoxically allows instinct and reason to be held together, fused in joyful participation and flow."

– Developer of Somatic Experiencing®, Peter Levine, PhD (2010, 287).

In mindfulness, movement studies, and philosophy, embodiment carries a meaning that goes beyond a standard

By enhancing embodiment, Rolfing® Structural Integration not only improves posture and movement but also nurtures a profound sense of connection to oneself and the world.

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dictionary definition of one that *embodies* something, that is, to represent in human form (Merriam-Webster.com 2025). Karden Rabin's definition from the Trauma Research Foundation provides a more nuanced perspective (2022, online): *"The act of expanding one's self awareness to include the felt experience of the body, such as sensory, sensational, emotional and physical experiences, and incorporating that information into one's overall conception and conduct of themselves, their identity, beliefs, behaviors, and ways of being."*

Rabin's definition was inspired by a few others, like this quote by Ann Saffi Biasetti (Rabin 2022, online): *"Embodiment can be simply defined as living informed through the sense of experience of the body."*

When was the last time you enjoyed the sensations in your feet as you walk, felt the weight of your body relaxing into a chair, noticed your breath change with an emotion, or paid attention to how your muscles respond to stress? Has our present bodily awareness been diminished by the allure of the virtual world? We humans have the tendency to suppress emotions against our better interests, especially in order to conform to social expectations. Peter Levine has shown how autonomic discharge in the form of shaking, moving, or emotional expression, such as crying, is a healthy response immediately after coming out of the immobility phase of a trauma (2010). Animals do this naturally; they reorient themselves to the environment, shake off the undischarged energy pent up in the traumatic event, and return to a normal breathing pattern. Yet the adolescent boy who misjudges the timing of his rugby tackle and receives a bone-crunching impact through his shoulder and spine is not going to lie down and cry until his breathing returns to normal. He is motivated by peer pressure to get up and keep participating in the rugby game for fear of being judged as weak. His choice may come at the cost of a physical unease that may persist for years after the traumatic event.

Ultimately, we all have a choice in how much value and attention we give to the somatic aspect of our being. In order to fully appreciate the value of doing this, it first helps to understand the philosophical and cultural roots that have contributed to the modern trend of being primarily mind-identified.

Our Cartesian Inheritance

Western culture's tendency to prioritize the mind over the body has deep philosophical roots. The ancient Greek philosopher, Plato (427-348 BCE), had the notion of *soma sema* (the body as a tomb for the soul), and his belief that bodily desires obstruct wisdom laid the groundwork for a lasting dualism. Plato elaborates on this concept in *Phaedo*, a widely read dialogue between Plato and his teacher, Socrates (469-399 BCE) (Connolly 2025). The dialogue is a dramatization of the day Socrates was executed, where Socrates transforms death itself into a philosophical demonstration of soma sema. The body is seen as a hindrance in the soul's aspiration for truth and wisdom:

" . . . the body fills us with passions and desires and fears, and all sorts of fancies and foolishness, so that, as they say, it really and truly makes it impossible for us to think at all." (Plato Translated by Harold North Fowler 1966, online).

Early Christian thinkers, including Paul and Augustine, reinforced this hierarchy, associating the body with temptation and the soul with moral enlightenment. Medieval ascetic practices, such as fasting and self-denial, which emphasized detachment from the world and physical hardship as a path to spiritual purification, further deepened this divide.[1]

The foundational insight of Descartes – *I think, therefore I am* – is often referred to as 'the cogito'. It first appeared in French as – *Je pense, donc je suis* – in *Discours de la Méthode Pour Bien Conduire sa Raison, et Chercher la Vérité dans les Sciences* (1637), and later in *Principia Philosophiae* (1644) in its Latin form – *cogito, ergo sum*. The cogito emerged from Descartes' method of radical skepticism, where he systematically doubted everything that could be questioned: sensory perceptions, the physical world, and even mathematical truths. Ultimately, he realized that the one thing he could not doubt was his act of thinking. From this, he concluded that thinking itself was undeniable proof of his existence.

Descartes conceptualized the mind as *res cogitans*, the thinking substance, immaterial and focused on reason. In contrast with the body being material, spatial, and governed by mechanical laws, the *res extensa*, the extended substance. This was a pivotal moment in Western thought, reinforcing psychological detachment from the body by elevating reason and cognition as the essence of selfhood while relegating bodily experience to a secondary role.

Descartes' separation of the mind and body, known as the Cartesian split, led to a cultural shift in which the body was treated as an object to be controlled rather than an integral part of selfhood. This division fueled mechanistic reductionism, framing human experience in purely

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physical terms. In *The Concept of Mind* (1949), Gilbert Ryle critiqued this view as the 'ghost in the machine', arguing that it fragmented selfhood by isolating the mind from the body. The Cartesian perspective shaped the biomedical model of health, which treats the body as a machine to be repaired through medical interventions, often neglecting the psychosocial dimensions of healing (Richardson 2024).

The Downside of Disembodiment

"He lived a little distance from his body, regarding his own acts with doubtful side glances."

– Irish novelist and poet, James Joyce (1882-1941), in *Dubliners* (2019, 61).

The consequences of mind-body disconnection are numerous. Failing to notice early signs of physical discomfort or stress can lead to chronic pain, tension, repetitive strain injury, or postural issues, especially for those who spend long hours sitting at a computer.

Lack of somatic awareness also makes it harder to recognize how emotions manifest physically, such as chest tightness during sadness or a fluttering stomach when excited. This disconnect can lead to emotional suppression or overwhelm, as unprocessed feelings linger outside conscious awareness, heightening stress and making emotional regulation more difficult.

Furthermore, because trauma is often stored in the body, somatic disconnection can hinder the ability to process emotions and heal, reinforcing cycles of tension and dysregulation. As Bessel van der Kolk notes, "Physical self-awareness is the first step in releasing the tyranny of the past" (2014, 119). Over time, ignoring bodily signals may contribute to chronic stress and emotional exhaustion.

Disembodiment also leads to overthinking, rumination, and distraction while dulling the ability to fully appreciate sensory pleasures – such as the scent of flowers, the taste of food, or birdsong – key sources of joy and presence. Additionally, it can shift focus toward external appearances and societal standards, reinforcing negative self-image and a sense of inadequacy, a trend intensified by social media's culture of comparison.

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It is helpful to consider three aspects of embodiment that can be viewed as three relationships: the relationship between the person and their body, the person and their surrounding environment, and the person and gravity. (Image by BartekSzewczyk on istockphoto.com.)

Rolfing Embodiment and the Three Relationships

"Caminante, no hay camino, se hace camino al andar."

(Traveler, there is no road; you make your own path as you walk.)

– Spanish poet Antonio Machado (1875-1939), from poem (translated title) *Proverbs and Songs* (2004, 345).

In order to explore how undergoing Rolfing sessions can deepen a sense of personal embodiment, it is helpful to consider three aspects of embodiment that can be viewed as three relationships: the relationship between the person and their body, the person and their surrounding environment, and the person and gravity.

By the end of the Ten Series, they not only appear more structurally integrated but also feel a deeper, more authentic connection to themselves – a hallmark of true embodiment, where the body becomes not just a mechanical entity, but a living, breathing expression of who they are.

Relationship Between the Person and Their Body

"To me, the most important thing is not a specific Rolfing hour; it's the progression from hour to hour. It's the way you prepare in the second hour for the third hour so that you can get the results of the third hour" (Rolf 1990, 159).

The legacy of the Cartesian split has led many to identify primarily with their minds, treating the body as a machine to be controlled rather than an integral part of selfhood. While any skilled touch can momentarily heighten bodily awareness, lasting change requires a deeper shift in one's relationship with the body. The structured sequence of the Rolfing® Ten Series facilitates this transformation, progressively enhancing sensory awareness and integration.

The first two sessions lay the foundation for embodiment by focusing on breath and the feet – two key aspects of bodily awareness. Many clients, unaware of their habitual breathing restrictions, are surprised by the newly experienced ease in their breath. Some are motivated to maintain a daily mindful breathing practice throughout the Ten Series and beyond. Likewise, attention to the feet strengthens a sense of connection to the ground, helping clients shift from a head-dominated focus to a more holistic sense of being.

As the Ten Series progresses, each session expands awareness of different body regions, allowing for the release of chronic tension and the discovery of a more fluid, connected way of moving. Clients often describe sensations of greater length, spaciousness, and ease, subtle yet profound shifts that redefine their relationship with their bodies. By the end of the Ten Series, they not only appear more structurally integrated but also feel a deeper, more authentic connection to themselves – a hallmark of true embodiment, where the body becomes not just a mechanical entity, but a living, breathing expression of who they are.

2. Relationship Between the Person and Their Surrounding Environment

"The world offers itself to your imagination,

calls to you like the wild geese, harsh and exciting –

over and over announcing your place in the family of things."

– American poet, Mary Oliver, in *Wild Geese* (1986, 1).

As the Rolfing Ten Series enhances internal body awareness, it simultaneously deepens one's connection with the surrounding space. A fuller breath expands spatial perception, while more responsive feet create a stronger sense of support from the ground. Over time, this heightened awareness transforms not just movement but the way one interacts with the environment.

French Rolfer™, movement expert, author, and scholar, Hubert Godard highlights this shift, noting, "When you change something in the body, the concrete body of somebody, you change his or her way of perceiving space" (McHose 2006, 31). Godard teaches the notion, *I am in the space and the space is in me*, reflecting the idea that our relationship with the world shapes how we perceive it.

Hubert Godard uses the words 'topos' and 'space' to refer to the environment surrounding an individual person (McHose 2009). *Topos* represents the object, the external environment that exists independently of perception. It is the measurable, geographical reality that all beings exist in, regardless of how they experience it. Godard uses the term *space* when he talks about "the imaginary building of our relationship to the world" (McHose 2009, 29). To illustrate Godard's concepts of topos and space, imagine two people walking through a busy London, UK street: a confident local and a first-time visitor. While the topos – pavement, buildings, and traffic – remains the same for both people, their perception of space differs. The Londoner moves fluidly, adjusting their pace and weaving effortlessly through the crowd. In contrast, the tourist feels disoriented, their sense of space fragmented, overwhelmed by the fast pace of the city.

Interestingly, the notions of topos and space are similar to the idea of *umwelt* and *umgebung* in the work of Baltic German-biologist Jakob von Uexküll (1864-1944). While umwelt refers to the subjective world as experienced by an organism – its unique perception and interaction with its environment – umgebung is the objective, external environment, akin to topos. The interplay between these concepts highlights the contrast between objective reality and our individual experience of it.

American neuroscientist, author, and science communicator David M. Eagleman, PhD, discusses umwelt and umgebung in *Incognito: The Secret Lives of the Brain* (2011), noting that, "Reality is far more subjective than is commonly supposed. Instead of reality being passively recorded by the brain, it is actively constructed by it" (82).

Our perception of space is subjective, influenced by our history and life associations. Someone who has always felt compressed might suddenly experience a sense of openness, not only within their body but also in the space around them. Similarly, a person with habitually raised shoulders might feel greater ease when they are supported to allow them to rest down on the rib cage, alongside a shift in how they occupy space in social settings.

Rolf Movement® education reinforces this by exploring how posture and imagination shape spatial perception. Clients discover how shifting attention – such as engaging peripheral vision or sensing the space behind them – can transform their movement quality and overall presence. Attention has its own power, as British psychiatrist, philosopher, neuroscientist, and author Iain McGilchrist points out:

"*The kind of attention we bring to bear on the world changes the nature of the world we attend to . . . Attention changes what kind of thing comes into being for us. . . . Attention also changes who we are, we who are doing the attending*" (2009, 28).

Simple somatic explorations take on a phenomenological depth, with imaginative spatial cues offering powerful insights. For example, a client might explore movement as if passing through water or honey, or evoke the scent of pleasant aromas to alter their sensory experience. These metaphors aren't just poetic; they immediately reorganize coordinative patterns and create new possibilities for embodied expression.

Rolf Movement® Instructor, Kevin Frank, expands on these ideas by emphasizing that movement is not simply about posture or structure but about the relationship between *body schema* and *body image* (2008). Body schema refers to the unconscious, automatic coordination of movement, allowing the body to respond fluidly to external stimuli without conscious effort. Body schema is synonymous with what Frank calls the *movement brain*. When the body schema is allowed to function optimally, movement becomes more natural, adaptable, and responsive to the environment.

In contrast, body image refers to the conscious perception of one's body, shaped by personal history, emotions, and social influences. When overly dominant, body image can override body schema, leading to excessive conscious control, tension, and movement patterns that feel awkward or unnatural.[2]

Frank describes the body as a movement system, responding dynamically to gravitational forces, spatial orientation, and sensory input. Rather than seeing the body as something to be mechanically adjusted, Frank highlights the importance of working with the nervous system's innate intelligence to refine coordination and balance. His approach emphasizes that embodiment extends beyond internal awareness to encompass the dynamic interplay between perception, movement, and engagement with the external world.

Frank emphasizes that coordinative change is not achieved through rigid formulas but by refining the body's perception of itself in space. He outlines several ways to enhance this process, which he refers to as *portals to the movement brain*. These include sensing weight and spatial orientation, engaging with imagined vectors, and using peripheral gaze to enhance inter-sensorial awareness. Tuning into the articulation of bones, sensing micromovements in the joints, cultivating haptic awareness through the hands and feet, and shifting weight and spatial orientation through guided attention, all serve as powerful tools for reining body schema – allowing

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it to bypass the conscious control and tension imposed by body image.

Additionally, introducing subtle challenges, such as a new demand or a slight acceleration in movement, can elicit deeper integration. By incorporating these strategies, practitioners create conditions where the body schema can reorganize itself naturally, facilitating greater ease, stability, and adaptability.

Through this process, embodiment moves beyond internal focus. It becomes an active, dynamic relationship with the world, where movement is no longer effortful but fluid, responsive, and deeply integrated with the surrounding space.

3. Relationship Between the Person and Gravity

"[In] order for a living body to be at ease in its spatial environment on earth [sic] gravity must be able to deal positively with it" (Rolf 1990, 35).

"Lines in a body are not mystical structures; they are where forces balance" (Rolf 1990, 104).

Dr. Rolf was known for saying – *Gravity is the therapist* – emphasizing that when the body is well-organized, gravity becomes a supportive force rather than a compressive burden.

"*Rolfers make a life study of relating bodies and their fields to the earth and its gravity field, and we so organize the body that the gravity field can reinforce the body's energy field. This is our primary concept*" (Rolf 1990, 86).

The myofascial system functions as a tensegrity structure, where balanced tension and compression allow for efficient movement. Instead of resisting gravity, an integrated body learns to work with it, creating a sensation of both grounding and lift. Rolfing Structural Integration enhances this relationship by reorganizing the body's structure so that gravitational force flows through it efficiently. As chronic holding patterns release, movement becomes more fluid and effortless. Mechanoreceptors in the fascia adjust muscle tone in response, refining posture and coordination. Dr. Rolf described this optimal state as "zero

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balance" – a sense of weightlessness and ease in movement (Rolf 1990, 54).

From a phenomenological perspective, emphasizing the lived experience of the individual, gravity is not just an external force but something we live through. Godard notes that habitual tension can create unnecessary resistance to gravity, distorting both movement and perception of space. By restoring efficient support, Rolfing Structural Integration transforms one's felt sense of being, allowing for a more natural, responsive, and embodied way of moving through the world.

Phenomenology and Gravity

As explained at the beginning of this article, the mind-body divide, exemplified by Descartes, has shaped Western thought throughout cultural history. Phenomenology arose as a direct challenge to this dualism, arguing that mind and body are not separate entities but deeply intertwined. The French phenomenological philosopher Maurice Merleau-Ponty (1908-1961) proposed that perception is always embodied; rather than simply *having* a body, we *are* our body, continuously engaging with and being shaped by our surroundings.

"*Truth does not 'inhabit' only 'the inner man', or more accurately, there is no inner man, man is in the world, and only in the world does he know himself*" (Merleau-Ponty 1962, xii).

This perspective resonates with Dr. Rolf's approach, which sees posture and movement not as isolated mechanical adjustments but as integral to how we experience both ourselves and the world.

"[A] man's emotional state may be seen as the projection of his structural imbalances" (Rolf 1989, 17).

When German philosopher Martin Heidegger (1889-1976), another key figure in phenomenology, speaks of 'thrownness' (*Geworfenheit* in German) in *Being and Time* (1927), he describes how human existence is situated within a world we did not choose, influenced by conditions that precede and define our experience. This concept can be understood not just existentially, but also quite literally, in terms of being 'thrown' into a gravitational field – a force that conditions our every action, movement, and way of being in space.

From a phenomenological perspective, gravity is not just an external force acting upon us; it is something we live through and experience in our posture, gait, and proprioception. Our relationship with gravity is deeply pre-reflective, meaning we do not consciously think about it, yet it profoundly shapes our kinesthetic sense, our felt relationship to space, and even our sense of self.

Tonic Function and Gravity

Dr. Rolf's work, structural integration, laid the foundation for understanding how the human body can be optimally aligned within the gravitational field. Building on this, Hubert Godard's tonic function model explores how postural and movement patterns, shaped by history and perception, either create unnecessary resistance to gravity or allow for effortless support.

Tonic function refers to the body's ability to maintain postural support and readiness for movement through the continuous, low-level activation of muscles. In the article, *Basic Concepts in the Theory of Hubert Godard* (Newton 1995), Rolf Movement Instructor Aline Newton describes it as the body's fundamental capacity to organize itself in relation to gravity – a process governed by the nervous system's ability to regulate muscle tone efficiently. This tonic function ensures stability and ease without excessive effort by selectively inhibiting muscles that do not need to be engaged.

"*Like the air around us, our relationship with gravity is so basic, so fundamental, that we rarely think of it. Yet it underlines – sets the tone for – every one of our actions and behaviors*" (Newton 1995, 34).

This balance allows for smooth, effortless movement and postural support without unnecessary tension. However, tonic function extends beyond mechanical postural control – it is deeply interconnected with psychological development, expression, and communication. As Newton explains, it involves an entire system that coordinates our interaction with gravity, including the brain, nerve pathways, fascia, muscle spindles, and tonic muscles. She emphasizes that tonic function cannot be understood purely through biomechanics, as it is shaped by subjective experience, perception, and early developmental patterns formed through infant-mother relationships. Operating below conscious awareness, this system underlies all movement and expression, fundamentally shaping how we engage with our environment.

When functioning optimally, the body responds to gravity with natural efficiency, distributing effort without unnecessary strain. However, stress, injury, or habitual misuse can lead to compensatory patterns where certain muscles remain chronically contracted while others become underactive, disrupting the self-regulating nature of tonic function. This misalignment causes the body to misinterpret its gravitational environment, creating unnecessary muscular effort to resist a force that could instead support it.

To restore optimal muscle tone, dysfunctional inhibition must first be released, freeing the body from excessive muscular tension that disrupts efficient movement. This process allows the nervous system to reset and restore proper postural support, enabling the body to rely on its intrinsic stabilizing systems rather than overusing movement-focused muscles.[3]

Dr. Rolf's Legacy

"*And those who were seen dancing were thought to be insane by those who could not hear the music."*

– unknown author, often attributed to Friedrich Nietzsche.

The genius of Dr. Rolf lies in her recognition that our relationship with gravity is not fixed, but can be fundamentally reorganized. This reorganization goes far deeper than simple postural adjustment. It transforms our basic mode of inhabiting space and relating to the ground beneath us.

In essence, both Rolf's and Godard's approaches seek to transform our fundamental *thrownness* into gravity – not by resisting it – but by learning to move in harmony with it. That is to 'dance' with it, allowing the body to find greater freedom, adaptability, and responsiveness. The Rolfing Ten Series is not merely a biomechanical adjustment for our vertical alignment; it is a process

of reshaping how we inhabit our own embodiment within gravity's embrace. This refined partnership with gravity unlocks deeper relaxation, fluidity of movement, and a more expansive sense of presence in the world.

In our modern world, where mental activity dominates and technology increasingly disconnects us from our physical selves, Rolfing Structural Integration stands alongside many other valuable somatic practices that help restore our embodied awareness. Methods such as yoga, Tai Chi, and other mindful movement disciplines each offer effective pathways back to bodily presence and refined sensory awareness. These embodiment practices, though varied in approach, share a common emphasis on physical awareness and serve as essential bridges restoring our connection to the lived experience of our bodies. Through movement, breath, and conscious attention, they offer powerful counterbalances to the mind-body disconnect in today's world.

Whether through the systematic manual therapy of structural integration and movement re-education offered by Rolfing sessions, the mindful postures and breathwork of yoga, and the meditative fluidity of Tai Chi, these kinds of practices cultivate deeper self-awareness and flourishing. Flourishing – the state of thriving physically, mentally, and emotionally – emerges when we fully connect with our body, embracing embodiment through movement, awareness, and presence. By reconnecting with the body's innate intelligence, these practices encourage a sense of grounding, vitality, and harmony, allowing us to experience the weight of our bones, the rhythm of our breath, and the energy that animates us.

Through Rolfing Structural Integration, in particular, with its unique focus on fascial release and tonic organization in gravity, we refine our movement patterns, improve our capacity to adapt to ever-changing physical circumstances and challenges, release unnecessary tension, restore natural alignment, and improve contralateral spinal function in walking, enabling us to move with greater ease within the gravitational field (Haaland 2022). By enhancing embodiment, Rolfing Structural Integration not only improves posture and movement but also nurtures a profound sense of connection to oneself and the world.

By addressing both structural patterns and somatic awareness, Rolfing Structural Integration serves as a bridge between mechanical efficiency and lived experience, helping individuals rediscover the felt sense of being: their body's inherent wisdom and potential for integrated movement.

Endnotes

1. It's worth noting, however, that while these developments were influential in shaping a cultural tendency to privilege the mind and spirit over bodily experience in Western culture, Christianity also contains doctrines, such as the incarnation (the belief that God took on human flesh in the person of Jesus Christ) and resurrection, that affirm the intrinsic goodness and enduring value of the body. Nevertheless, these developments continue to shape Western thought, sustaining a dualistic framework that persists today.

2. A practical example of *body schema* in a golf swing is when you step up to the ball and take your shot. As you position yourself, your body automatically adjusts the angle of your feet, the alignment of your hips, and the grip on the club, all without conscious thought. Your arms and shoulders begin to move in sync with the rest of your body as you start the backswing. The muscles in your torso engage at just the right time, coordinating your posture and balance while your legs adjust to maintain stability. As you come down through the swing, your body automatically adjusts your follow-through, maintaining fluidity and balance throughout the movement. This seamless coordination happens because your body schema continuously processes spatial and sensory information, allowing for fluid, unconscious movement adaptation. On the other hand, if you take the swing with *body image* at the forefront of your mind, you might begin to overanalyze each part of the movement. You might consciously adjust your stance, double-check your grip, and focus on each muscle's engagement, which can disrupt the natural flow of your swing. As you start the backswing, you may tense up, worrying about whether your posture is correct or if you're using enough force. Your legs might feel stiff, and your arms may lack the fluidity they need, resulting in a clumsy or disjointed motion. Instead of feeling the natural rhythm of the swing, your attention is split, making your movements less coordinated and more forced, which can ultimately affect the quality of your shot.

3. Inhibiting the inhibition, in the lexicon of tonic function theory, refers to restoring natural postural support by releasing unnecessary muscle tension. In other words, inhibiting the dysfunctional inhibition to efficient, effortless posture and movement.

Alan Richardson is a Certified Advanced Rolfer™ and Rolf Movement® Practitioner with a private practice in London, UK since 1998. He is also qualified as a craniosacral therapist. Richardson is passionate about knowing other cultures and languages, having lived in Japan, Taiwan, Australia, and Brazil.

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Rolfing Structural Integration; felt sense; embodiment; fascia; smartphones; social engagement; body awareness; embodiment; integration; self awareness; felt experience; philosophy; culture; mind; body; Plato; Descartes; Ida Rolf; Hubert Godard; Kevin Frank; body schema; body image; phenomenology; gravity. ■

The Memory Palace of Bones: Exploring Embodiment Through the Skeletal System

by David Lauterstein and Jeff Rockwell (2023, Handspring Publishing)

Reviewed by Tristan Koepke, MFA, Certified Rolfer™

The Memory Palace of Bones (2023) by David Lauterstein and Jeff Rockwell is a captivating exploration at the intersection of embodied anatomy, poetry, physical memory, and somatic practice. While many bodywork texts in recent years have shed light on the beauty and wonder of soft connective tissue, this book, aimed primarily at both students and practitioners of manual therapies, offers new inquiries into the roles bones play in embodied memory and histories. Lauterstein, a prolific bodyworker with a focus on Zero Balancing and massage, and Rockwell, a chiropractor and self-proclaimed somatic poet, leverage a combination of theoretical, metaphysical, historical, and practical insights, acknowledging the inherent wisdom within the skeletal structure. Early in the book, Lauterstein introduces the concept of the "memory palace" – a cognitive tool traditionally used for mnemonic purposes – as a metaphor for understanding our body's own history and insight. Lauterstein and Rockwell adapt the memory palace concept to the somatic realm, suggesting that the body, and more specifically the bones, store deep-seated joys, traumas, and emotional and cultural imprints.

Despite being a relatively small book, Lauterstein and Rockwell pack a lot into it. They divide each of their twenty-four chapters into three parts. The first two include an essay from each author. They summarize, reflect upon, and theorize about a segment of the body (such as the foot) or a specific bone (such as the sphenoid). The authors reference their own embodied experience and expertise, as well as key ideas from both modern and traditional bodywork and healthcare practices, including Rolfing® Structural Integration, osteopathy, craniosacral therapy, and somatic psychology, while providing accessible explanations for a general audience. Additionally, Lauterstein and Rockwell prove themselves to be extremely well-read across a broad range of creative and philosophical traditions while relating their topics to cultural and spiritual practices.

The third and final section of each chapter provides a co-authored embodiment exercise for each area of the body discussed. These exercises focus on developing an intuitive, felt sense of the body's structure, with particular emphasis on the bones. None of these exercises will feel revolutionary to readers with experience in Rolf Movement® or a similar somatic tradition, especially since many somatic practices (such as Franklin Method®) already use bone-specific anatomical cueing. However, these exercises will be helpful for any practitioner new to incorporating movement into their therapeutic approaches or for any student hoping to integrate more sensation-based, embodied inquiries into their everyday life.

Furthermore, including these embodiment exercises in the book provides a critical gesture towards one of the book's most significant contributions to the field: its emphasis on leveling the importance between theoretical and phenomenological somatic experience. While the idea that trauma can be stored in the body is not new, *The Memory*

Palace of Bones (2023) brings a focus to the skeletal system in a way that seems fresh and grounded. Lauterstein and Rockwell's methodology – their collaging of scientific study with poetry, art, and phenomenology – although also not new, is exciting and relevant, and reminds me of Katherine McKittrick's Black methodology (as discussed in her beautiful book, *Dear Science and Other Stories,* 2021). Both Lauterstein and Rockwell take on their embodied topics with a playful and inclusive tone, utilizing references across a wide range, from popular culture to religious traditions, with ease. They also strive for cultural humility in their discussions, which they mostly achieve.

However, *The Memory Palace of Bones* (2023) is not without its limitations. Lauterstein and Rockwell assume a certain level of familiarity with anatomical terminology and therapeutic practices they discuss, which may present a challenge for readers without a solid background in anatomy or manual therapies. While the authors do an admirable job of breaking down complex concepts, some sections may feel dense for those unfamiliar with somatic practices. Furthermore, the book's theoretical discussions, while informative, sometimes skirt the edges of scientific evidence, making certain claims about the emotional properties or symptomatology of bones and their relationships or dysfunctions difficult to fully substantiate from a purely empirical standpoint. While the authors do cite research frequently, it is sometimes outdated (such as a 1978 study on mechanical tension in the upper cervical vertebrae). Other times, the sources are missing completely, as in a chapter discussing the lumbar vertebrae. Rockwell mentions Adverse Childhood Experiences (ACEs) as a primary cause of lower back pain (LBP); Lauterstein vaguely mentions research indicating first lumbar instability as a leading cause of such pain. As poems and literary excerpts are so crisply cited throughout the book, the uncited sources stick out like a sore thumb.

These minor drawbacks can be overcome by any reader who invites their sense of wonder to triumph over their skepticism. *The Memory Palace of Bones* (2023) makes an important contribution to both the fields of bodywork and somatics. I believe it also promotes a rich way for students of various disciplines to learn and understand the body, and as such, I look forward to including it as an essential read for future 'Embodied Anatomy and Kinesthetics' courses at the small liberal arts college where I teach. By reimagining the body as a "memory palace," Lauterstein and Rockwell provide a rich metaphor that invites further exploration of the relationship between mind and body, offering both healing professionals and laypeople valuable tools for personal and therapeutic growth.

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Course Listings

2025 & 2026 Rolfing® SI Certification Training Programs

Program	Start Date	Location	Instructors
RAC Phase I	July 14, 2025	Edmonton, AB	Marius Strydom
P2.25	August 4, 2025	Lafayette, CO	Neal Anderson & Nobuko Muth
P3.25-GA	September 11, 2025	Atlanta, GA	Neal Anderson, Libby Eason, & John Schewe
P1.26	March 16, 2026	Lafayette, CO	Neal Anderson & Nobuko Muth
P2.26	August 10, 2026	Lafayette, CO	Neal Anderson & Nobuko Muth

Upcoming 2025 & 2026 Advanced Rolfing® Training Programs

Program	Start Date	Location	Instructors
AT1.26	June 5, 2026	Bellingham, WA	Russell Stolzoff & Kevin McCoy
ERA-AT	August 5, 2026	Munich, Germany	Pierpaola Volpones

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Course Name	Start Date	Location	Instructor
Translation of the Rolfing Ten-Series® *Recipe into Movement for Core Session*	September 22, 2025	Lafayette, CO	Hiroyoshi Tahata
Rolf Movement® Training, Part 2: *Introduction to Leading Rolf Movement* Groups – 2025	October 8, 2025	Munich, Germany	Nicola Carofiglio
Rolf Movement® Training, Part 2: *Introduction to Leading Rolf Movement* Groups – 2025	February 11, 2026	Munich, Germany	Rita Geirola

* All classes can be found at **https://rolf.org/courses**

USA Continuing Education Classes

Course Name	Start Date	Location	Instructors
Deepening the Rolfing Ten-Series®	July 18, 2025	Lafayette, CO	Jazmine Fox-Stern
Thematic Neck Work in the Series and Session	July 26, 2025	Lafayette, CO	Neal Anderson
Pelvic Girdle, Legs, and the Digestive Apparatus	November 8, 2025	Lafayette, CO	Kevin McCoy
Head and Neck	November 17, 2025	Lafayette, CO	Tessy Brungardt

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