My Journey with Dystonia and the Feldenkrais Method: Beginning a Discussion on Contraindications for Aspects of Our Practice

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I am writing this article on my personal experience with dystonia and my journey through a Feldenkrais training program and beyond to broach the topic of contraindications for techniques within the Feldenkrais Method. In my experience, the notion of contraindications is not yet a central part of dialogue and education in our work. As this Method evolves, and as we come to know more about the various ways Feldenkrais affects the brains and the nervous systems of individuals with a growing variety of physical, chemical, pathological, and other issues, we need to begin more critically to examine the application of aspects of our practice.

Many Feldenkrais practitioners I have encountered over the last five years believe that because this work is gentle, slow, small, goes with the pattern rather than against it, and is about smoothness, ease, and comfort, it is not possible to "hurt someone" if we continue to work within these parameters. We trust that by thinking about function, finding the easiest path, and creating more movement choices where we find limited options, we are always providing people with the tools to learn and improve.

I entered my training asymptomatic of any serious physical or neurological issues. I am a musician and a pedagogue, and my interest was in improving my work with musicians. Though I had experienced some very early symptoms of a focal hand dystonia a few years before, I thought I had successfully eliminated my problems by reexamining my alignment and other aspects of my playing. I finished my training in December, 2013 having developed a full-blown generalized dystonia: new symptoms, and a mysterious, progressive unraveling that seemed to begin after a Functional Integration (FI) lesson in my first weeks. I continue to struggle with this condition today. Briefly, dystonia is a movement disorder involving abnormal muscle contractions and postures. It is currently believed to result from faulty self-regulation throughout the brain and nervous system. The word refers to the state of abnormal (dys–) muscle tone (–tonia), resulting in muscle spasms that can affect one muscle, a group of muscles, or the whole body.

My unintended experience has been a puzzling, frustrating, but ultimately an important study of the concept of "plasticity gone awry," as Sandra and Matthew Blakeslee begin to address in *The Body Has a Mind of Its Own*.[1] My hope is that, in the future, more knowledge about underlying self-regulatory problems, which may not be evident at the outset of our work with clients and students, might emerge from sharing this experience. Positive discussion of this and related topics may well prevent situations similar to mine.

Before I share my story with you, I want to emphasize that my interest is not to spark a debate about what happened or what should have been done differently. Instead, I am calling for discussion on the issue of contraindications–a discussion based on my own and others' personal experiences, work with clients and students, research, and an ongoing process of scrutinizing and rethinking the work we do as part of our continuing education as a community.

I love this Method and the positive ways it helps meet people's unique and individual needs. I am now a practicing member of this community, and I would like for my experience and, perhaps, the puzzling and individual encounters of others, to begin to build a repertoire of new ideas on this subject, a repertoire that will continue to evolve our thinking. I hope that we might teach and learn from each other what we can offer in training programs, what new information is available to deepen our understanding of the Method, and how to make it safer and more effective for our many and varied clients.

My Dystonia and its Remission

I am a violinist. About seven years ago, I started to feel some symptoms of what I came to know as a mild focal dystonia in my left hand. At first it was just the hint of a strange sensation in my fingers when I played passages with particular sequences of repeated finger movements. Then one day, toward the end of a very long day of rehearsals, I was playing a passage of this kind of repetitive material. When the pattern ended and I tried to continue playing the next phrase, my fingers would not stop moving in the old pattern for several seconds. I thought about playing the new material, and my fingers managed it half way, but the old pattern also continued, so I was stuck; everything just froze! This episode only lasted for a few seconds, and then even the strange sensation disappeared with rest.

Over the next several months, however, such episodes occurred with increasing frequency. They also began to last longer, and I began to feel more and more tension in my fingers and hand as my body compensated to stop the repeating movements. I found that I could make myself stop the excess movement and continue playing, but at a cost of increasing tension and fatigue. Even playing easy material felt difficult and forced, though I did not lose control of my fingers.

When it became evident that this problem would not go away, I talked with a couple of string player friends who had started studying with a Taubman Method pianist in New York. They told me this teacher had been able to help many musicians find ways to work around the movement patterns involved in focal dystonia. When they caught the dystonia early enough, many of her students were able to shift into remission. I was encouraged and went to see this teacher. I played for her, demonstrating the kinds of patterns that produced the most tension, and she quickly identified the problematic movements. I remember her saying, "This is a diseased movement, and you need to erase it from your playing and from your life." She said that each time my fingers/hand/arm moved in these gestures, I was reinforcing and growing the dystonic pattern in my brain. She said it was like walking a path over and over again until it cut so deep into the ground that it would be very difficult to climb out and start another path. If I could avoid taking the path before it became too deeply carved, and find new ways of moving without using the same sequences and muscle groups together, the original path would become overgrown, and I would find it less and less difficult to avoid.

There are some clear relationships between her work and what we do in the Feldenkrais Method. She helped me find a new alignment in my hand and arm so that my fingers did not have to move so independently; she helped me find ways to play with new support so that, with concentration and awareness, it was possible to completely avoid the original sequences; and she showed me how my fingers and hand were also adopting these damaged movement patterns away from the violin, such as when I typed, held a drink in my hand, or scratched my head. The movements that seemed to evoke the problem involved allowing my fingers, particularly the pinky and ring fingers, to extend backwards and curl in a way that was not connected to the flexion and extension in my hand. I was moving them in an isolated way, but also twisting and moving into more extreme ranges of motion, because I was not able to connect the movement to anything more proximal.

To eliminate the possibility of this movement sequence, she helped me to discover paths of movement around the problematic ones, and also to avoid a number of ways of using myself that had become gradually linked to that sequence in my brain. I had to avoid breaking the connection in my wrist, keep it in the middle of its range of motion at all times, never differentiate in my fingers beyond a minimal range, never isolate a finger in adduction or abduction beyond whole hand movements, and never “curl” my fingers by flexing and extending them at the same time. The plan seemed rigid, but not impossible, and it was worth a try considering the success she had had with this disease in others. It took extreme vigilance, but over the course of only a couple of months I was gradually able to eliminate the old patterns in my playing and in other parts of my life. I found myself less drawn to them, and I found the tension seeping away and a new ease entering my playing. I was aware of fine distinctions in discomfort related to the old patterns and could slip into the new movements when I felt even a hint of the old cycle. I noticed that some of the mild discomfort I had experienced over the years in my shoulder and back had also started to disappear. In time, and to my excitement, my playing actually became easier and freer than it ever had been before.

Because of the rapid and palpable success of this experience, I started to turn my teaching toward injury prevention and rehabilitation, emphasizing awareness and alignment. I was interested in ways to teach safer technique that would benefit musicians, whether or not they were predisposed to neurological injuries. I emphasized alignment and stability, and the ability to clearly feel connections from distal to proximal in order to improve ease and efficiency. I was playing better and better, not just because I had eliminated the patterns connected with the dystonia-like symptoms, but because those habits were problematic to begin with, and eliminating them was making everything more accessible. This new way of working was noticeably successful with my students, too, and teachers began sending me their own students with unusual problems. I was driven by my own success in healing and improving myself through focused attention; my reading on the subject brought me to the Feldenkrais Method. Seeing its similarities to the ways in which I had been directed in my self-exploration, I wanted to learn how to apply this knowledge to students in ways that met their individual needs. After a year and a half of dystonia-free playing and teaching, I enrolled in a Feldenkrais training program.

Entering a Feldenkrais Training Program

When I started my training in May, 2010, things took a different course almost from the beginning. Although I remained cautious about the old movement patterns, I felt confident about the potential in this work to increase my awareness and to build on my successes. I had begun to learn to sense myself on a deep level and was looking forward to more, and to finding ways to teach this to my students more effectively. Concerning the old dystonia patterns, I imagined from my work the two previous years that if I did not actively engage these pathways and did not isolate the movements that had caused the problems, I would be fine.

In the second week of my training, however, I had my first-ever Functional Integration (FI) lesson and my first taste of the mysterious and complex way my dystonia pathology and aspects of this Method could wreak havoc on my body through a seemingly benign process of learning. I remember that my FI lesson was about continuing to establish a stronger, clearer connection through my spine to my arm and hand so that I could find even more new options for avoiding isolated movement in my fingers. This is what I was interested in. Much of the lesson was about gaining more differentiation between my spine and my shoulder blade and in my ribs and thorax so that I could connect in many ways and at many angles through my arm to my fingers. Although I did not understand a lot of it at the time, this is what we discussed, and it felt smooth, easy, small, and gentle throughout; when I got up, I felt very relaxed, and my shoulder and arm hung about an inch lower. Over the next few hours though, things began to change dramatically. I started to feel as if a rubber band were pulling my arm up and into my shoulder. When I took my violin out to play a few notes that evening, I immediately felt an all-out tension in my hand and arm, as I had two years before at the end of the rehearsal. Now I also felt pain and tightness that radiated up my arm and all around my shoulder blade.

For the next couple of weeks, I lay low, thinking I had unknowingly triggered something after the lesson when I was so relaxed. I took some time off from playing, and I just did what I thought were the smallest, easiest movements from Awareness Through Movement (ATM). I did a lot of gentle arm, hand, and shoulder movement lessons to encourage some softening and release in the places that were locking down so hard. I read a lot in Feldenkrais's books, listened to recordings of ATMs from different sources, and I tried to feel myself on a deeper level in these places. I wanted to understand the habits that must have created these patterns. I worked on going slower and smoother in everything, doing less, eliminating anything that felt like effort, and observing my thoughts and emotions. Each time I did a lesson where I found I could achieve some new smoothness and release, I felt almost a click, like a connection, and a sensation of pleasant relaxation. I looked for more ways to differentiate and to find new movement possibilities, because the sensation of release grew quite addicting. I did lessons in small parts until I found that sensation of sudden ease and clear direction, and then I would sometimes stop and try to explore the components of the new direction which felt so free and compelling. I thought I was finding a better way of moving, a new and better choice, because it felt so good, and every other possibility seemed like such effort. Many times in FI, too, the practitioner or student would follow that sudden change of direction because it was so clear, and there was stronger resistance in other movements.

The problem was that each time I got up from these explorations of new and greater differentiation, I started to lock down into that tightening pattern. The lockdown also began gradually to affect more of my body and to happen more quickly. Contrastingly, many times when I did lessons that involved much effort on my part, even to the point of discomfort, I seemed to emerge relatively the same as when I began. For a very long time, this difference was not at all obvious to me, and it just seemed unpredictable which lessons would make me feel good and stop hurting (and then experience more problems later) and which would leave me feeling the same. It took many months of experiencing lessons that had that component of sudden ease and “connection” before I began to wonder what was really happening. I simply thought I was “learning” and gaining valuable plasticity, and that eventually, when I found the right combination of connections, the pain would stop.

Meanwhile, I experimented with varying the activities I did after a lesson—from walking to swimming to sleeping to just doing things that took my thoughts away from the lesson. I wrote my thoughts on note cards, and if they were negative, I turned the cards over and wrote something positive. I practiced meditation and gratefulness and positive thinking. I kept a journal to see if I could discern any patterns in my thinking or in my practice of the Feldenkrais Method that might be contributing to the problems I was having. I regularly practiced teaching ATM and FI with my students and colleagues, with growing success. I tried to observe what might be different between my teaching and my own personal practice of the Method to understand how I might be instigating my difficulties by some negligence.

It did not occur to me or to most of the people around me that the differentiation, the new patterns, the learning, and the neuroplasticity could be adding to my dystonia. I didn’t realize this, in large part, because the change I felt in lessons was initially so pleasurable, smooth, and easy—all the things we were supposed to be looking for. I often craved the seductive sensation of these lessons when I was feeling the tightness, pain, and loss of control in between. I really felt that my difficulties had to be coming from something I was doing outside of the lessons.

I also had FI lessons with many experienced practitioners who came through our training. Often the dystonic effects were more powerful than what I experienced after ATM. I mentioned the contrast between what I felt during and after FI lessons, and hesitatingly asked, “Is it possible that something in these lessons is making it worse?” But because there was little context in the work for such questions, practitioners responded that *if* you go gently, moderately, listen, follow, etc., you cannot hurt someone doing Feldenkrais.

The lessons most often were painless, gentle, small, and careful. I felt I was becoming better at also being this way with myself in ATM, so I was convinced that it could not be something in the experience of the lessons that was the problem. Practitioners would say things like: “You lost a compensation, and now you just have to keep going until you get to the core of your habits.” “You must be uncovering something deeply emotional, and you just need time to work through it.” “You are just becoming more AWARE and starting to feel these patterns of discomfort that have been hidden for a long time.” “You are just ‘unwinding’ in these lessons, and you need to let go and follow it to the end.”

Some suggested I examine the emotional roots of my playing, pressure from parents and teachers, or anxiety I might have felt about playing at the outset of the training. I never felt pressured by family to achieve with the violin, and I had been feeling so thrilled with my playing when I started the training. But the ideas mostly seemed reasonable to examine, considering most people ardently believed nothing could go wrong as a result of the work. So I trusted the principles and the ideals of the work. I also saw people improving and becoming freer. I continued to believe that it was a matter of time, that searching along the threads of release in each lesson would eventually connect me to something bigger, clearer, and more organizing.

A Resurgent Dystonia

By the time I finished my first year of training, my whole thorax, neck, and left arm were so tight that I couldn’t play for longer than 10 or 15 minutes at a time. I was growing limited in other activities, as well. I was on constant anti-inflammatories. I had a lesson with Paul Rubin, my educational director, who was the first to suggest there might be something structurally wrong under the surface, something that had somehow remained protected until the training; he said he did not understand what was happening, and he insisted I see a specialist.

I went to the reputable Performing Arts Clinic at the Methodist Hospital in Houston and saw both an orthopedist and a neurologist. They did imaging and determined there was nothing structurally wrong, but that there was a lot of inflammation, which was probably causing nerve entrapment. They suggested modalities therapy (heat and ice alternation, and ultrasound) and also pushed for steroid injections to settle the inflammation. I worked with the modalities but was hesitant to do the injections, not having identified a clear orthopedic source of the problem.

Over the next year I saw several doctors, and they encouraged more physical therapy and work on postural issues; most often this was in the form of massage, nerve-glide stretches, and other release therapies, which just seemed to worsen the contractions and inflammation. By this point I had developed a strong sensation of pulling into my chest accompanied by tightening of my neck extensors, so that my shoulders rounded forward and pulled my head forward of my spine. I often felt as if my thorax were a solid block, and I had pain between my ribs and along my sternum. The physical therapists and physiatrist I saw for a time became frustrated that my posture was becoming hunched and that I did not carry my head on top of my spine. Continued work with posture, strengthening neck flexors, massage, and release work for the flexion in my thorax just seemed to make my system react by increasing the extensor contraction and pulling throughout my spine. Most of the doctors and other specialists I worked with had little to no familiarity with the Feldenkrais Method, so explaining the sequence of events that brought me to this difficulty, and asking pertinent questions, was particularly frustrating. Much of the time my range of motion and my ability to differentiate movements was far better than average, so although they could feel distinctions in muscle tone and inflammation, they had no context for understanding what was happening.

By the end of my second year of training, my head started spontaneously to twist to the right when I felt some lengthening or release of excess effort in parts of my rib cage and along my spine. As with the other pleasant sensations of release, movement, lengthening, and freedom in lessons, this twisting felt good in the beginning. It was smooth and always felt like something that needed to happen. As with the other spontaneous movements though, it became increasingly difficult to stop this movement once it started. I tried just letting it go, following the advice of the "unwinding" experts, but then a pattern of co-contraction would start on its own to stop the twist after it seemed to go too far. When the co-contraction began, the sensation dramatically shifted from freedom and ease to pulling and pain. I noticed that this sequence could be elicited from a number of different places during FI and ATM, including new movement in the pelvis, legs, or hip joints, making it nearly impossible to avoid setting it off.

With my neck and spine caught in the involuntary movements, these co-contraction patterns became more pervasive. Sometimes my neck extensors contracted so hard to stop the movement that I would go for weeks unable to rest my head on my pillow at night. My chest would squeeze, leaving me to experience relentless flight-or-flight responses. I suffered with fear, altered breathing, lowered blood pressure, digestive, and other symptoms for up to three weeks without relief. I was well into my third year of training, still with no conclusive diagnosis from doctors, and my trainers agreed that they did not understand what was happening. I began to ask about the possible diagnosis of dystonia and neurological/self-regulatory issues. But because I had been gaining new and varied movement possibilities, I did not fit the normal categories for diagnosis (other than some inflammation and increased asymmetrical muscle tone, and postural issues). Thus I felt it was up to me to continue to explore and try to make some sense of it all.

At the same time, I started to notice that these episodes occurred in progressive cycles. Finally I could see a slightly clearer set of patterns, although it was unpredictable how or when they would occur. They could start with a feeling of release almost anywhere in my body, depending on the impetus; for instance, my head would start to turn, my thorax twist in the same direction, and then my pelvis release and twist in the opposite direction, pulling my legs. If I tried to resist, it would be painful, sometimes nauseating; if I let it go, it felt okay for a while, but then at some point something else would start to squeeze, pull, or lock down. The sequence was no longer predictable, either, as new lessons, introducing new forms of movement, seemed to create new triggers.

Yet the way the cycle led to fight-or-flight reactions, strong contractions opposing the twisting, and increased twisting with increased stabilization, were similar enough for me to catch the pattern. It felt like two uncontrollable demons at war with each other, each growing stronger, outside of my conscious control. I tried to use my own consciousness to divert it, but often my attempts inadvertently strengthened one side or the other. It usually took outside intervention to stop and divert the pattern, and the earlier the better. When the pattern occurred in the training, Paul Rubin would hold my head and neck and resist the strong contractions until sometimes, after 10 or 15 minutes, fatigue made them subside for a while. Most of my FI lessons at this point involved trying to find some way to stabilize or temporarily hold the patterns in check.

In my last year of training, I finally began to realize the deep pattern of the phenomenon. Although parts of the pattern remained quite elusive, in summer of 2014 (after my training was over) I had an FI with a new approach. In retrospect, it brought many of these elements together. The idea was to explore how to help the stabilizing pattern release by alternately squeezing with all of the places I felt trying to stabilize, and then feeling how to release the twisting patterns more fully. It seemed worth a try. The practitioner's observation was that the twisting was "so alive" in me that it might be hurting me to oppose it. We were initially successful in releasing many of the protection patterns and in allowing the twisting to play out on a large scale.

Again it felt great to allow the movement, as if this was what my body had to do. But when I got up from the table, my thorax was rotated 45 degrees clockwise to my pelvis. It was impossible to pull it back—with effort, with relaxation, or by any means. I took a walk to see if it would find its way back with some functional stimulation, but as I walked, I felt as if I were drunk or drugged, almost devoid of sensation or even emotion. In the coming days, I experienced a strong and long-lasting return of the protection and fight-or-flight response; it was perhaps the biggest cycle I had ever experienced. Although such a large-scale reaction was really frightening, it revealed a lot of new information that proved very helpful when I shared it with my current neurologist. This kind of sequence clearly suggested to her abnormal pathology as seen in various forms of dystonia—something I will discuss in the next section.

The drugged and almost blank state emerged as a defining characteristic of these cycles. I would come to the point in a lesson, or in my daily activities, where I felt a click and a release followed by a short period of smoothness and ease. Then it was as if I slid down the rabbit hole into this state of relaxation in which my body started moving on its own, followed by the blankness. I felt no pain or emotion but also could not form clear thoughts. I would lie on the floor in our training for a few hours at a time like this, sometimes not being able to communicate what I needed. Often, after a long period of drifting like this, some adrenaline would kick in, and the cycle would begin anew. In retrospect, I recognize that these sensations had been present on a smaller scale during lessons earlier in the training—a sudden sense of ease and almost pleasure. It was a trance-like state of relief, what I came to think of as my "learning," or all of the pieces of the lesson coming together. The difference as the training progressed was that I often simply could not get up and emerge from this state. It was really frightening.

Sometimes someone was available and aware enough to intervene when this happened. A talented teacher, along with another assistant in my training, sometimes sensed how to interrupt these cycles. A good friend in the training, who was a Muscle Activation Technique therapist, could help me stabilize temporarily. Paul Rubin tried to intervene when he was available. Much of the time, the twisting pattern continued when I was in the "blank" state, even though I couldn't feel it; I sensed movement and a feeling of floating on waves, but I could not feel what was happening.

At a certain point, it did not require ATM or FI to unleash these reactions any longer. By the end of the training, the sequences were so widespread that almost any activity could trigger them. At present, I am constantly in one phase of these cycles or another, and my strategy is simply to chase the movements around, finding any way I can to affect my own stabilization and to head off the larger cycles. It is an ongoing process in me and in my current physical therapy work to discover the movements that begin the cycles and to find ways to redirect the reaction early enough so that the cycles do not go out of control.

What I Have Learned

I want to share how my dystonia evolved over the course of my training to show how my assumptions about the safety of the Method, and those of the practitioners around me, made it difficult to understand what was happening. Those assumptions made it impossible to recognize that anything was wrong until it went out of control. Even then it was difficult to discern how to manage it, as some lessons *did* help calm things down initially, while others introduced new triggers. I include specifics for the benefit of anyone who might have experienced something similar. I also want to provide my account as a retrospective study of the growth of a generalized dystonia through learning and movement. If I had understood the operating pathology and how it could grow and take hold in this sinister way, it is possible that we may have all done many things differently early on. This article is an invitation for further study, discussion, and research about how to work with these issues as they come up and, perhaps, ultimately, prevent them.

I hope that this unintentional study can serve as a learning tool for other practitioners, and as a caution about how powerful our work can be. It is imperative that we start to look for and discuss contraindications in circumstances of various pathologies and other deviations from the "norm."

After my training, I finally connected with a wonderful neurologist, who carefully listened to my story and has been able to construct a reasonable explanation of what happened. Her explanations (and some speculation) have helped me start to work much more effectively with my difficulties. She used my story to understand why certain abnormal symptoms exist alongside normal range of motion, reflexes, and even increased movement capability, to form a diagnosis of generalized dystonia. With her knowledge of the science, she has explored treatment options and educated me how to be cautious, considering that adding more movement choices and increasing plasticity have worsened my illness. I have also found a wonderful physical therapist who has partnered with me and uses the information the neurologist supplies to help negotiate my symptoms. Although my new understanding seems unlikely to reverse the spread of the dystonic pattern at this stage, it has helped me gain some control and work with these cycles when they occur. I do not have half of the answers yet, but I am learning more every day.

Dystonia research on task-specific focal dystonias like those experienced by musicians, writers, or golfers has focused on cortical blurring. The blurring seems to occur with overtraining in activities that require sensorimotor precision in a narrow range and very specific timing.[2] Those suffering from task-specific dystonia exhibit abnormal cortical mapping of the distal areas involved in the dystonic pattern.[3] Traditional treatments have assumed that the basis of the problem is similar to that of less specific overuse patterns and have advised functional retraining and "re-differentiation."[4] Often, such therapy is ineffective, and the research does not account for the majority of those who trained similarly but did not experience these symptoms.

More recent dystonia research examines genetic components, abnormalities affecting plasticity throughout the brain and nervous system, pre-existing self-regulatory issues, and ways in which this pathology manifests itself in specific and sometimes widening motor control issues over time. Now, in addition to cortical blurring, research has focused on abnormalities in movement inhibition arising from the basal ganglia, and on pre-existing anomalies in the cerebral cortex, cerebellum, thalamus, and brainstem. The "unaffected" side may also be implicated in task-specific dystonias, as may subtle abnormalities throughout the body that may be compensatory, causative, or both.[5]

Current research indicates that adult-onset dystonias have three features that separate them from other movement disorders: abnormal inhibition or the loss of inhibition, sensory dysfunction, and hyper-plasticity (faster, stronger impulses along synaptic pathways and easier formation of new synapses).[6] This combination may contribute to the worsening of the dystonia in the context of the learning through movement differentiation and focused sensory stimulation that our work involves.

With loss of inhibition, motor activity overflows into muscles surrounding and opposing the muscles directly involved in a particular task. EMG studies have documented co-contractions of agonists and antagonists simultaneously and in reaction to an intended movement.[7] New studies suggest that faulty inhibition may "blur" the cortical representation of the surrounding muscles when the person selects a particular patterned movement that exists before a dystonia manifests itself. Dystonia is also characterized by its growing, cyclical nature, which is prompted by a repetition of the problem patterns and an increase of the overflow to the surrounding muscles. In a normally functioning system, inhibition suppresses surrounding movements in order to refine and make specific the intended movement. In Feldenkrais work, one of the ways we use movement is to explore inhibition to make particular movements more streamlined.

Research specifically on the role of sensory dysfunction as an underlying, possibly genetic, trait of dystonia has focused largely on the roles of the basal ganglia and relationships in the forebrain. The basal ganglia is involved in the process of spontaneously choosing which movements to include in smooth and efficient action. This part of the brain allows us to perform complex, learned movements unconsciously while focusing on other tasks. For example, it allows a musician to perform a practiced and repeated pattern while he or she directs attention to the shape of a phrase or coloring the sound. Studies over the last 10 years illuminate sensory abnormalities in dystonia subjects relating specifically to sensorimotor learning. They also suggest that these abnormalities in the basal ganglia not only facilitate the expression of dystonia, but actually induce the learning of dysfunctional movements in response to improper processing of information in sensorimotor loops.[8]

People with dystonia showed deficits in sensorimotor integration not only when stimulus was provided in the affected areas, but generalized throughout the nervous system. When sensory stimulus was provided in both affected and non-affected areas, dystonic subjects had difficulty making spatial and temporal discriminations.[9] With stimulus of the affected areas, surrounding muscle groups also fired. In the early stages of a task-specific dystonia, most individuals identify a generalized sense of weakness, tension, loss of control, and sometimes pain in the affected area. For this reason, in the early stages, the symptoms are hard to pin down as the excitation spills (as it did early in my disease) into surrounding tissues and antagonist muscles.

Recent studies have shown that dopamine is an important component of reward-motivated behavior. It gives us the feeling of pleasure and well being in response to such movement types as skilled performance, sex, and lactation, and it generally encourages us to continue behaviors that stimulate its production.[10] Dopamine levels in various forms of dystonia have been shown to include cases of both too much and too little dopamine in the part of the brain called the *striatum*, in either case exerting a strong influence on choice of movement in sensorimotor learning. In forms of generalized dystonia, however, where the dystonia patterns had become proximal, affecting the spine, subjects demonstrated increased dopamine levels during dystonic episodes.[11]

I have begun to wonder if the feelings of well-being, ease, and pleasure during Feldenkrais lessons that later resulted in systematic unraveling might have resulted from dramatically increased dopamine levels as the dystonic patterns expanded. When I accessed feelings of grace, smoothness, and pleasure in lessons, my painful co-contractions vanished, and I almost felt as if I were floating. Almost every movement I did for the remainder of such lessons felt easy and smooth. In time, I became more facile at getting under the layers of tension and antagonistic contraction. Gradually, these states morphed into the periods of feeling drunk or drugged that I have described. Eventually, as these periods became more pronounced, coming out of this state was accompanied by many days of anxiety and an extreme fight-or-flight reaction, also very characteristic of dopamine overload.

Abnormal plasticity is the underlying distinguishing feature of dystonia that has been studied most extensively in recent years, and it is now theorized to be the largest pre-existing feature in those who develop adult-onset dystonias. In addition to the surrounding tissues becoming involved because of faulty inhibition, excess activity appears in multiple parts of the brain, including the brainstem and the opposite hemisphere from the affected side.[12] In adult-onset dystonia, new synapses are formed much more quickly, with less repetition. They remain stronger, and even strengthen over time, with minimal stimuli. This, in combination with faulty inhibition, excitability of surrounding tissue, and a generalizing to multiple parts of the brain could activate large dystonic patterns even with small amounts of sensorimotor stimulation. Thus it might be very easy for an individual with this predisposition to "overlearn" new movement patterns and create very strong new synapses quite rapidly.

By the fourth year of my training, I often seemed to over-learn many of the movement patterns explored in lessons. While many of my colleagues returned to something closer to their normal pattern after a few hours, what I learned seemed to morph into something less and less familiar. Over time I moved farther away from anything I recognized in myself, which was very frightening. I felt that my body was grappling with every component introduced at the same time. Because I was unable to distinguish functional from dysfunctional in these options, everything seemed increasingly to lock down just to stabilize from the onslaught of new information and too many equal possibilities. As an aside, my memory for lessons in each and every detail was such that I could easily recall all of the components of a lesson after one hearing; every component seemed immediately absorbed into my system.

Although dystonia can emerge from a particular set of pre-existing abnormalities, not everyone who possesses these abnormalities develops some form of dystonia. An individual typically remains asymptomatic until a "trigger" disrupts the homeostasis of what might be a moderately dysfunctioning, but successfully compensating system. Researchers are focusing on identifying triggers in order to suggest more successful treatment. Risk factors include age, unusually high demands on sensory-motor precision, trauma/injury, gender, changes in or increase of sensorimotor stimulation, disruption of compensatory patterns, and psychological factors such as social constraints, perfectionism, and stress and anxiety.[13]

Adult-onset dystonia most often develops in people in their mid-thirties to early forties. Musicians such as violinists, pianists, guitarists, and brass players are most likely to develop focal dystonias due to the temporal and spatial specificity required in playing. Spatial specificity also plays a role in violinists being more prone to the disorder than cellists or bassists, because violinists need to learn rapid patterns in a very small range, so that movement differentiation is at its most complex. Classical musicians are more likely to trigger the onset of dystonia than jazz musicians because of the high demands and the social constraints of the profession—playing in concert halls for audiences who are likely to notice and judge based on mistakes, performing auditions where perfection is directly linked to the likelihood of winning a job. Stress and anxiety increase the likelihood of dystonic episodes, although it is also thought that the increase of episodes and the nature of the pathology also yields excess stress and anxiety, including the fight-or-flight responses I described. Injury is a strong factor in adult-onset dystonia: dystonia symptoms can arise from peripheral injury in the affected hands of musicians, and they can arise as a result of trauma such as whiplash, where the nervous system repeatedly creates and revisits patterns from the original trauma.[14]

Current treatment of dystonia is largely pharmacological, as few movement approaches have led to long-term benefit. One of the major risks more recently identified in movement-based therapies is, in fact, that introducing new movements or sensory stimuli can unwittingly overload a system. There exists the chance to create "runaway plasticity" by destabilizing compensatory factors and providing too much stimulation.[15] The problem with dystonia is that it combines normal learning with an abnormal pathology—the faulty inhibitory response to some of these learned movements. The brain fails to send a complete inhibitory signal to stop a movement, such that it continues even after the task is completed. In this way, the pattern continues to strengthen itself and map the areas involved on the cortex more strongly; it also continues to become easier to trigger the longer it continues.

Some therapies and interventions at early stages of symptom development have helped people avoid and eliminate the targeted movement sequences—for example stopping all affected movements for a period of time. Botox is now used in these beginning stages to paralyze the involved muscles so that they cannot be mobilized. This strategy creates a constraint so that the person is forced to relearn various tasks in new ways and hopefully create a new, undamaged path to the functional goal. According to my neurologist, 25 percent of those treated with Botox in this way have experienced a reduction of symptoms. I think a similar approach could be taken through very careful movement education and awareness, if we know what we are dealing with and how this disease works. I think this is how I produced my two-year "remission" before the training, and it is how I hope to learn to use the

Feldenkrais Method with musicians facing this problem. I am probably no longer a candidate for this kind of work because my dystonia has affected too many muscle groups, and the patterns involve too many movements throughout my body. The pattern has become complex.

One approach for generalized dystonia is to stabilize the cycles before they become too large. I am developing strategies to notice the moment a cycle begins and to learn ways to stabilize and balance. I try to identify and minimize the use of muscular effort in my stabilizing and use alignment and skeletal connections to my advantage. I also use meditation and self-calming to shift my attention deliberately away from the patterns. For me, it is a pretty slippery slope, because we often use differentiation with the Feldenkrais Method to help free muscles and create better alignment, but differentiation can also precipitate one of these cycles. My neurologist prescribes medication in late stages to help regulate the protection responses so that the compensatory side of the cycle still helps stabilize but stays within a normal range. This helps also to control the intensity of the whole cycle.

Where to Go from Here

Dystonia is emerging as an increasingly prominent diagnosis amongst musicians. Since I have begun to speak about my experience with this disease, I have found colleagues everywhere with similar stories. Dystonia was the topic of a featured article in the September, 2014 *International Musician*, because of its prevalence in this community.[16] For Feldenkrais practitioners working with musicians, I think it will become an increasingly commonplace challenge. I hope that this article can generate some serious and important discussion on these and related issues, as I think this work can be powerfully effective, but also risky when working with pathologies such as this.

I do not believe that what happened to me is because of negligence on the part of practitioners, but rather because we do not yet fully understand the potentially harmful effects of elements of this work. When I searched for research on contraindications with neurological conditions of any kind, and discussions of injury or unraveling or loss of control after lessons, there was very little from which to educate myself—although, in the time since, I have been in contact with a number of people who have experienced long-term adverse effects from both trainings and individual lessons. I hope sharing my story will encourage those people to come forward and enter the discussion to help educate us further.

I love this Method and still very much believe it can help people learn in more effective ways than many other modalities. I have seen remarkable results in working with colleagues and students. I even believe that it provides insights to helping people manage and possibly find ways around pathologies such as dystonia, if we begin to more carefully examine how various strategies from our work can have both positive and negative effects. From my understanding, Moshe Feldenkrais remained a true skeptic his whole life. This was part of his education as a scientist, and because he applied his skepticism to every element of his own work from the beginning to the end, he was able to refine and revise it, and to make it more and more applicable to the people he taught and worked with. I would like to invite a continuation of this kind of thinking as we meet new challenges. I think it is time to ask ourselves not only what our clients and students need to learn, what we can show them, and what they are ready to learn, but perhaps, more importantly, what they can teach us about this Method—the ways our tools can be refined and reexamined, how to listen more carefully for new kinds of reactions, and what we can learn from each unique perspective. This is already an important part of the work, but acknowledging and studying possible adverse effects and potential contraindications will help us to do this job even better.

Please join me in a productive and responsible discussion about how, when, and where we can make the Feldenkrais Method safer and increasingly effective for our clients, students in our training programs, and ourselves. I would be very glad to take on the task of compiling and organizing any new and relevant ideas, personal stories, case studies, and accounts of work with clients. I am interested in productive private or public correspondence on this issue. I would love to compile a collection of accounts on this subject for my personal learning and would be glad to present these for the benefit of the whole community at a later date if there is an interest in and willingness to share material more publicly.

I would be so glad to hear from you! Please contact me by email at rilkesq@yahoo.com

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