



# Mirror-Sensory Synaesthesia and the Practice of Manual Therapy

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## Abstract

Mirror-touch synaesthesia can provide a distinct advantage for the healthcare worker who experiences this form of cross-modal perception. While several studies and presentations have focused on synaesthesia as a tool for augmenting artistic endeavours and cultivating creative opportunity, a massage therapist with mirror touch may have an edge over her non-synaesthete peers.

## Keywords

Synaesthesia, mirror touch, grapheme-colour, mirror-sensory, mirror proprioception, synaesthesia-for-pain, cross-modal perception

The client scheduled onto my calendar didn't seem unusual to me in any way; female, mid-forties, right rotator cuff pathologies. With almost 20 years in practice as a manual therapist, I'd witnessed just about every iteration of soft tissue injury. This woman's concern, a SLAP tear, is a common lesion of the glenohumeral joint, and treatment of its symptoms is one of my clinical specializations. I anticipated she would inquire about stretches and strengthening exercises, and to perhaps ask about self-care techniques like heating pads and ice packs; people often have questions about their pain and dysfunction, and I do my best to provide answers. But, I never expected that this particular client would provide an answer to my own questions.

"Do you know what synaesthesia is?" she asked at the start of our session. I thought I'd heard this word before, but I couldn't quite place it. "I don't", I told her as I draped her torso and exposed her injured shoulder. "It's a union

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of the senses”, she said. “In synaesthetes, stimulation of one sensory pathway leads to sensation in another. I see coloured patterns floating in front of my face when people touch my skin. I thought I should tell you because sometimes those colours are so vivid, I gasp”.

“That’s fascinating”, I said, easing my fingers under the border of her scapula, searching for the taut bands of the subscapularis tendon. As I mobilized her muscles and fascia, she described her visual experience: magenta orbs that hovered when I palpated her tender biceps tendon, chartreuse lines that came with long strokes over her erector spinae, an iridescent blue arc that corresponded with retraction of her shoulder girdle.

When I returned home that evening I went straight to my computer, not to document our session, or to delve into the latest orthopaedic findings on SLAP lesions. Instead, I began researching synaesthesia, hoping I’d finally learned a word that could help me understand my own strange sensory experiences.

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I never thought I would have the fortitude to enter a healthcare career. My mother was a nurse, and some of my earliest childhood memories are of her return home after a long shift in the local emergency room. Her white nurse’s dress was often speckled with red spots, and her pockets were packed with sundry medical supplies: angled bandage shears, hypodermic syringes, lancets in clear cellophane packets. While the bloodstains on my mother’s uniform never bothered me, those needles and scissors and razors all sent searing electric bolts down the back of my legs when I looked at them. This sensation was painful, consistent, and common, a daily occurrence that happened every time I looked at sharp objects. Broken glass, nails poking up from a board, and the detritus of my mother’s shift at the hospital all sent the same scintillating pain from my hips to my heels, as did witnessing other people’s injuries, and the sight of bandages or casts.

When I was four years old, my German Shepard puppy fractured her leg when she leapt over a barrier meant to keep her safe and contained. She was hobbled by a bulky aluminium splint and clearly uncomfortable. While my elder sister Elizabeth tended to our injured pet, feeding the puppy bits of kibble she designated as ‘pills’, I kept my distance and averted my gaze. Just a glimpse of that splint was enough to send fiery bolts coursing down my legs. Additionally, the physical pain I experienced when I looked at my injured pet was paired with an emotional distress borne from the friction between my intense desire to comfort my dog and my inability to quell my own discomfort.

Like many people with synaesthesia, I never told anyone about my strange sensations. During my childhood, it simply never occurred to me that my sensorial world was any different than that of my family. But, in my teens, when my mother began to steer me toward a healthcare career, I balked. My sister

Elizabeth was already in nursing college, and our mother hoped I would study physiotherapy, the perfect job for a kid who could barely sit still. I'd long been the daughter who, when at the ballet or a sporting event, kicked the seats in front of me as I moved like the people I was watching. This was true as well when I watched television. I could be engrossed with a program yet still twitch and flail about when I saw other bodies in action. "You'd be a great physio", my mother told me. "It's a good fit for an active person like you. I can even introduce you to the physiotherapists at the hospital".

But instead of taking her lead, I retreated into the world of coloured words. I read Shakespeare voraciously, delighting in the timeline of the English Renaissance, which, like all calendars, existed in three-dimensional space around my body. I auditioned for school plays and quickly learned all of my lines, memorizing the text in a cascade of rainbow-hued passages. And, while I excelled in my literature courses, I did occasionally get in trouble during drama class, always for mimicking the movements of the actors across from me and mouthing their lines as they spoke. It took every fibre of self-control to keep my own body physically still and in character as I watched my cast mates. But I learned to focus less on their physical actions and more on their words, which kept me from mirroring my fellow actors, and also guaranteed I could recite every line in the play by the time we opened the show.

Although I'd planned to study literature at university, a motor vehicle accident and my subsequent rehabilitation and recovery placed me squarely on the career path my mother had suggested. In the course of receiving physiotherapy, I was treated by the clinic's massage therapist, a woman who worked one-on-one with her clients, relieving pain and restoring comfort to damaged tissues. Her career was physically demanding and required a detailed understanding of anatomy, kinesiology, and biomechanics. She addressed injuries that were hidden under the skin, wounded muscles and connective tissues, in a small quiet room. The massage therapist's environment was so different than the hospital setting I'd assumed would be the workplace for a manual therapist. I'd long felt there was no place for me in the healthcare professions with their numerous triggers for my vision-to-tactile pain. But a career in manual therapy held the potential to nurture every positive aspect of my conflated senses.

Two years after my accident, I became licensed to practice therapeutic massage, a career that has proven a most natural fit. I had always felt pleasant physical sensations in my own body when I saw other people getting touched; with my newly minted license, I could touch people all day and get paid to feel as if I was giving myself a massage. Additionally, the twitchy quality that made me move like the bodies I watch has amplified my understanding of proprioception, and helps me feel in my own body what my clients are describing in their bodies. And, while I continue to have trouble with those weird bolts of sensation down the backs of my legs when I see casts and bandages and other

people's wounds, at least those zaps of pain are paired with the pleasurable attributes of my work in manual therapy.

A client came to see me recently, the day after completing a marathon. He was elated to have finished his first race of this distance, but limping. When he told me that he felt something 'pop' near his foot as he ran the hills in San Francisco, I envisioned his Achilles tendon partially avulsed from its anchor, the calcaneus. That image stimulated a brief flash of synaesthetic pain, and waves of stinging electricity shot down to my feet. For a moment as he spoke, it seemed as if his body was superimposed over my own, and I was acutely aware of my own left leg, the soreness in hamstrings and gastrocs after a long run. But, when my client was on the massage table, and my hands glided over his ankle, I began to feel my own ankle responding positively to my mobilizations.

Over the course of our session, I used a variety of techniques to calm his ropey Achilles. Cross-friction strokes physically heated his skin and the underlying tendon while the sight of my fingers working made my own skin warm. When my client took his first steps after the treatment, his limp had diminished and his pain was greatly decreased. And while he was the recipient of a 60-minute massage session, after watching my hands work for an hour on his calf and ankle, I felt as if I had received the benefits of the treatment too.

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I never saw the client with the shoulder injury again. I wish she had come back for another therapeutic massage session so I could tell her how very much she helped me. But, I treated her SLAP tear symptoms efficiently and expertly, and for that reason, she was gone. One of the clearest benefits of my mirror-sensory synaesthesias is my proficiency at my work. I am able to address my client's concerns with a high degree of skill, not only because of my solid background in the art and science of manual therapy, but due to my synaesthesia. My vision, my mirror neurons and my skin have an unusual connection to each other. And while I wish I had learned the word earlier in my life, it seems fitting that the term 'synaesthesia' came to me in the course of a career that is enhanced by its presence.